LONG®
PAINTING COMPANY

INJURY AND ACCIDENT PREVENTION PROGRAM

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Dear Employees:

Welcome to Long Painting Company. We are glad to have you with us.

The foundation of an effective accident prevention program relies on each employee. This publication can serve only as a guide to injury-free work. It cannot prevent accidents.

Only you, the individual, can avoid injury to yourself and to others, and avoid damage to equipment and/or property by following the rules in this Safety Manual.

READ IT CAREFULLY – READ IT FREQUENTLY

Apply the rules to the jobs that you do, and bear in mind continuously that you are the person most responsible for your own, and your fellow workers safety and well-being on the job.

Respectfully,

LONG PAINTING COMPANY

Vince Guymon
President

"It is better to be careful 100 times than to get killed once."
– Mark Twain

Think Safety, Communicate Safety, Live Safety

Safety is a Long Painting Company (LPC) core value and a cornerstone of our culture. We have developed our Safety Program to address each aspect of the work we perform.

We recognize that safety requires complete commitment and involvement at all levels, from executive management to individual crew team members. Providing a safe work environment is each employee's responsibility and LPC's first priority.

LPC continuously evaluates the risks inherent in our type of work, starting before the project begins through the completion of job, with evaluations and inspections of the work and jobsite. When risks arise, we proactively find the causes of the risks then develop and implement effective corrective actions.

Our successful safety program relies on these clear and well-established goals:

- Zero injuries
- Zero environmental issues
- Zero equipment and vehicle incidents

This focus on defined goals is the reason that our award winning safety program continues to set the safety standard for specialty contractors across the nation.

We especially focus on the Safety 6, which are key areas of risk that LPC has identified that have created issues in the past. We take special effort and dedication to the Safety 6 in order to maintain a safe work environment.

LPC takes great pride in the quality of our team and is committed to the ongoing development of each employee. To facilitate that, we have a core set of safety training requirements that all personnel must keep current and up-to-date. We also hold formal field, online and classroom safety training on topics such as fall protection, lifting and other body mechanics, respirators, hazardous materials, confined space, and aerial lifts.

LPC is committed to being a safe place to work for the benefit of all of our employees, our customers, and the communities in which we live and work. Together, we will Think Safety, Communicate Safety, Live Safety, every minute, every hour, and every day.

A copy of this Safety Program will be given to each employee when they start work at Long Painting. Additional copies of this program or sections of this program will be available to employees upon request.

September 10, 2025

By this notice, I do hereby designate Rob Buck, in his capacity as the Director of Environmental, Health, and Safety, as the individual at Long Painting Company, hereinafter collectively referred as LPC, responsible for administering the Company's Environmental, Health, and Safety Program (EHS).

This individual has the authority to represent LPC in all matters of environmental, health, and safety as well as stop actions by LPC employees and subcontractors not in conformance with the state and federal regulations and/or the Company's EHS Program.

This individual is responsible for review and revision of the EHS Program annually, or more often if needed, and is the individual designated to keep abreast of safety and health changes and issues and to disseminate them throughout the organization.

Vince Guymon
President

09/10/2025
Date

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1. SAFETY AND HEALTH POLICY

The personal safety and health of each employee of Long Painting Company (LPC) is of primary importance. The prevention of occupational injuries and illnesses is of such consequence that it will be given precedence over operating productivity at all times. To the greatest degree possible, management will provide all mechanical and physical facilities required for personal safety and health in keeping with the highest standards and common good sense.

Our objective is an Environmental, Health, and Safety (EHS) Program that will reduce the number of disabling injuries and illnesses to zero. To be successful, such a program must embody the proper attitudes toward injury and illness prevention on the part of Managers, Supervisors, and employees.

Our safety and health program includes:

- Jobsite audits will be conducted by each Foreman on a weekly basis. These inspection documents shall be turned in to the main office each Monday morning before 7:00 a.m.
- Superintendents making random inspections of all of their jobsites once a week when geographically feasible.
- The Director of Environmental, Health, and Safety will perform jobsite inspections on a regular basis.
- The president/owner frequently making jobsite visits/inspections.
- Providing mechanical and physical safeguards to the maximum extent that is possible and maintain them in position and in proper operating condition.
- Conducting a program of safety and health inspections to find and eliminate unsafe working conditions or practices, to control health hazards, and to comply fully with the safety and health standards for every job. We will exceed the standards where feasible and possible.
- Training all employees in good safety and health practices for hazards on and off the job.
- Providing necessary personal protective equipment (PPE) and instructions for its care and replacement in addition to standards requiring its use.
- Investigating, promptly and thoroughly, every accident to determine all causes and to correct all causes so such an accident will not recur. An employee member shall assist in the investigation.
- Prompt implementation of corrective actions to prevent incidents from occurring.
- Setting up a system of recognition and awards for outstanding safety program participation and performance.
- Establishing on and off the job safety awareness for all employees.

1.1. Disciplinary Policy

- Developing and enforcing safety and health rules;

- Employees are required to cooperate with these rules as a condition of employment.
- Employees can expect to be disciplined should safety rules be violated.
- Violation of safety rules will result in disciplinary action up to and including termination, if situations warrant.
- Fall protection or other serious violations can result in immediate terminations.

- All levels of supervision are responsible for upholding the policies and procedures of LPC and are expected to enforce such through a progressive disciplinary process.

- Owners, Director of EHS, Project Managers, Superintendents, Foremen, and lead personnel are all expected to implement disciplinary action when called for.

- Disciplinary action may include, but not limited to, verbal warning, written warning, suspension, and termination.

2. RESPONSIBILITIES

- We recognize that the responsibilities for safety and health are shared.

- Management is responsible, and accepts the responsibility, for leadership of the EHS Program, for its effectiveness and improvement, and for providing the safeguards required insuring safe conditions.

- Supervisors are responsible for developing the proper attitudes toward safety and health in themselves and in those they supervise, and for insuring that all operations are performed with the utmost regard for the safety and health of all personnel involved, including themselves. If employees working under them are not meeting safety expectations or exhibiting unsafe behaviors or actions, they will coach them to improve the behaviors, and, if needed, remove them from the site.

- Employees are responsible for cooperation with all aspects of the EHS Program, including compliance with all rules and regulations, and for continuously practicing safety while performing their duties, and a constant awareness of their co-workers' safety.

- Our Safety Program and safety meetings shall be given full support by management at all levels.

- All safety activities will be fully publicized.

- We shall encourage all employees to procure and maintain a current first aid card. The company will arrange for training by an agency certified to issue a first aid card. At least one supervisory employee will have a valid first aid card on all jobsites.

3. INJURY, ILLNESS AND ACCIDENT REPORTING AND RECORDKEEPING

3.1 Reporting Accidents, Injuries or Illnesses

- Accidents include significant near misses, property damage to both LPC and others.

- Employees are responsible for reporting all accidents, injuries or occupational related illnesses the same day as the incident to their immediate supervisor or the Director of EHS.

- If employees are not feeling well or are getting fatigued, they must report this to their supervisor immediately.

3.2 Investigation and Corrective Actions

- To prevent incidents and injuries from reoccurring, each incident will be investigated to determine the root causes of the incident.

- Supervisors will lead the investigation of all accidents, injuries, and near misses to determine the root causes of unsafe acts or conditions.

- In cases of injuries to person(s), damage to company or private property, significant near misses, repeat cases of accidents, injuries, or near misses, the Director of EHS will conduct an independent investigation.

- Corrective actions will be implemented to prevent reoccurrence of the incidents.

- All accidents shall be reported on **Form 901**, **Superintendent Incident Investigation**.

- An accident with a fatal injury or in patient hospitalization will be investigated in depth to identify all causes and to recommend hazard control measures.

    - Except for rescue and emergency measures, the accident scene shall not be disturbed until it has been released by the investigating official.

- A record of all first aid treatments not otherwise reportable shall be maintained.

- Reports will be maintained for five (5) years.

3.3 Recordkeeping

- LPC will ensure the appropriate records are kept as follows:

    - Maintain a log and summary on **OSHA Form 300, Occupational Injuries and Illness**.

        - Recordable cases include:

            - Every occupational death
            - Every occupational illness
            - Every occupational injury that involves unconsciousness
            - Inability to perform all phases of the regular job
            - Inability to work full time on a regular job
            - Temporary assignments to another job
            - Medical treatment OTHER than first aid

- Keep copies of all reports generated when an employee is injured on the job and log the injury into the OSHA 300 form within 7 days of the injury.

- During the period from February 1 – April 30 post the completed and signed **OSHA Summary of Work Related Injuries and Illnesses, Form 300A.**

  - Maintain records for five (5) years following the year to which they relate.

  - In addition to the OSHA 300, a supplementary record for each occupational injury or illness, (OSHA 301) will be maintained.

3.4 Reporting to Agencies

- Within eight (8) hours after the following type of work related incident(s), management will notify the state or safety governing body of the injury via their hotline.

  - Fatal injury
  - An inpatient hospitalization of any employee

- Within twenty-four (24) hours after the following type of work related incident(s), management will notify the state or safety governing body of the injury via their hotline.

  - Amputation or loss of an eye that does not require in patient hospitalization.

The hotline numbers are:

- Washington State Dept. of Safety and Health
  (800) 423-7233

- Oregon OSHA
  (800) 922-2689

- OSHA
  (800) 321-6742

4. NEW EMPLOYEE ORIENTATION

- All new employees shall receive a basic safety orientation before assignment to work.

- The orientation includes a review of procedures, rates, policies, this Injury and Accident Prevention Program, and the employee's Right-to-Know Hazard Communication training.
- All employees shall receive an on-the-job review by their supervisor or the Director of EHS on the practices necessary to perform the initial job assignments in a safe manner.

- All field and shop employees are to receive additional training by use of videos and manuals, on the subjects of respiratory protection and ladder safety.

- In addition, all employees will receive a copy of this Injury and Accident Prevention Program.

- Each field employee shall receive a copy of the LPC Employee Safety Handbook.

- New employee orientation includes the following items but not limited to:

    - How and when to report injuries.
    - Location of first aid facilities.
    - Reporting unsafe conditions and practices.
    - Safety Program description including Safety Policy, rules, and Safety Committee.
    - Personal protective equipment care and use.
    - Hazard Communication training.
    - Potential hazards on the job and on the job review of safe work procedures.
    - What to do in an event of emergencies, including reporting, accident locations, evacuation routes, specific procedures.
    - Proper lifting.
    - Training in bloodborne pathogens.
    - Worker's compensation orientation.

5. TRAINING AND EDUCATION

5.1 Purpose

- Ongoing safety education programs will be provided for all employees in an effort to:

    - Have employees understand the importance of staying safe on the jobsite.
    - Increase the ability of employees to perform work activities in a safe manner.
    - Increase awareness of accident cause factors.
    - Promote acceptance of safety rules by presenting accident prevention as a positive, desirable, and integral part of all activities.

5.2 Procedure

- LPC will provide a systematic accident program for the employee. This program will provide on-the-job training in their work area and will familiarize each person with company safety requirements.

- Identified safety and occupational health deficiencies and corrective measures shall be reported.

5.3 Training

- Specific training will be provided for certain jobs and kinds of equipment.

- First aid training and certification will be required for all Foremen, Supervisors, or persons in direct charge of crews in order to assure that all employees can be afforded quick and effective first aid in the event that an injury occurs on the job.

- Orientation and training shall be based on the safety program of the contractor and shall include but not be limited to:

- General Safety Policy
- Requirements for employee and project safety
- Employee's responsibilities for property and the safety of others
- Employee's responsibilities for reporting all accidents
- Medical facilities and required treatment
- Procedures for reporting or correcting unsafe conditions or practices
- Safe Clearance Procedures
- Firefighting and other emergency procedures
- Job Hazard Analysis and Accident Prevention Plan
- Alcohol/Drug Abuse Policy
- Segregation of vehicular and pedestrian traffic

- Many general EHS requirements will be provided in an e-learning platform assigned based on the employee's job description and/or assigned duties.

- Annual safety training will be completed by all employees. These trainings will be done through different formats including safety toolboxes, foreman meetings, company safety meetings, and on-line training.

- All employees are expected to complete all their annual training.

6. SAFETY AND HEALTH COMMITTEE

- Due to the varying jobsites and per Washington Code where we work in widely separate jobsites with 10 or fewer employees at each location, Long Painting has weekly toolbox meetings instead of a safety committee.

7. CREW SAFETY TOOLBOX MEETINGS

7.1 Purpose

- To assist in the detection and elimination of unsafe conditions and work procedures.

7.2 Procedures

- Meetings are held once a week in the individual departments.

- For field employees, these meetings are held each Monday at the jobsite.

- The attendance/subjects discussed shall be documented and maintained on file for a period of one (1) year.

7.3 Scope of Activities

- Cover weekly toolbox topics
- Review jobsite safety inspections (use weekly safety inspection form).
- Review accident reports to determine means or elimination.
- Accept and evaluate employee suggestions.
- Review job procedures and recommend improvements.
- Monitor the safety program's effectiveness.
- Promote and publicize safety.

7.4 Documentation

- Meetings will be documented with signatures of attending employees.

8. SITE-SPECIFIC SAFETY PLANS

- For each project Long Painting works on, there will be a Site-Specific Safety Plan (SSSP) developed for that project.
- The Site-Specific Safety Plan will include information on:
  - Job Location
  - Scope of work
  - Equipment and Materials
  - Safety Items associated with the project
  - Job Hazard Analysis for the different scopes of work
- The SSSP may also include, depending on the work required:
  - Fall Protection Plan
  - Confined Space Plan
  - MEWP Plan
  - Lead Plan
- All these sections will be reviewed with each employee and subcontractor before they start work on the project.

9. JOBSITE SAFETY INSPECTIONS

9.1 Purpose

- LPC conducts regular safety inspections at all active jobsites to identify unsafe conditions and work practices, verify compliance with this program and applicable regulations, and drive corrective action before incidents occur.
- Inspections are conducted at multiple levels of the organization. Each level of inspection serves a distinct purpose and together they provide comprehensive oversight of LPC field operations.

9.2 Inspection Frequency and Responsibility

9.2.1 Foreman Inspections

- Each foreman shall conduct a safety inspection of their jobsite on a weekly basis.
- Inspections shall be done in Procore using Form 961, Weekly Jobsite Safety Inspection.

9.2.2 Superintendent Inspections

- When a superintendent visits a jobsite, they shall conduct a safety review of site conditions and work activities as part of that visit.
- Findings shall be communicated to the foreman immediately.

9.2.3 Director of EHS Inspections

- The Director of EHS shall conduct jobsite inspections on a regular basis across LPC

operations in Washington and Oregon.
- The Director of EHS shall periodically review completed foreman inspection forms and superintendent findings to identify trends and recurring issues.

9.3 Inspection Criteria

- Inspections shall evaluate, at a minimum, the following areas as applicable to the work being performed:

  - Compliance with fall protection requirements.
  - Proper use and condition of PPE.
  - Condition and use of ladders, scaffolding, and aerial lifts.
  - Housekeeping and material storage.
  - Hazardous material handling, labeling, and SDS availability.
  - Electrical safety and GFCI protection.
  - Compliance with the current Pre-Task Plan and JHA.
  - Adequacy of site-specific safety controls identified in the SSSP.
  - Subcontractor compliance with LPC safety requirements.
  - Posting of required safety and regulatory notices.

9.4 Corrective Actions

- Unsafe conditions or practices identified during any inspection shall be corrected immediately where possible.
- Hazards that cannot be immediately corrected shall be communicated to the Director of EHS without delay. A corrective action plan, including the responsible party and target completion date, shall be established.
- The Director of EHS shall follow up to confirm corrective actions have been completed.

10. JOB HAZARD ANALYSIS (JHA)

10.1 Purpose

The purpose of the Job Hazard Analysis (JHA) program is to identify, evaluate, and control hazards associated with the work performed by Long Painting Company, A JHA breaks each task down into its component steps, identifies the hazards associated with each step, and establishes the controls necessary to eliminate or reduce those hazards to an acceptable level.

10.2 Scope

This program applies to all LPC employees and subcontractors performing work at any LPC job site or facility. The JHA program works in conjunction with Site-Specific Safety Plans (SSSPs) and Pre-Task Plans to provide comprehensive hazard identification and control across all operations.

10.3 Types of Hazard Analysis

LPC utilizes three levels of hazard analysis depending on the nature, scope, and duration of the work being performed:

Master JHAs

- LPC has developed master JHAs for all standard types of work and tasks performed by the company.
- Master JHAs are maintained by the Director of EHS and are reviewed and updated annually or whenever processes, equipment, or conditions change.
- The relevant JHAs for a given project shall be incorporated into the Site-Specific Safety Plan (SSSP) for that project.

Project-Specific and Task-Specific JHAs

- For large, complex, or non-routine tasks and projects, a project-specific or task-specific JHA shall be developed in addition to the applicable master JHAs.
- These JHAs address hazards unique to the specific project conditions, client requirements, site layout, environmental factors, or work methods that are not adequately covered by the master JHA.
- Project-specific JHAs shall be developed by the Director of EHS in coordination with superintendent or foreman the prior to the start of work.

Pre-Task Plans (Daily)

- A Pre-Task Plan shall be completed at the beginning of each work day on every job or project.
- The Pre-Task Plan is a brief, focused review of the day's specific tasks, associated hazards, and required controls. It is led by the foreman or crew lead and involves all crew members.
- Pre-Task Plans are also used for smaller, one-time tasks that do not warrant a full project-specific JHA but require hazard identification beyond what is covered in the master JHA.
- The Pre-Task Plan ensures that all personnel on site are aware of the day's work scope, potential hazards, required PPE, and emergency procedures before any work begins.

10.4 JHA Development

Each JHA shall be developed using the following process:

- **Select the job or task.** Identify the specific job, task, or operation to be analyzed.
- **Break the job into steps.** List the basic steps of the job in the sequence they are performed.
- **Identify the hazards.** For each step, identify all potential hazards including but not limited to falls, struck-by, caught-in/between, electrical, chemical exposure, heat/cold stress, ergonomic, noise, and environmental hazards.
- **Rank the Hazards.** Rank the hazards using Probability and Severity in a JHA form.
- **Determine the controls.** For each identified hazard, determine the appropriate controls using the hierarchy of controls: elimination, substitution, engineering controls, administrative controls, and personal protective equipment (PPE).
- **Review and approve.** The completed JHA shall be reviewed by the supervisor and, for project-specific JHAs, by the Director of EHS prior to implementation.

10.5 Integration with Site-Specific Safety Plans

The relevant master JHAs and any project-specific JHAs shall be incorporated into the Site-Specific Safety Plan (SSSP) for each project. The SSSP serves as the comprehensive safety document for the project and includes:

- All applicable master JHAs for the types of work to be performed.
- Any project-specific or task-specific JHAs developed for unique conditions.

- Client-specific safety requirements and site rules.
- Emergency action plans and contact information.
- Required permits (hot work, confined space, etc.).
-

The SSSP and associated JHAs shall be available on site at all times and accessible to all personnel.

10.6 Communication and Review

- All JHAs shall be reviewed with affected workers before the start of the applicable task. Workers shall have the opportunity to ask questions and provide input.
- JHAs shall be reviewed whenever conditions change, including changes in weather, equipment, personnel, work methods, or site conditions.
- If a new hazard is identified during the course of work, the JHA shall be updated immediately and all affected workers shall be notified.
- Workers are encouraged to identify hazards and suggest improvements to JHAs at any time. This input shall be considered during the review process.
- Prior to beginning work and as part of each daily Pre-Task Plan, the foreman shall identify any work being performed by other contractors or personnel in the same general work area. Hazards created by those activities that could affect LPC employees — including overhead work, chemical use, equipment movement, or concurrent hot work — shall be identified, evaluated, and controlled before LPC work begins. If a conflict cannot be adequately controlled, the foreman shall coordinate with the general contractor or site owner to establish a resolution before work proceeds.

10.7 Pre-Task Plan Procedures

The following procedures apply to all daily Pre-Task Plans:

- The foreman or crew lead shall conduct the Pre-Task Plan meeting at the beginning of each work day before any work begins.
- All crew members and any subcontractors working with the crew shall participate.
- The Pre-Task Plan shall address the specific tasks planned for the day, the hazards associated with those tasks, the controls to be implemented, required PPE, and any changes from the previous day's work.
- The Pre-Task Plan form shall be completed, signed by all participants, and retained on site.
- If the scope of work changes significantly during the day, an updated Pre-Task Plan shall be conducted before the new work begins.
- Completed Pre-Task Plans shall be submitted to the main office on a weekly basis.

10.8 Training

All LPC employees shall receive training on the JHA program as part of their initial safety orientation. Training shall include:

- The purpose and importance of JHAs and Pre-Task Plans.
- How to read and understand a JHA.
- How to identify hazards and appropriate controls.
- How to participate in and conduct Pre-Task Plan meetings.
- The employee's right and responsibility to identify hazards and request JHA revisions.

Refresher training shall be conducted annually and as needed. Training records shall be maintained by

the Director of EHS.

10.9 Documentation

- All master JHAs shall be maintained by the Director of EHS.
- Training records for JHA and Pre-Task Plan procedures shall be maintained by the Director of EHS.

11. GENERAL COMPANY SAFETY RULES AND STANDARDS

- Safety means being alert to unsafe acts or conditions. All employees are expected to comply with all safety practices at the jobsite and/or LPC premises.
- Horseplay and practical jokes will not be tolerated and could lead to dismissal.
- Gambling on the premises or jobsites will not be tolerated.
- If employees are new, or unfamiliar with new work conditions, they can do several things to keep the job safe.
    - Ask questions when in doubt.
    - Listen carefully to the LPC supervisor's instructions.
    - Watch and learn from others.
    - Participate at LPC safety meetings.

11.1 Drug and Alcohol Use

- See the Company Drug Free and Alcohol Free Workplace Policy in the Employee Handbook.

11.2 Smoking

- Smoking is not allowed inside any buildings. All smoking must be done at designated smoking areas.

11.3 Personal Conduct

- Attitude is a big part of safety. What employees do and say can affect other employees and it can have an overall impact on the job.
- Employees are expected to look professional on the job. Field personnel should dress according to Union and LPC standards, neat with white or high visibility shirt and white overalls unless the job requires other attire.

11.4 Housekeeping

- Good housekeeping is a company requirement. Keep the work area clean and uncluttered.
- Do not leave tools, cords, lines, hoses, or debris other items that could cause a trip hazard lying around the work site.

- Keep aisles and walkways clear of all obstructions and foreign objects (including water/oil or grease) on the walking surface.

- Material shall be stacked, blocked, interlocked, or limited in height so that it cannot slide, collapse, or fall over.

- Make housekeeping a part of the daily routine. A clean area is a safe place to work.

11.5 Additional Safety Standards

- Any potential safety problem, which is observed, should be reported to the LPC supervisor immediately. Problems that are not resolved by the LPC supervisor should be reported to:

    - Office personnel: immediate supervisor and Director of EHS
    - Service Center personnel: Service Center manager and Director of EHS
    - Field personnel: Superintendent and Director of EHS
    - If still no results, report it to the President at (253) 234-8050.

- Observe established handling procedures for those materials used that could constitute health hazards unless special precautions or controls are followed.

- Do not operate special equipment such as forklift trucks, pallet jacks, carts, and other special equipment unless trained to do so. If trained, follow the proper instructions and move at a safe speed.

- Be familiar with the primary and alternate exit routes from the work area in case evacuation would become necessary.

- Participate in any safety training provided by supervisory personnel.

- Observe all hazard warning signs and “No Smoking” signs posted at the jobsite.

- If required to take prescription drugs while at work, insure the LPC supervisor is aware of the type drug and any suspected side effects it might produce.

12. DRUG AND ALCOHOL FREE WORK PLACE

- Information on the Drug and Alcohol Policy is in the LPC Employee Handbook.

13. FIRST AID AND MEDICAL REQUIREMENTS

13.1 General

- Prior to start of work on a new job, a review of nearby medical facilities, ambulance service, and medical personnel to be available for prompt attention to the injured. Arrangements for special considerations will be made with these services as needed. Emergency response numbers will be made available and posted at the jobsite by the Foreman.

- When, in terms of time and distance, a medical facility or physician is not reasonably

accessible to a group of two or more employees for the treatment of injuries, at least one (1) employee on each shift shall be qualified to administer first aid and CPR.

- All foremen running projects and all journeymen painters shall hold a valid first aid/CPR card.
- Communication and transportation to effectively care for injured workers shall be provided.
- Identification shall be provided to readily denote location of all first aid stations.
- Where any part of the body may be exposed to toxic or corrosive materials, drenching and/or flushing facilities shall be provided in the work area for immediate emergency use.

13.2 First Aid Kits

- In all places where less than 100 workers are employed on any shift, 16 unit first aid kits shall be provided in the ratio of one for each 25 persons. The containers shall be weather tight and each type of item therein shall be maintained sterile, and shall be easily accessible to all workers.
- The superintendent shall determine before job startup if there are any specialized first aid requirements and obtain the authorization from the Director of EHS for use.
- The contents of the first aid kits will be checked by Service Center personnel before being sent out on each job. Once on site, they will be checked by the foreman or by a person with a valid first aid card.
- In an effort to prevent exposure to bloodborne pathogens, all first aid kits are equipped with CPR protective shield devices and latex gloves. Gloves are to be worn whenever administering first aid. CPR devices are to be utilized whenever administering cardiopulmonary resuscitation.
- First aid kits are located in all company vehicles and job boxes, as well as available to all upon request.

14. OFFICE SAFETY

- All employees will be informed of the locations of the various types of fire extinguishers in the office buildings and instructed on how to operate properly and safely.
- Know the location of and the proper use of fire extinguishers located on the jobsite.
- If an office machine requires the use of an extension cord, only one machine is to be attached to a cord. More than one may cause machines and/or cords to overheat and fail.
- Filing cabinets will be opened one drawer at a time. Cabinets of this type can tip over and result in serious injury.
- Filing cabinets will have all drawers closed when unattended.
- Copy machines will be maintained by trained personnel only.

- All personal injuries, regardless of the severity, will be reported at once to the immediate supervisor.
- A wall mounted first aid kit is located in all restrooms.
- Do not use chairs to stand on, use stepladders.

15. SERVICE CENTER SAFETY

- These safety standards will be strictly adhered to in the Service Center. Items of particular importance are as follows:
    - Dirty or oily rags, coveralls, paper, or other trash will be put in their respective containers.
    - No smoking allowed in the Service Center. Smoking will be permitted in designated areas only.
    - All company tools will be cleaned and returned to their proper storage place at the end of each shift.
    - Use safety glasses and hearing protection in designated areas.
    - All small parts will be put away when not in use. Workbenches, tables, and other work areas will be kept clean.
    - Air hoses, welding hoses and/or leads, and light cords will be hung up when not in use.
    - Full face shields will be used at all times when operating any equipment involving eye/face dangers from flying object.
    - Tools that are too badly damaged or appear for any other reason to be unsafe will not be used under any circumstances. When tools are found in this condition, tag for repair, notify the LPC foreman and give a written report to the LPC supervisor.
    - Removal of ground prongs on extension cords or hand held power tools strictly forbidden. Alteration or rendering inoperable pieces of safety equipment will be considered grounds for dismissal.
    - All personal injuries, regardless of the severity will be reported at once to the immediate supervisor or foreman. If medical attention is needed, dial “911” and give the operator details of the accident and location.
    - A wall mounted first aid kit is located at front counter of the Service Center.
    - A wall mounted first aid kit is located in the time card area of the Service Center.
    - Only trained and authorized operators are allowed to use forklifts.
    - Only trained and authorized operators are allowed to use cranes.

16. THE SAFETY 6

- From review of previous incidents and injuries, LPC has developed the Safety 6 to spotlight and create awareness of the areas that pose the greatest risk to worker safety.
- The Safety 6 topics will be used to train and improve the safety for all employees.
- The Safety 6 topics include:
    - **Vehicles and driver awareness**: Defensive driver safety for all employees that drive vehicles during the course of their work.
    - **Strains and sprains**: Lifting, twisting, stepping on debris or tools, or any other action(s) that could result in a muscle, tendon or ligament injury.
    - **Falls at any level**: 100% Fall protection at all times. Falls from not only heights, but also trips and falls on the working surface. Proper use of fall protection.
    - **Chemical hazards and respirators**: Knowledge of the chemicals we use or encounter, the dangers they may create and the proper steps to take to reduce or eliminate those risks. How and when to properly use and care for respirators.
    - **Manlifts**: Proper operation and use of manlifts, scissors lifts and other personal lifting equipment.
    - **Sharp objects**: Knives, razors blades, glass or any other tool that could cut a person.

Note: Sections in this manual that have the Safety 6 logo beside them are part of the Safety 6.

17. MOTOR VEHICLES

17.1 General

- "Motor Vehicle" shall mean any vehicle propelled by a self-contained power unit, except a vehicle designed solely for use on railways or other tracks, or equipment designed for exclusive use off the highway.
- Tobacco use, vaping, eating, drinking, texting and cell phone use without hands free devices is prohibited while the vehicle is being operated on public roads.
- All citations or tickets received by an operator of a company vehicle for any reason is the responsibility of the operator. All tickets or citations will be reported to the Director of EHS within twenty-four (24) hours.
- Every person regularly or occasionally operating a motor vehicle shall possess, at all times while operating such vehicle, a license or permit valid for the equipment being operated.
- If required to operate a company vehicle on the streets and highways, follow good defensive driving techniques and operate the vehicle as if it was a personal vehicle.

- Seat belt/shoulder harness use is mandatory for all vehicles.
- No vehicle shall be placed in service until it has been inspected by a mechanic and found to be in safe operating condition.
- All vehicles shall be inspected on a scheduled maintenance program.
- Vehicles in use shall be checked at the beginning of each shift.
- Vehicles not meeting safe operating conditions shall be removed from service, repaired or replaced, and re-inspected before being placed in service again.
- Company vehicles are provided for the sole purpose of expediting jobs. They should be used only for company business unless cleared with management. The employee using the vehicle will be responsible for all damages that occur when using a vehicle for personal use.
- The attitude of the driver is a reflection on LPC. Employees shall extend every courtesy to other vehicles or pedestrians.
- Vehicles shall be operated in accordance with state and city laws.
- Vehicles shall not be parked in front of taverns or cocktail lounges, except on business.
- No alcoholic beverages will be carried in company vehicles at any time. Vehicles shall not be driven after drinking.
- Vehicles are to be kept clean and neat at all times.
- Persons using company vehicles are responsible to see that routine maintenance jobs (oil change, lube, anti-freeze, etc.) are done as per manufacturer's recommendations. Maintenance and repairs shall be done by the company or at authorized repair shops.
- Any mechanical defects or malfunctions shall be reported to the company immediately.
- Gas and oil shall be picked up at the shop, but when purchased with a credit card, receipts must be turned in with time card.
- Drivers will not pick up hitchhikers or unauthorized riders.
- Vehicles are not to be loaned to anyone, including members of the employee's family.

17.2 Accidents Involving Vehicles, Equipment and/or Persons

- In case of any accident, make sure the LPC supervisor and/or Director of EHS is notified as quickly as possible, who, in turn, will notify proper insurance company representatives.
- All personal injuries, regardless of the severity, will be reported at once to the immediate supervisor or foreman.

- For vehicular accidents, set out flags or flares and/or reflectors.
    - When the disabled unit is near the crest of a hill or on a turn, proper allowances for distance must be made.
- Do not move injured persons unless necessary.
- Notify the police. If a police officer responds, obtain the name of the police officer and his badge number.
- Fill out **Form 905, Driver's Report of Accident**.
- Be sure to get names of all witnesses.
- Regardless of the facts, admit nothing, promise nothing, and do not argue. Be polite. Give your name, and company name, and offer to show your driver's license.
- Do not move, or allow to be moved, any vehicle involved in an accident unless approved by a supervisor or manager.
- Draw a quick sketch of accident on form provided in vehicle.
- Employees must report every accident (property damage or injury), however minor. Failure to report any accident will be cause for dismissal.

18. Driver and Vehicle Program

- Long Painting Company is committed to instituting and maintaining a Driver Safety Program. The goal of the Driver Safety Program is to take the proper steps to prevent loss of life, injury, or property damage to all employees and members of the general public. LPC recognizes that the responsibilities for safety and loss prevention must be shared by everyone.

18.1 Policies

- Long Painting will have a driver training program to promote safe driving practices including defensive driving.
- Managers will review all accidents and take all steps necessary to prevent a recurrence.
- Each preventable vehicle accident and unsafe driving report will be reviewed with the employee and his supervisor to emphasize management's commitment to safe driving practices.
- All preventable vehicle incidents will be reviewed with employees at Safety Toolboxes.
- Employees are responsible for all fines and moving violations they may incur while operating a vehicle for LPC.

18.2 Vehicle Operations

- Employees are not allowed drive any LPC vehicle unless they have a VALID Drivers' License and are familiar with LPC driving rules and policies.

- All employees must have their valid driver's license in their possession while operating a LPC vehicle.

- Only authorized personnel are allowed to operate LPC vehicles, special purpose vehicles, and trucks.

- Seatbelts are required for all people in company vehicles at all times.

- All vehicles must be maintained adequately for safe operation.

- All vehicles will be inspected daily by the driver before beginning operation, including gas, oil, and other fluid levels, lights, and brakes. If items are broken or not working correctly, the service center will be contacted and a determination will be made of how to get them repaired.

- LPC vehicles will not be operated under the influence of alcohol or drugs.

- Electronics or any handheld devices will not be used while operating the vehicle. Phone calls may be received or placed via Bluetooth and voice recognition technology or other hands-free method.

- Eating, applying makeup, reading or other functions that can be considered distracted driving will not be performed while operating an LPC vehicle.

- Vehicles will be operated in a manner for which they are designed, within their design limits, and in areas or locations for which they are designed to be operated.

- Vehicles will be operated so they are not damaged through neglect, misuse, improper driving techniques, or improper handling.

- An employee will operate LPC vehicles at all times in such a manner as to avoid injury to persons or damage to property.

- No employee will be authorized to ride or work from the bed or rear of a vehicle while it is in motion.

- Employees will adhere to all traffic laws and regulations when operating LPC vehicles.

- All tickets or citations must be reported within 24 hours to your supervisor, HR or the Director of EHS.

- Employees using LPC vehicles will exercise caution when transporting equipment, packages, paint or other materials. Items should be secure to prevent shifting or movement during vehicle operation or accident. Items must be tied down to prevent them from coming out of the vehicle while it is being operated.

18.3 Parking

- All employees will park their vehicles in a legal and proper manner. Employees will remove the keys and lock the vehicles, except when specifically instructed otherwise.

- Employees will not park on the wrong side of a street or highway, unless it is mandatory to park in such a location to perform a job.

- All signs, cones, lights, and warning devices, as required by law, will be used when vehicles are parked or in use in a public travel lane.

- Employees will use all emergency brakes and other parking safety methods when parking equipment.

- Electronic equipment (phones, computers, cameras, etc.) and other items of value will not be left in the vehicle where it can be seen from outside the vehicle.

18.4 Driver Requirements

- All drivers must be a minimum of 18 years of age.

- LPC will obtain a legible copy of the license of all drivers.

- Employees will notify their supervisor if their license is suspended, revoked, or expired.

- LPC will request an MVR for all new drivers that will be driving company vehicles or where operating their own vehicle for company business will be required. The MVR will be evaluated by the Director of EHS per the employee handbook before the driver is allowed to drive. Yearly, all the current MVR for all drivers will be reviewed per the employee handbook.

18.5 Driver Training

- LPC's goal is to have a process in place to ensure our employees are safe drivers. To meet this, LPC drivers will have training, including initial driver orientation and yearly refresher training.

- The initial driver training will occur before a new driver is allowed to operate a LPC vehicle.

- The training will be through the SafetySkills LMS and will be with interactive videos focusing on driver safety, distracted driving and defensive driving.

- Additional training through the year will be done through safety toolboxes.

- Refresher training will be done if a driver has an at fault accident.

18.6 Accident Investigation

- All accidents, regardless of how minor, must be promptly reported. Any damage to Company property or vehicles or the property or vehicles of others must also be promptly reported to the employee's supervisor.

- Personal injuries resulting from an auto accident must be reported immediately to employee's foreman or supervisor.

- In the event of an accident involving a Company vehicle, the employee shall complete the "Driver's Report of Accident" form. The form shall be fully completed and filed out at the

scene of the accident in accordance with instructions in the form. The completed form shall be immediately turned in to the employee's supervisor.

- If a police officer is present at the accident, obtain their name and badge number.

Other information about the driver program, including the MVR point system, is available in the employee handbook.

19. COMMERCIAL DRIVER'S LICENSE

- LPC's vehicle fleet includes passenger autos, pickups, vans, and delivery trucks, up to and including combination tractor and trailer equipment. Employee duties may necessitate driving some or all of these types of vehicles.

- Drivers who operate any of the vehicle types listed below are considered commercial drivers and must comply with this program.

    - Any vehicle with a Gross Vehicle Weight (GVW) rating of 26,001 or more lbs.
    - Any vehicle designed to carry 16 or more persons to include the driver regardless of weight.
    - Any vehicle carrying hazardous materials that require placarding of the vehicle, regardless of the vehicle weight.

  Note: The GVW rating is the rating assigned by the manufacturer of the vehicle.

- The CDL will show the class of vehicle the driver may operate and any special endorsements for which the driver has qualified. The classes, endorsements, and restrictions are listed below.

19.1 CDL License Types

- **Class A**: Combination vehicles where the combined GVW is 26,001 or more lbs. and the GVW of the vehicle(s) being towed is over 10,000 lbs.

- **Class B**: Single vehicles with GVW less than 26,001 or more lbs. These vehicles may also tow trailer with a GVW of 10,000 or less lbs.

- **Class C**: Any vehicle with a GVW less than 26,001 lbs. if designed to carry sixteen (16) or more persons to include the driver, or transporting hazardous materials requiring the vehicle to be placarded.

19.2 Endorsement Types

(T): Required when operating a double or triple trailer combination.
(P): Required when operating passenger vehicle designed to carry sixteen (16) or more persons to include the driver.
(N): Required when operating a tank vehicle designed to carry liquids or gases.
(H): Required when operating a vehicle carrying hazardous materials requiring placarding.
(K) : Restricts operators to vehicles without air brakes.

- Any person operating a vehicle or combination of vehicles with a GVW of over 10,000 and not more than 26,000 must have a medical evaluation every two (2)

years and have a Driver Qualification File (DQF) maintained at with the Fleet Manager.

- Anyone not having a DQF will be prohibited from operating vehicles over 10,001 lbs.

20. STRETCH AND FLEX/LIFTING

20.1 Stretch and Flex

- The Stretch and Flex Program has been developed to help employees warm up before beginning their daily jobs.
- Each person is expected to warm up each day by participating in the Stretch and Flex Program.

20.2 Lifting

- Employees should use mechanical lifting devices wherever possible.
- Employees should only lift what they can safely handle. Size up the load before lifting. Get help if necessary.
- Plan the lift. Make sure the path that is about to be used when lifting is clear of items.
- How to lift:
  - Make the strong leg muscles do the work by crouching under the load and keeping the back as vertical as possible.
  - Face the load, and keep it close to the body,
  - Lift gradually with arms slightly bent.
  - Do not lift from a twisted or awkward position.
  - Firm footing and a solid grip are equally important.
- Keep hands and feet in such position as to protect them from being crushed if load is dropped or strikes other objects.
- Do not attempt to catch falling objects! Wait until the object comes to rest, and then begin from there.
- When handling material with another, all shall agree on who is in charge and the signals to be given. Load shall not be moved or released until all are ready.
- When carrying extended loads such as pipe, lumber, or ladders, keep front end high and watch carefully to avoid striking objects or other persons.
- If an object is too bulky to allow an employee to watch where they are going, it is too big to carry alone. Get help or use transporting equipment.
- It is easier and safer to push an object instead of pulling it.
- Do not walk backwards.

- Do not attempt to carry anything in the hands or under the arms while using vertical ladders. Hand lines for raising or lowering these objects are available in the Service Center.

- No power tool of any description shall be raised or lowered to or from decks or staging by the air hose or power cable.

- Never throw tools or materials to another worker.

- In stacking material or placing equipment, see that it is securely placed in a stable position to prevent falling.

21. FALL PROTECTION

LPC has a Zero Tolerance Policy for fall protection violations; employees violating fall protection requirements are subject to immediate dismissal. All employees are informed of this policy during the initial hiring orientation process.

21.1 Purpose

- The purpose of this document is to provide the requirements relating to fall protection for service and construction operations.

21.2 Definitions

Anchorage (Anchor Point): A secure point of attachment for lifelines or lanyards that is capable of withstanding the loads.

Body Belts: Body belts or safety belts are prohibited and shall never be used by an employee as a personal fall arrest system.

Competent Person: An individual knowledgeable of fall protection equipment, including the manufacturer's recommendations and instructions for the proper use, inspection, and maintenance thereof; and who is capable of identifying existing and potential fall hazards; and who has the authority to take prompt corrective action to eliminate those hazards.

Control Zone: The area between an unguarded edge and a defined warning line that is set back a safe distance.

Deceleration Device: Any mechanism, such as a rope grab, rip stitch lanyard, specially woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc. which serve to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

Deceleration Distance: The additional vertical distance an employee falls from the point at which the deceleration device begins to operate. It is measured as the distance from the employee body harness attachment point at the moment of activation of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

Fall Arrest: Stopping a fall, which has occurred, before the worker hits the surface below.

Fall Distance: The distance from the point where the worker would fall to the point where the fall would be arrested.

Fall Restraint: The use of a work restraint system to prevent workers from falling, such as a system to prevent workers from travelling to an edge from which they could fall.

Free Fall: The distance from the point where the worker would begin to fall to the point where the fall arrest system begins to cause deceleration of the fall.

Full Body Harness: Straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system. Must ANSI Approved.

Horizontal Lifeline: A rail, wire rope, or synthetic cable that is installed on a horizontal plane between two anchorages and used for attachment of a worker's lanyard or lifeline while permitting the worker to move horizontally. Must ANSI Approved.

Lanyard: A flexible line of webbing, rope, or cable used to secure a full body harness to a lifeline or anchor. Must ANSI Approved.

Lifeline: A vertical line from a fixed anchor or between two horizontal anchors and used for attachment of a worker's lanyard, full body harness, or other device. Must ANSI Approved.

Lower Level: 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, equipment, structures, or portions thereof.

Personal Fall Protection System: A fall protection system, which uses a full body harness to secure each worker to an individual anchor by means of lanyards, vertical lifelines, or other connecting equipment.

Rope Grab: A deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest the fall of an employee. Must ANSI Approved.

Self-Retracting Lifeline (Yo-yo): 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. Must ANSI Approved.

Shock Absorber: A component whose primary function is to dissipate energy and limit deceleration forces, which are imposed on the body during fall arrest. Must ANSI Approved.

Unprotected Sides and Edges: Any side or edge (except at entrances to points of access) or a walking/working surface where there is no wall or guardrail system at least 39” in. 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 but not including ladders, vehicles, or trailers, on which employees must be

located in order to perform their job duties.

21.3 Responsibility

21.3.1 Employees

- Successfully complete the required training in the requirements of the fall protection program.
- Use workplace-specific job procedures provided when working in fall hazard locations.
- Understand the meaning of the Zero Tolerance Policy.
- Review the pre-job Fall Protection Work Plan.
- Inspect equipment before each use.
- Notify the immediate supervisor of any component found to be defective. If it cannot be repaired, it shall be rendered unusable and disposed of or tagged out of service.
- Maintain and store all fall protection system components per manufacturer recommendations.
- Understand the requirements and use of the fall protection system with fall restraint and/or fall arrest equipment.
- Use only company supplied or approved equipment.
- Understand the requirements for working on a fixed edge.
- Notify the Supervisor for assistance prior to performing the work if an adequate anchor point is not available or is questionable.

21.3.2 Supervisors (Competent Person)

- Identify workplace fall hazard.
- Complete **Form 931, Fall Protection Work Plan**.
- Hold pre-job meeting with the crew to educate them about applicable fall hazards and specific fall protection requirements. Provide training in the use, care, and inspection of fall restraint and fall arresting equipment.
- Have employees acknowledge that they understand the requirements by signing the **Employee Acknowledgment Fall Restraint Arrest Training, Form 909**.
- Ensure employees comply with fall protection instructions after workplace fall hazards have been identified.
- Provide for prompt rescue in case of a fall.
- Ensure non-compliant employees are immediately terminated.
- Evaluate compliance during inspections and audits.
- Ensure that all equipment required by this procedure is available for use and in good condition.
- Ensure that fall protection equipment is not used for anything other than fall protection.
- Provide for proper anchorage points.

21.3.3 Director of EHS

- Train Supervisors to comply with the Fall Protection Program.
- Assist in inspecting fall protection equipment (in conjunction with designated Service Center employee's) brought in after a project has been de-mobilized.
- Periodically review the Fall Protection Program and make necessary changes.
- Periodically review the Fall Protection Work Plans from field operations.
- Inspect field operations to ensure compliance with the program.

- Investigate all accidents to include near misses, injury, and serious incidents. Investigation results shall be shared with all field employees.

21.3.4 Service Center

- Have designated qualified inspector(s) for inspecting fall protection equipment.
- Separate fall protection equipment received from field operations for inspection by the Service Center designated employee and/or Director of EHS.
- Appropriately, store fall protection equipment after inspection separately from other rigging equipment.

21.4 Training

- Initial fall protection training will be performed during an employee's orientation process.

- Site-specific training shall be conducted and documented for each project that poses such fall hazards over 4' ft. using **Form 931, Fall Protection Work Plan.**

- Annually, all employees using fall protection are required to attend personal fall arrest systems and components training to ensure proper inspection, use and fit testing.

    - Employees will sign **Form 909, Employee Acknowledgment Fall Restraint Arrest Training**.
    - Training will be performed by a competent person or approved vendor.

- Retraining shall be conducted after (but not limited to) one of the following situations occur:

    - Incident - subsequent to any type of an incident involving fall protection equipment or procedures, retraining shall take place to address root cause(s).
    - Any situation that involves non-compliance with company policy or a regulatory mandate.
    - Significant/pertinent job site changes that impact fall protection systems that are in place.
    - Whenever new equipment or components are included into the project.

21.5 General

- Fall protection system(s) must be in place when work is being performed at elevations greater than 4' ft., or where a fall from a height less than 4' ft. involves an unusual risk of injury.

- A pre-job assessment is to be conducted prior to beginning the job. **Form 931, Fall Protection Work Plan** shall be reviewed and approved prior to starting work. A copy of that plan will remain on site for the duration of the job.

- Surfaces on which employees are to work must have the strength and structural integrity to support employees safely.

- Fall protection systems must be used whenever working where exposed to a 4' ft. or greater fall risk. This includes all edges as well as holes or openings in surfaces or walls, hoist ways, ladder accesses or skylights. Fall protection systems must be

used when work is required within 15’ ft. from an edge where there is at more than 4’ ft. to the lower level.

- Employees on walking/working surfaces shall be protected from falling through holes more than 4’ ft. above a lower level by personal fall arrest systems, covers, or guardrail systems erected around such holes.

- Each employee on a walking/working surface with an unprotected side or edge that is 4’ ft. or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, positioning device, warning line system, safety monitoring system, travel restraint system or personal fall arrest systems.

- The following factors are key considerations to provide maximum fall protection.

    - **Warnings**: Always read all instructions and warnings contained on the product and packaging before using any fall protection equipment.
    - **Inspection**: All fall protection equipment must be inspected prior to each use.
    - **Training**: All workers should be trained by a Competent Person in the proper use of fall protection products.
    - **System Components**: Only components that are fully compatible with one another should be used.

- After a fall occurs, all components of the fall arrest system should be removed from service.

- Fall protection systems may include (in order of priority):

    - Guardrails
    - Personal fall protection systems with related equipment
    - Horizontal life lines
    - Warning line system

21.6 Fall Protection Systems

21.6.1 Fall Restraint

- Restraint protection is rigged to allow the movement of employees only as far as the sides and edge of the walking/working surface. Temporary anchorage points used for fall restraint must be engineered to be capable of supporting four times the intended load.

- Inspect fall restraint components before each use for wear, damage, and other deterioration. Remove defective components from service when the component’s function or strength has been adversely affected and replace defective components with new ones.

- Fall restraint components must be compatible; always read and understand the manufacturer’s recommendation.

- Always tie restraint lines, independent of other lines, to the anchorage point.

21.6.2 Fall Arrest

- Employees exposed to a hazard of falling 4’ ft. or greater (without restraint) must wear fall arresting equipment.

- Employees must inspect components of the fall arrest system before each use for wear, damage, and other deterioration. Defective components are removed from service when the components' function or strength has been adversely affected.

- Fall arrest equipment must meet the following minimum criteria:

    - Vertical lifelines must have a tensile strength specified by the manufacturer as 5,000 lbs.; only one employee shall be attached to any one vertical lifeline at any time.
    - Horizontal lifelines must be capable of supporting a fall impact load of at least 5,000 lbs. per employee using the lifeline, applied anywhere along the lifeline.
    - Lanyards must have a minimum tensile strength of 5,000 lbs.
    - Full-body harness systems must be secured to anchorage points capable of supporting 5,000 lbs. per employee.
    - Personal fall arrest systems that were subject to impact loading must be removed from service.
    - The system must be rigged to minimize the free fall distance, with the maximum free fall distance of no more than 6’ ft.; and that the employee does not contact the lower level.
    - Protect safety lines and lanyards against cuts or abrasion.
    - Never wrap lanyards around sharp or rough anchor points. Use a cross arm strap or other compatible anchorage connector to connect to the lanyard’s snap hook.
    - Connect only one locking type snap hook to any one D-ring.
    - Locking type snap hooks must not be connected to one another.

21.6.3 Anchor Points

- Anchorages for full body harness systems must be capable of supporting (per employee):

    - 3,000 lbs. when used in conjunction with:

        - A self-retracting lifeline that limits the maximum free fall distances to 2’ ft. or less; or
        - A shock-absorbing lanyard that restricts the forces on the body to 900 lbs. or less.

    - 5,000 lbs. for all other personal fall arrest system applications, or they must be designed, installed, and used:

- Anchorage points that must be installed immediately prior to use should be designed by a registered professional engineer with experience in fall protection systems, or another qualified person with appropriate education and experience. This responsibility should be borne by the customer. If the anchor is installed by LPC directly or through a subcontractor, it must be removed at the completion of the project to prevent non-LPC employees or subcontractors from using it.

- Anchor points used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms.

- Anchor points will be capable of supporting at least 5,000 lbs. (3,000 lbs. for a self-retracting lifeline) per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of

at least two and under the supervision of a qualified person.

- Anchor points may be devised from existing structures, such as steel members or I-beams if an applicable anchorage connector is available for the connection.
- Guardrails, if they have been designed for use as an anchor point; or masonry or wood members can only be used if the attachment point is substantial and precautions have been taken to assure that bolts or other connectors will not pull through.
- A qualified person should be used to evaluate the suitability of these "make shift" anchor points with a focus on proper strength.
- Anchor points should be as directly above a person as possible to minimize exaggerated swinging during the fall.
- The hazards of obstructions in the path of the fall should be considered when locating the anchor point (tie-off) to prevent injury due to impact before the system fully arrests the fall.
- The strength of an eyebolt is rated along the axis of the bolt and its strength is greatly reduced if the force is applied at an angle to the axis. The greater the angle, the larger the bolt dimension must be.

21.6.4 Safety Harnesses, Lanyards and Lifelines

- 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 and destroyed.
- Make sure the safety harness is tightened snugly.
- Test the self-tightening devices (yo-yos) daily to make sure they tighten upon applying a load.
- Full body harnesses are the only type of employee worn devices that are approved for use. Body belts are prohibited for employee use at any time.
- D-rings and snap hooks shall have a minimum tensile strength of 5,000 lbs.
- Snap hooks shall be a locking type design and used to prevent disengagement of the snap hook (roll out).
- Never use non-locking type snap hooks.
- Never disable or restrict the locking keeper or alter connecting devices in any way.
- Make sure that the keeper of a snap hook is never load bearing.
- Fall protection devices should be attached to the back D-ring of a full body harness.
- Side, front, and chest D-rings are for positioning only.
- Shoulder D-rings are only meant for retrieval.

- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 lbs.
- Do not attach lanyards to each other to lengthen a working distance. Only use a maximum of one lanyard for the correct and minimum length needed for the application.
- Never use a lanyard with a snap hook clipped onto itself.
- Tie-off using a knot in a lanyard or lifeline (at any location) can reduce the lifeline or lanyard strength by 50 percent or more and should not be used. The appropriate anchor point connector should be used to eliminate the need for a knot.
- Tie-offs where the line passes over or around rough or sharp surfaces shall have effective padding of the surfaces or an abrasion-resistant strap around or over the problem area.
- When vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against cuts or abrasions. All locations where they go over a corner, they will be protected.
- Lanyards or Self-Retracting Lifelines that could go over an edge, will be edge rated.
- Self-retracting lifelines and lanyards that automatically limit free fall distance to 2’ ft. or less shall be capable of sustaining a minimum tensile load of 3,000 lbs. applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2’ ft. or less, rip stitch, tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 lbs. applied to the lifeline or lanyard in the fully extended position.
- Harnesses and Lanyards, when stopping a fall, shall:
    - Limit maximum arresting force on an employee to 1,800 lbs. when used with a body harness.
    - Be rigged such that an employee can neither free-fall more than 6’ ft. nor contact any lower level.
    - Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5’ ft.
    - Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6’ ft., or the free fall distance permitted by the system, whichever is less.
- Employees with a combined person and tool weight of 310 lbs. or more, the fall protection system design criteria must be appropriately modified to provide the proper protection for such heavier weights.
- Body 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. Equipment will be destroyed and disposed of properly. New personal fall arrest systems and components will be issued to the employee.

- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists.

- Where considerable horizontal movement of the employee is required by the work, and continuous disconnecting and reconnecting to anchor points may not be practical, a horizontal lifeline can be utilized if it has been designed by a registered professional engineer with experience in fall protection systems, or another qualified person with appropriate education and experience.

21.7 Inspection and Maintenance Procedures

- Inspection

    - Only trained personnel are to use any type of fall protection equipment.

    - Always inspect the fall protection equipment every time BEFORE use; (follow the manufacturer's instructions at all times) inspections shall:

        - Check buckles to assure proper and secure connections.
        - Check harness, lanyard, and lifelines for frayed edges, broken fibers, pulled stitches, cuts, burns, and chemical damage.
        - Check that each snap hook and carabineer freely engages the D- ring or anchor point and that its keeper is completely closed and locked.

- Maintenance

    - Storage areas must be clean, dry, and free of exposure to fumes or corrosive elements.

    - Harnesses and lanyards may be cleaned in accordance with the manufacturer's instructions.

    - To store a harness, hang it by the back D-ring. Keep from exposure to direct sunlight or UV lighting.

21.8 Personal Fall Arrest Systems

- Possible free fall distances should be kept to a minimum.

- The presence of acids, dirt, moisture, oil, grease, etc., and their effect on the system, should be evaluated. Hot or cold environments may also have an adverse effect on the system.

- Where lanyards, connectors and lifelines are subject to damage by work operations such as welding, chemical cleaning, and sandblasting, the component should be protected, or other securing systems should be used.

- Horizontal lifelines shall be designed, installed and used, under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of two.

- Do not tie any knots in any fall arrest component, such on the lanyard.

- Once a fall protection system is in use, its effectiveness should be monitored.

- A system cleaning and maintenance program may be necessary.

- Replace all worn components of a fall arrest system with identical replacement components unless evaluated by a competent person.

- Fall arrest systems must be inspected before each use for the following:

    - Significant defects such as cuts, tears, abrasions, mold, or undue stretching.

    - Damage due to deterioration; contact with fire, acids or other corrosives; distorted hooks or faulty hook springs; tongues unfitted to the shoulder of buckles; loose or damaged mountings; or non-functional parts.

    - Components found with any damage or defects must be taken out of service, and marked or tagged as unusable, destroyed and disposed of.

- After a fall has occurred, all components of the fall protection system and equipment that was being used during the fall will be replaced with new equipment. All equipment taken out of service will be physically cut up such that no one can re-use the equipment again. The equipment will then be disposed.

21.9 Rescue

- LPC shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

- Rescue Planning: A rescue program should be established prior to using fall protection equipment as part of the jobsite Fall Protection Work Plan.

21.10 Warning Line System

- A Warning Line System is used for low pitched, open sided surfaces. Warning lines are erected on all unprotected sides and edges of the work.

- The use of a Warning Line System is prohibited on a surface where the slope exceeds 4” in. vertical and 12” in. horizontal or for scaffold erection and removal.

- A minimum distance from the edge of 15’ ft. is used to protect employees not wearing fall arrest or fall restraint equipment;

- The Warning Line System should be expanded during an adverse condition, (e.g. slippery roof) or when working at an additional elevation (e.g. on a stepladder).

- Employees working within the Control Zone must use appropriate fall arrest or fall restraint equipment.

- If work is to be conducted inside the Control Zone, warning lines must be installed to identify the Control Zone. The lines must be highly visible and maintained at a height of between 36” in. and 44” in.

- The warning line system shall consist of wire, rope, or chain supported on stanchions, or a method that provides equivalent protection.

- After being erected with the rope, or chain attached, stanchions shall be capable of resisting without tipping over, a force of at least 16 lbs. applied horizontally against the stanchions 30” in. above the roof surface, perpendicular to the warning line and in the direction of the edge.

- Each line shall be flagged or clearly marked with high visibility materials at intervals not to exceed 6’ ft.

- The rope, wire, or chain must have a minimum tensile strength of 200 lbs.

21.11 Safety Watch System

- The safety watch system may be used on roofs with a pitch less than 4:12 and is for one employee doing repair work.

- The person performing the watch:

    - Is a competent person for fall protection.
    - Has full control over the fall protection of the work.
    - Has a clear and unobstructed view of the worker.
    - Can communicate with normal voice communication.

- The employee acting as the safety watch must only watch this one person doing the work. No other people can be on the roof.

- The person performing the task must follow the directions of the person performing the watch.

21.12 Falling Object Protection

- Falling object protection shall be planned into any work that creates a hazard.

- Anytime work activities pose a risk of objects falling into an area accessible by the public, overhead and/or falling object protection shall be implemented.

- This may include the tethering of tools and falling object netting.

- All tools, brushes, rollers, hard hats, radios, phones, ladders or other materials that can come loose shall be secured with the use of a tool lanyards or rope.

- When possible, controlled access zones should be provided below overhead work and warning signs should be posted.

22. FLOOR OPENINGS AND COVERS

22.1 Floor Openings

- All covers shall be capable of supporting, without failure, at least 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 prevent accidental displacement by the wind, equipment, or employees.

22.2 Skylights

- Skylights present a fall hazard when they do not have a barricade or protection cover over them.
- Fiberglass panels are similar to skylights when used in corrugated metal roof surfaces on rooftop applications.
- Employees must recognize this risk and exercise caution when walking on rooftops to avoid stepping onto skylights if not marked.
- If working around skylights that do not have protection over them or a barricade around them, personal fall protection must be worn.

22.3 Wall Openings

- Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6’ ft. or more above lower levels and the inside bottom edge of the wall opening is less than 39” in. above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

23. LADDER SAFETY

- For this procedure, ladders shall be considered fixed, portable. Portable ladders may be extension/straight ladders, stepladders or platform ladders. Extension/straight ladders are hereafter referred to as extension ladders in this procedure.
- If ladders or stools are required to be used, place them on a stable base and insure they are secured or held to prevent slipping, falling, or tripping.
- Alternatives to reduce or eliminate the use of ladders shall be identified and implemented.
- Where the use of other work equipment is not feasible because of the low risk and the short duration of the job or unalterable features of the work site, the use of ladders shall meet the requirements outlined below.

23.1 Ladder Duty Rating

- Ladders are designed and constructed to safely hold up to a specific amount of weight. More demanding applications require heavier grade ladders.

- The weight limit includes the employee's personal weight, protective equipment, tools and any other supplies that will be brought up the ladder.

- Check the ladder to make sure it is rated for the work and loads being used.

23.2 General Ladder Safety

- Ladders shall not be used for purposes other than the original intention.

- Observe all warning signs on ladders.

- All ladders purchased and used by LPC meet or exceed OSHA/ANSI specifications.

- All ladders shall be of such construction (wood, fiberglass) that when used in areas of energized equipment, they will not conduct electricity.

- Chairs, tables, trashcans, upside down buckets etc. shall not be used as ladders.

- Employees shall not place blocks, bricks or other loose material under a ladder to adjust for uneven conditions.

- Ladders should not be placed on moveable bases such as boxes, tables, or trucks.

- Check for overhead clearance and ensure there are no live electrical wires.

- Pitch a portable ladder ¼ the distance of its length. For example, the feet of a 16' ft. ladder should be placed 4' ft. from the base of a wall.

- Ladders shall not be placed for use in front of a door, unless it is locked or guarded.

- Ladder shall not be used outdoors in extreme weather (i.e. high winds, heavy rains, thunderstorms, snow/ice).

- Use a clean, dry ladder free from defects. Do not use a ladder with broken or missing rungs or with a split side rail.

- Never use a ladder in a horizontal position as a walk-plank or scaffold.

- Never tie two ladders together. If a ladder is too short, get a taller ladder.

- Any employee working on a ladder at a height greater than 20' ft. shall use appropriate fall protection.

23.3 Climbing a Ladder

- Face the ladder and use both hands to grip the rungs firmly. Do not grip the side rails while climbing.

- Be aware that the body's center of gravity is away from the vertical ladder.

- Climbing a ladder shall be done maintaining three-point contact (two feet-one hand, two hands-one foot).
- Do not, at any time, release the handgrip from the rung until the other hand has established its grip on the ladder.
- If wearing gloves, ensure the gloves have a firm grip. Do not climb using gloves with smooth palms.
- Place feet firmly on each rung.
- Clean muddy or slippery boot soles before mounting a ladder. Avoid climbing a ladder with wet soles.
- Do not hurry up or slide down a ladder.
- Light tools are carried in a shoulder bag or holster attached to a belt so that both hands are free for climbing. Heavy or bulky loads shall not be carried up or down ladders. A pulley or other lifting device shall be used.
- Conduct work without stretching the center of the body beyond the ladder rail and maintain the following points of contact at all times: Two feet/one hand, two feet/two knees or shins.
- Never climb higher than the fourth rung from the top on straight or extension ladders, or the second tread from the top of stepladders.

23.4 Fixed Ladders

- LPC personal shall not use the fixed ladder if it is installed to a height of 20’ ft. or greater and is not provided with one of the following forms of fall protection:
    - Ladder safety cage; or
    - Personal fall restraint system
- Check the ladder to be sure it is securely anchored. If the anchoring is loose such that the ladder may pull out or fall, the ladder is not to be used.
- When there is another person using the ladder, wait until that person has exited before ascending or descending the ladder.
- Use the appropriate safety devices (e.g., restraint belt, traveling fixture) where applicable.

23.5 Portable Ladders

- Portable ladders shall be labeled with appropriate manufacturer’s labels such as load capacities, rating, warnings, and inspection criteria.
- Ladders shall not be loaded beyond the rated load capacity.
- Portable Ladders exceeding 28’ ft. or 65 lbs. require two-person handling.

23.6 Portable Extension Ladders

- Use the ladder on a level and stable surface.
- Portable ladders must be tied, blocked, and equipped with safety shoes or otherwise anchored to prevent slipping.
- Place the extension ladder at a 1 to 4 ratio.

  Note: A quick way to check for a 4:1 ratio is to place the toes of the boots against the bottom of the ladder. Stand erect and extend the arms straight out. The palms of the hands should touch the top of the rung that is at shoulder level.
- When setting up an extension ladder, ensure that the top of the ladder is at least 1 meter (3’ ft.) past the landing.
- To set-up an extension ladder:
  - The feet should be blocked.
  - Pick up from the unblocked end and pushed toward the block by moving the hands up the rungs, hand over hand.
  - Move the bottom back into position (4:1 ratio).
  - Raise the ladder to the correct height.
  - Fully engage both extension ladder locks over the rungs and place it against the wall or structure.
- Do not stand higher than the fourth rung from top of an extension ladder.
- When using an extension ladder, tie the top of the ladder to a fixed object or have it held by another person. It is permissible to climb the ladder initially in order to get to the top to tie the ladder off and to untie the top of the ladder prior to descending for the last time.

23.7 Portable Stepladders

- Stepladders may only be used in an "A" position, with the legs locked in place. Do not use as a straight ladder.
- Use the stepladder on a level and stable surface.
- Fully open and lock both spreaders on stepladders.
- Do not stand on the top two steps of a stepladder, excluding the cap.

23.8 Inspections

- Employees shall visually inspect all ladders before each use.
- Ladders will also be inspected during the demobilization and mobilization process.
- Ladders with defective side rails will be taken out of service and destroyed.
- Any ladder that is damaged or that is identified as having a defect during an equipment inspection shall be red-tagged and removed from service immediately.

- Red-tagged equipment is to be returned to the Service Center for repairs or to be destroyed.

23.9 Training

- All new employees will be trained in new employee orientation regarding the safe use of ladders. In addition, all employees will receive annual training in ladder safety.
- Training shall include but not be limited to the following subjects:
  - The proper use, inspection, placement and care in handling of ladders.
  - The maximum intended load carrying capacities of ladders used.
  - Users of portable ladders shall be familiar with the instruction labels found on the various parts of the ladder. These labels have information on the weight limits, highest working levels, safety instructions, proper ladder set up and ladder usage.
- Retraining will be done when:
  - Changes occur in the workplace that render the previous training obsolete.
  - Observation of the use of ladders indicate that the employee has not retained the understanding or proper ladder use.
- Training records will be kept for three (3) years.

24. SCAFFOLDS

- When work cannot be performed safely and efficiently at elevated locations from a ladder, scaffolding must be used
- Employees will not assemble or use a scaffold unless they have been trained and authorized to do so.
- Scaffolds must be designed by a qualified person.

24.1 Setting up Scaffolds

- Only metal frame, free standing commercially available scaffolding with platforms or scaffold planking are allowed for use.
- No scaffold shall be built, moved, altered, or dismantled except by experienced and trained employees under the supervision of a Competent Person.
- All scaffolds and scaffold supports shall be built to support expected loads. No load in excess of the designed capacity shall be permitted.
- Scaffolds shall be capable of supporting four times their maximum intended load.
- The footing or anchorage for scaffolds must be level, sound, rigid, and capable of carrying its intended load without settling or displacement. Objects such as boxes, barrels, bricks, or concrete blocks shall not be used.

- Guardrails, midrails and toe-boards shall be installed at all open ends and side for platforms 10’ ft. or more above the ground or floor level.
- If there is not a guardrail system, then a personal fall arrest system must be used.
- All planking shall be scaffold grade as recognized by grading rules for the species of wood used.
- All planking or platforms shall be overlapped over a support (minimum 12” in.) or secured from movement.
- Scaffold planks shall be cleated or restrained by hooks or extend over their end supports not less than 6” in. or more than 18” in.
- An access ladder or equivalent safe access shall be provided. The ladder rails must extend at least 3’ ft. above the platform.
- When wheels are used on scaffolds, they must be lockable to prevent any movement while a worker is on the scaffold.

21.2. Using Scaffolds

- Scaffolding must be inspected prior to use each shift.
- Scaffolds shall be maintained in safe condition. Scaffolds shall not be altered or moved horizontally while they are in use or occupied.
- Do not allow others to use LPC scaffolding.
- Employees will not use other contractor’s scaffolding unless they have gone over the checklist provided by the LPC superintendent.
- Scaffolds must be kept in good repair.
- When using rolling scaffolds, lock all casters when scaffold is being used.
- Do not allow debris to accumulate on the platforms.
- Do not move rolling scaffolds with someone on it.
- If the height of the scaffold is more than three times the least base dimension, the scaffold should be secured to prevent tipping.
- All working levels must be fully planked.
- Employees will use a personal fall arrest system when they are unable to stand on the floor of the scaffold.
- If material must be handled, raise or lower it with a rope.

24.2 Training

- All employees must complete the LPC web based training modules on scaffolding

prior to using scaffolds. This training has been developed by qualified persons and addresses hazards in the area, electrical, falling objects hazards, fall protection, design and use and load capacity.

- Employees must review the assembly and use requirements for the scaffold prior to using the scaffold assembly.
- Employees must go through the site-specific orientation for scaffolding before using it.
- Employees must be retrained if their work around the scaffolding is inadequate or the hazards of the scaffolding change.

24.3 Inspections

- A Competent Person must inspect the scaffold prior to each work shift and sign a green tag on the scaffold signifying it is safe to use.
- Any scaffold damaged or weakened from any cause shall be immediately repaired or tagged out with a “Do Not Use” tag until repairs have been completed.

25. SWING STAGE SCAFFOLDS

- If employees are subject to dizziness or seizures, or are bothered by heights, they cannot operate swing stage scaffolds.
- Swing stages must be installed by trained and experienced personnel under the supervisor of a Competent Person.
- The swing stage installation must be approved by a Competent Person before use.
- LPC will have an emergency rescue plan in place before beginning to use a swing stage.

25.1 Check the Equipment and Jobsite

- Insure that there is safe access to the swing stage assemblies at all times.
- Check for electrical conductors in the work area. If there are any that could be contacted during the job, call the electrical utility company to de-energize and lockout the conductors during the time work is being performed.
- Barricade immediately below and around the work area to keep individuals out of danger from any falling objects.

25.2 Wire Rope and Hardware Guidelines

- Use only wire rope and attachments as specified by the hoisting machine manufacturer.
- Do not use wire rope that is kinked, bird-caged, corroded, undersized, or

damaged in any way.

- Look for broken cable strands. The cable must be replaced if there are more than three broken strands in one full wind of cable.
- No splicing of cable is permitted.
- Be sure that wire rope is long enough to reach to the lowest possible landing without the rope passing through the hoist.
- Clean, lubricate and handle wire rope in accordance with the wire rope or hoist manufacturer's instructions.
- Coil and uncoil wire rope in accordance with the wire rope or hoist manufacturer's instructions in order to avoid kinks and damage.
- Use thimbles at all wire rope suspension terminations.
- Use J-type clamps or swaged fittings to fasten wire ropes. Do not use U-Clamps.
- Tighten wire rope clamps in accordance with the clamp manufacturer.
- Wire ropes used with traction hoists must have prepared ends in accordance with the manufacturer's recommendations.
- Inspect wire rope during each ascent and decent.
- Do not expose wire rope to fire, undue heat, corrosive atmosphere, chemicals, or to passage of electrical currents or to damage by tools or handling.

25.3 Rigging Guidelines

- When rigging on exposed roofs or floors, wear fall prevention equipment. When rigging from overhead supports, such as bridges, beams etc. wear fall arrest equipment.
- Roof anchorages, parapet clamps, outrigger beams, or other supporting devices, including tiebacks and their anchorages, must be capable of supporting the rated load of the hoist with a safety factor of four (4).
- Verify that the building or structure will support the suspended loads with a safety factor of at least four (4).
- Overhead rigging, including counterweights, must be secured from unintentional movement in any direction.
- Counterweights used with outrigger beams must be of a non-flowable material, designed to be counterweights and fastened to the beam.
- Outrigger beams that do not use counterweights must be installed and secured on the roof structure with devices specifically designed for that purpose.
- Tie back all transportable rigging devices with wire rope and hardware that has

strength equal to the hoist rope.

- Install tiebacks at right angles to the face of the building and secure without slack to a structurally sound portion of the structure. In the event tiebacks cannot be installed at right angles, use two tiebacks at opposing angles to prevent movement.

- Rig so that suspension points are directly above the hoisting machines.

- The platform must be secured to prevent swaying. Do not tie it to window cleaning anchors.

22.2. Power Supply Guidelines

- Be sure the power supply conforms to hoist manufacturer's recommendations.

- Ground all electrical power sources, power cord connections and protect with circuit breakers.

- Use power cords or air hoses of proper size that are long enough for the job.

- Power cord or air hose connections must be connected and restrained to prevent their separation.

- Tie off power cords or air hose to the suspended scaffold to prevent them from falling.

- Protect power cords or air hoses at sharp edges.

- Air hoists require clean, lubricated air.

25.4 Fall Arrest Equipment Guidelines

- Each person on a suspended powered scaffold must be attached to a fall arrest system at all times.

- Each lifeline must be fastened to a separate anchorage from other lifelines and the swing stage anchors.

- When wrapping lifelines around structural members the lines must be protected and a suitable anchorage system must be used.

- Rig fall arrest systems to prevent free fall in excess of 6' ft.

- Lifelines must be suspended freely without contact with structural members or building facade.

- Use a lifeline size and construction that is compatible with fall arrester and complies with applicable safety codes.

- Lifelines must be protected with sleeves or other methods to prevent them from wearing where they go over edges.

- Inspect lifelines for worn areas or other defects.

- Do not use synthetic or fiber rope when using acids or other chemicals as they can deteriorate the rope.

- Be sure fall arrester is installed on the lifeline in the proper direction above the employee's head and in accordance with the manufacturers' recommendations.

- Use a harness that is properly sized and fitted.

- Lanyards will be attached to the D-ring at the center of the upper back of harnesses.

25.5 Suspended Scaffold General Guidelines

- Follow all equipment manufacturers' recommendations as well as all local, provincial and federal codes, ordinances and regulations, pertaining to suspended scaffolding.

- If in doubt regarding safety or use of suspended scaffold, consult the scaffold supplier.

- Safety equipment must be used at all times while working from the suspended platform.

- Survey the job site for hazards such as exposed electrical wires, obstructions that could overload or tip the suspended scaffold when it is raised or lowered, unguarded roof edges or openings inadequate or missing tieback anchorages, or the need for overhead protection where exposure to falling objects exist. These conditions must be corrected before installing or using suspended scaffold systems.

- Inspect all equipment before each use. Never use any equipment that is damaged or defective in any way. Tag damaged or defective equipment and remove it from the job site.

- Always use fall arrest equipment when using suspended scaffolds. See the Fall Arrest Equipment Guideline section for further reference.

- A braking device must be installed in case there is a change in momentum or an overspeed acceleration.

- Erect, use and dismantle suspended powered scaffold equipment in accordance with design and/or manufacturers recommendations.

- Do not erect, dismantle, or alter suspended scaffold systems unless under the supervision of a qualified person.

- Do not abuse, misuse, or use suspended scaffold equipment for purposes or in way for which it was not intended.

- Erected suspended scaffolds should be continuously inspected by the users to ensure that they are maintained in a safe condition. Report any unsafe condition to the LPC supervisor.

- Care must be taken when operating and storing equipment during windy

conditions.

- Powered platforms must never be operated near live power lines unless proper precautions are taken. Consult the power service company for advice.
- Employees will not work on scaffolds if they feel dizzy, unsteady in any way, or are impaired in any way by drugs or any other substance.
- Operate the hoist for smooth, vertical movement.
- Make sure that none of the controls stick.
- All moving parts that create hazardous pinch points must be guarded.
- Toe boards, at least 4” in. high, are required on all sides and ends.
- When employees must work or pass under the swing stage, metallic mesh must be inserted in spaces between the rails and toe boards.
- Floor must be at least 24” in. wide and must be a non-skid type material.

25.6 Communication

- Each platform must be supplied with a positive means of communication (such as two-way radios).
- Inspect communication devices daily to make sure they are in working order.

25.7 Training

- All employees must complete the LPC web based training modules on scaffolding prior to using scaffolds. This training has been developed by qualified persons and addresses hazards in the area, electrical, falling objects hazards, fall protection, design and use and load capacity.
- Employees must review the assembly and use requirements for the scaffold prior to using the scaffold assembly.
- Employees must go through the site-specific orientation for scaffolding before using it.
- Users must be trained on how to safely operate equipment and how to handle emergencies, if in doubt, consult a qualified person.
- Employees must be retrained if their work around the scaffolding is inadequate or the hazards of the scaffolding change.

25.8 Inspections

- After setup, a Competent Person must inspect the scaffold.
    - Check the load rating plate, which specifies the maximum rated capacity for the platform. The rated capacity must not be exceeded.

- Be sure that there are top and mid-guardrails on both sides and ends of the platform.
- Top rail on the building side must not be less than 36” in. high.
- Top rail on all other outer sides must not be less than 42” in. high.
- Make sure all the controls are properly marked as to their purpose.
- Make sure all electrical grounds are connected and in good repair.

- A Competent Person must inspect the scaffold prior to each work shift.
- Any scaffold damaged or weakened from any cause shall be immediately repaired or tagged out with a “Do Not Use” tag until repairs have been completed.

26. MOBILE ELEVATED WORK PLATFORMS (MEWP)

- Mobile elevated work platforms are vehicle-mounted work platforms that can move vertically and/or horizontally. Most common MEWP’s LPC uses are boom lifts and scissor lifts.
- Only properly trained and authorized employees will be allowed to operate MEWP’s.

Note: Operator cards that are issued with the LPC logo on it are only valid while actively employed with LPC.

26.1 General

- Make sure operator-training guides are completed before operating lifts.
- Use Form 941, **MEWP Operator Training Guide**
- For platform scissor lifts, training must be provided from the company the lift is rented from or qualified personnel per the definition provided. The operator must provide proof of training when asked. Proof of training consists of a certification document provided to them by the qualified person.
- The operator will inspect and practice operating the lift before starting work to ensure familiarity and develop effective skill of operating the equipment. The operator must ensure that they know the limits of the MEWP and that those limits are not exceeded.
- For all other types of lifts, booms, gondolas, etc., operator training is mandatory. This training requires web based modules and/or operator performance training by the Director of EHS or other qualified person(s) and must comply with local regulatory requirements.
- The operator must ensure that they know the load limits and that those limits are not exceeded.

- Thoroughly inspect machine prior to beginning of each shift and document inspection of unit and jobsite.

- Any MEWP found with defects or otherwise unsafe conditions shall be immediately tagged out of service until repaired by a lift manufacturer or a qualified repair service.

- MEWP's may not be "field modified" for uses other than those intended by the manufacturer unless the modification has been certified in writing by the manufacturer.

- Engines produce toxic carbon monoxide gas. Adequate ventilation will be provided inside buildings and the atmosphere will be measured for carbon monoxide levels as needed.

- Barricade immediately below and around the work area to keep individuals out of danger from any falling objects.

- Be aware of overhead hazards when raising an MEWP.

- Do not use an MEWP in a high wind situation over 25 mph.

- Do not exceed the basket weight capacity.

- The deadman switch is to be operated by the foot only.

- Employees shall stand firmly on the floor of the basket or working surface. They will not climb on the edges or guard rails, will not use planks, ladders or other devices while working from the equipment.

- Before an employee can exit an extended aerial lift, they must be tied off to an approved anchorage point on the aerial work platform (MEWP) and walk to the new anchorage point. Only after attaching to new point of approved anchorage the first anchorage can be abandoned using a personal fall arrest system (i.e. harness and double lanyard).

- Before moving the lift, check for obstructions - above, below, forward and back, side to side, and clearance for counterweight swing.

- Do not drive the tires of the lift over hatches, doors, vaults, or other items that could crush or collapse.

- The vehicle must have a reverse signal alarm audible above the surrounding noise level or the vehicle is backed up only when an observer signals that it is safe to do so.

- Equipment will be completely lowered prior to moving the equipment from location to location.

- MEWP's will not be used for transportation of passengers not involved in the required work activity.

- No work will take place within 20' ft. of any overhead power lines unless they have been de-energized and grounded. All power line work will be performed by qualified

contractors, not LPC employees. Contractors will verify for LPC employees that all lines are at zero state of energy before any work commences

26.2 Additional Boom Lift Safety

- Use full body harness and attached lanyard at all times when operating extending and/or telescoping boom lifts.
- Outriggers must be fully extended on machines equipped with them.
- Use outrigger jacks to level machine on uneven ground.
- Use larger pads (dunnage) under jacks on softer ground and asphalt.
- Never use the lift's boom as a crane.
- Never push, pull, or lift any object by extending the boom.
- A personal fall protection system (harness and lanyard) will be worn at all times while working and operating the equipment to prevent employees from falling out of the lift when sudden movements of the lift occur.
- The lanyard will be attached to the manufacturers' provided anchorage point. If no anchorage is provided, the lanyard will be attached low on the guardrail system at a joint of multiple rail components (a cross joint of uprights and cross rails)

27. PERSONAL PROTECTIVE EQUIPMENT (PPE)

27.1 General

- Personal protective equipment must be maintained in a sanitary condition. This applies to both company-supplied and employee-supplied PPE.
- Employees shall wear clothing suitable for the weather and work conditions. The minimum for fieldwork shall be a short sleeve shirt, long trousers, and leather or other work shoes or boots with safety toe protection.
- Items of personal issue shall be inspected regularly and maintained in serviceable and sanitary condition and, before being reissued to another person or returned to storage, shall be cleaned, disinfected, inspected, and repaired.
- Personal protection equipment will be of safe design and construction for the work being performed.
- Personal protective equipment must properly fit each person. To facilitate proper fitting, several different types of required PPE will be made available.
- All personal protective equipment, with the exception of safety toed boots, will be provided by the company at no cost to the employees.

27.2 Training

- Each employee who needs PPE will be trained in its proper use. Training will include:
    - When PPE is needed and what items are necessary.
    - The limitations of the PPE.
    - How to properly don, doff, adjust, and wear PPE.
    - Care, maintenance, useful life, and disposal of PPE.
- Training will be conducted when an employee's work location changes or the job assignment changes requiring different PPE.
- Any employee who cannot or does not use PPE correctly will also be retrained. The dates and subjects of all training will be recorded and maintained in the employee's training file.

27.3 Jobsite Specific PPE

- Jobsite PPE requirements will be determined by a Competent Person when the Job Hazard Analysis (JHA) is made.
- Jobsite PPE requirements may be set by the general contractor on construction sites. We will meet their requirements at a minimum.
- The hazard and reasons for the selection of the PPE will be explained to each employee before the job starts.
- The site foreman will assure that:
    - Each person knows and has the required PPE.
    - Each worker's PPE fits correctly and knows how to wear it.
    - PPE is cleaned properly.
    - New PPE is issued as needed.
    - Worn or defective PPE is discarded.

27.4 Service Center PPE

- All employees assigned to work in the Service Center or during the process of mobilizing/de-mobilizing a project shall adhere to the field classification of protective footwear.
- Supervisors walking through or performing administrative tasks in/around the Service Center shall wear substantial footwear. No sandals, flip-flop type shoes, heels, etc. are allowed.

27.5 Eye Protection

- All persons exposed to operations, which subject the eyes or face to dust or flying particles shall use eye protection which meets ANSI Z87. 1 standards.
- Persons shall be provided with eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents.
- Safety glasses shall be equipped with side shields.

- If subject to splashes that may get under safety glasses, goggles will be worn.

- Persons requiring corrective lenses in eye glasses when required by this regulation to wear eye protection, shall be protected by one of the following:

    - Eye glasses whose protective lenses provide optical correction.
    - Goggles that can be worn over corrective lenses without disturbing the adjustment of the spectacles.
    - Goggles that incorporate corrective lenses mounted behind the protective lenses.

- Eye protection equipment shall be kept clean and in good repair. Defective equipment shall not be used.

27.6 Face Shields

- Safety glasses or goggles must be worn under a face shield.

- Any processes that are likely to generate projectiles or splashes require the use of a face shield, as do any processes that involve handling large volumes of chemicals or chemicals that are extremely corrosive.

- Face shields will be worn when grinding.

27.7 Gloves

- Gloves protect hands from abrasions, cuts, burns, and chemical contact. Different materials and designs offer protection against different types of hazards.

- Contact the Director of EHS for assistance in selecting the best glove for the processes and compounds being worked with.

- When wearing gloves, still wash hands after working with chemicals. This will protect from any residue that falls from the glove onto the hands when they are removed.

- Persons handling rough, sharp-edged, abrasive materials or where the work subjects the hands to lacerations, punctures, burns, or bruises shall use hand protection.

- When handling sharp objects or when using a razor blade or knives, cut gloves are preferred.

- Rubber gloves are to be used when handling chemicals. Refer to the SDS to determine the type of rubber glove (latex, natural rubber, butyl rubber, nitrile rubber, neoprene, etc.) that is required for each particular chemical. Contact the Director of EHS if help is needed when selecting the appropriate type of impermeable glove.

- Use insulated gloves for processes involving extreme (hot and cold) temperatures.

- Special gloves will be required when sand blasting.

27.8 Protective Head Gear

- Protective headgear will be worn any time there is an overhead hazard or potential for items to fall from above.
- All protective headgear shall meet the requirements of ANSI Z89.1, Class A or ANSI Z89.2., Class B.
- Some jobs or projects may require Type I or Type II hardhats. If these are being worn, the chin strap must be buckled at all times.
- All persons working on or visiting non-administrative activities (i.e., construction, operations, and maintenance) shall be provided with protective headgear.

27.9 Protective Footwear

- All field employees and those that visit jobsites (Production Managers, Superintendents, Project Managers, Estimators, Director of EHS, etc.) shall wear the following protective footwear as defined:
    - Heavy sole
    - Leather or other equally firm, synthetic material (no canvas)
    - Boot top must be above the ankle height (6" in.)
    - Boots must be the lacing type. No cowboy or slip-on boots
    - Footwear will have safety toe protection meeting ANSI F 2413 standards
    - Tasks requiring increased level of foot protection shall be worn by employees as identified by the superintendent in the Site Specific Safety Plan for each project
- Rubber boots may be worn whenever mixing, transferring, or handling liquid chemicals or performing specific operations like lead removal.

27.10 Protective Clothing

- Persons exposed to vehicular or equipment traffic shall wear high visibility apparel, vests or jackets.
- Employees performing sand blasting will wear the proper clothing and hoods.
- Tyvek suits will be worn when painting during certain operations and when doing lead or other material abatement.

28. HEARING CONSERVATION PROGRAM

28.1 Policy

- In order to protect employees from possible adverse effects LPC has a hearing conservation program to prevent occupational hearing loss by controlling employee noise exposures with appropriate engineering and administrative practices, including the use of hearing protection.
- All applicable provisions of the Hearing Conservation Program shall be implemented

when employee noise exposures equal or exceed the Action Level (AL) of an eight (8) hour Time Weighted Average (TWA) exposure to a sound level of 85 dBA.

28.2 Program Components

- The fundamental components of the Hearing Conservation Program are:
    - Employee exposure monitoring
    - Medical surveillance
    - Implementation of noise hazard controls
    - Employee Training Program
    - Documentation of all activities related to the Hearing Conservation Program
    - Program maintenance

28.3 Monitoring

- The need for monitoring will be based on data collected via noise exposure surveys directed or conducted by the Director of EHS. Based on this information, an employee exposure monitoring strategy will then be developed and implemented.
- Noise exposure monitoring must be done in any area where reasonable information indicates the employee exposure may be over 85 dBA TWA. Monitoring shall be repeated whenever there is a substantial change in noise level, production, processes, equipment, or controls that change employee noise exposures.
- LPC will notify employees, in writing, of the results of exposure monitoring at or above the eight (8) hour TWA within five (5) days of receiving the results.

28.4 Medical Surveillance

- New hired employees will receive hearing conservation training during their initial orientation. For employees working out in the field or the Service Center, baseline audiograms will be administered within six (6) months.
- Audiograms will be done annually thereafter for all employees working in the field or the Service Center.
- There will be at least a fourteen (14) hour time period prior to the baseline audiogram where the worker is not exposed to workplace noise.
- All audiometric testing must be supervised and reviewed by a licensed professional.
- In the event that an employee experiences a standard threshold shift (STS - a change in hearing threshold levels relative to the baseline audiogram of an average of 10 dBA or more at 2,000; 3,000; and 4,000 Hz in either ear) the following steps are required:
    - Employee shall be informed in writing within twenty-one (21) days of the determination of the existence of an STS
    - Employee shall be retrained on hearing protection
    - Employee shall be referred for an audiologic evaluation as appropriate

- Employee shall be informed of the need for an otologic exam if medically indicated and is suspected to NOT be associated with the use of hearing protection.

- Employees shall be removed from the Hearing Conservation Program only when monitoring data has been obtained which indicates that these employees are no longer exposed to noise levels, which exceed the action level. An employee may also be removed when changing to a job classification that is not required to participate in this program.

28.5 Noise Exposure Controls

- LPC will ensure that exposure levels are reduced to a safe level using feasible engineering, administrative, or personal protective equipment controls.
- Noise exposures over 90 dBA TWA will be reduced as much as possible using feasible controls.

- Where engineering or administrative controls are not economically or technically feasible, to reduce employee exposures to below the eight (8) hour TWA of 85 dBA, the company will have available at least two types of hearing protectors to employees, without cost to the employees.

- Employees working with equipment, which produces noise levels of 85 dBA or greater should wear adequate hearing protection, regardless of full shift exposure.

- Warning signs will be posted at entrances or on the periphery of all well-defined areas in which employees may be exposed at or above 115 dBA. The warning signs will indicate that the area is a high noise area and hearing protectors are required. Employees exposed to impulsive or impact noise measured at or above 140 dB must use hearing protectors.

- Supervisors are responsible for ensuring that hearing protectors are readily available, and are worn by employees during times of exposure to noise greater than 85 dBA during an eight (8) hour TWA.

- Employees are responsible for caring for their hearing protection and wearing hearing protection properly and when necessary.

- The Director of EHS, after conferring with a certified Audiologist, is responsible for recommending the appropriate hearing protection.

28.6 Training Program

- LPC will institute a training program for all participants of the Hearing Conservation Program.

- During their training employees will receive training on hearing protection including:

  - The effects of noise on hearing.
  - The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instruction on selection, fitting, use, and care.
  - The purpose of audiometric testing and an explanation of the test

procedures.
- The right to access records pertaining to employee exposure monitoring etc.

- This training will be conducted upon initial employment, and annually thereafter for effected employees.

28.7 Documentation

- The Director of EHS will maintain written records showing employee participation with the annual medical surveillance requirements, including baseline and all subsequent audiometric testing, and hearing conservation training. The Director of EHS will also maintain documentation of all noise monitoring.

28.8 Program Maintenance

- The Director of EHS is responsible for revising LPC's Hearing Conservation Program as needed.

29. RESPIRATORY PROTECTION

29.1 General

- The intent of this written program is to define the company rules now in effect regarding the use of respirator masks for personal protection against airborne contaminants and oxygen deficient atmospheres.

- The rules contained herein are not optional for the employee. The company considers this policy to be mandatory and a condition of employment for each individual.

- The Director of EHS is the Administrator of the company's Respiratory Protection Program. They will make an appraisal of the effectiveness of the Respiratory Protection Program annually and take appropriate measures to correct any deficiencies.

- Respirators are required when employees are exposed chemicals or dust in the air that are at harmful levels. These can include vapors from handling solvents, spray-painting, and dust from grinding or sanding, lead, or welding fumes.

- Most commonly used chemicals have safe limits or "permissible exposure limits" in the air that if exceeded will cause harm. If these limits are exceeded, LPC and employees are required to take steps to protect the employees from that air exposure. If the levels cannot be reduced below the permissible exposure limits by ventilation, changes in the process or reduction in the length of time of exposure, LPC will provide respirators to exposed employees.

- The best way to accurately determine the levels of chemicals or dust in the air is to perform air sampling.

- The SDS for products used also provide information about the hazards of the chemicals, permissible exposure limits, methods of controls and recommended respirators.

- Respirators are worn over the nose and mouth to provide a source of clean air. Whenever ventilation systems are unable to control an airborne contaminant, respiratory protection is required. When selected and used correctly, respirators will protect from inhalation exposure to airborne particles, mists, and gases.

- All employees for whom respiratory protection is required will be properly trained in selection, limitations, use, cleaning, maintenance, and storage of respirators and will receive a copy of LPC's Respiratory Protection Program.

- Project supervisory personnel shall periodically monitor the use of respirators to ensure that they are worn properly.

- The project Supervisor shall be responsible for appropriate surveillance of work area conditions and degree of employee exposure of stress and use appropriate air monitoring protocol to assure proper respirator protection on a continuous basis.

- Only approved respiratory protective devices shall be provided and used to protect against exposure to hazardous atmospheres containing dusts, fibers, fumes, mists, gases, vapors, and other contaminants. "Approved" means the respirator assembly has been tested and listed as satisfactory by approval from the National Institute for Occupational Safety and Health (NIOSH).

- A Competent Person knowledgeable of inhalation hazards and respiratory protective equipment shall conduct an evaluation to insure only appropriate respiratory protection for the condition of exposure is utilized.

    - Each employee shall wear a situation appropriate approved respirator, properly fitted at all times when there is a possibility of exposure to airborne contaminants.

    - Each employee that requires a respirator will be issued one at the company's expense with replacement parts, cartridges, and filters upon request.

- LPC employees will not enter an area deemed as Immediately Dangerous to Life or Health (IDLH) with any type of respirator.

- Where the atmosphere is determined NOT to be Immediately Dangerous to Life or Health, all employees shall wear, at a minimum, supplied air-line respirators in areas where either of the following conditions exists:

    - The contaminant is unknown or the requirement for using an air-purifying respirator cannot be met.
    - Abrasive blasting or spraying with harmful substances where high concentrations of that substance may be present.

- Welding, cutting, and heating may normally be done without mechanical ventilation or respiratory protective equipment. However, where an unsafe accumulation of contaminates exist, suitable mechanical ventilation or respiratory protective equipment shall be provided.

- Exposure of persons to inhalation, ingestion, skin absorption, or contact with any chemical or physical agent shall be avoided.

- For a respirator to be effective, it not only must be appropriate for the chemical hazard but also must fit correctly and be used correctly.

- Before any respirator can be worn, an employee must receive training, be medically fit, have a fit test, and receive approval to wear a respirator.

29.2 Respirator Types

Dust Masks (Filtering Facepieces)

- There are two-strap disposable dust masks that are designed only for dusts. These are not used at LPC.

Air Purifying

- Air purifying respirators work by filtering and capturing specific, known contaminants on filter cartridges. They come in two styles: Full facemask and half facemask. The full-face mask has the advantage of protecting the eyes from exposure as well as providing a clean air supply; however, it may impair the vision.

- The jobsite will have the style of respirator that is appropriate for the hazards that are likely to be encountered.

- Air purifying respirators may be used only under the following circumstances:

    - The identity and concentration of the contaminants are known and have adequate sustained warning properties.
    - The oxygen of content of air is at least 19.5%.
    - There is periodic monitoring of the work area.
    - The respirator assembly is approved for protection against the specific contaminants.
    - The type and model of respirator to be used has been successfully fit tested on the wearer.
    - The concentration of the compound does not exceed the filter's and/or respirator's capability.

Half-Face Air-Purifying Respirator

- These respirators are called "half-face" or "half-mask" respirators since they cover just the nose and mouth. They have removable cartridges that filter out either dust, chemicals or both.

Full-Face Air-Purifying Respirator

- In some situations, employees may need or want to use full-face respirators. This type of respirator is used when the air contaminant irritates the eyes. They also provide somewhat higher protection since they tend to fit tighter and are less prone to leaking. These respirators also have replaceable cartridges that must be changed on a regular basis.

Supplied Air Respirators

- Supplied air respirators have clean air provided by means of an air hose from a compressor. They may be necessary when working at jobsites during sandblasting

or some spray painting operations.

- Air supplied respirators also may be used for situations where the nature of or the level of the contaminant is unknown.
- The length of the supplied air source hose cannot exceed 300’ ft. from source to user.
- A person with heart disease or a history of heart issues should not use these types of respiratory systems.
- Breathing air will be supplied to the respirators from air compressors.
- Compressed air shall meet at least the requirements of the specification for Type I Grade D breathing air.
- All compressors used for breathing air purposes shall employ the use of an air purification system to ensure grade D quality air.
- A compressor used to supply breathing air shall be constructed and situated to avoid entry of contaminated air into the air supply system.
- Breathing air type compressors shall be designed specifically for breath supply and shall be equipped with an approved regulator, a suitable in line air- purifying absorbent bed and filter inserted into the supply line.
- Oil lubricated compressors shall be equipped with high temperature, equipment failure alarms.
- Air-supplied respirators that are supplied by oil lubricated compressors will have a carbon monoxide alarm placed between the air source and the user to warn users.
- Carbon monoxide alarm will be set to trigger at a level of 10 PPM or greater. All alarm systems shall be so designed that affected employees will be made aware of the hazardous conditions.
- All systems shall be calibrated on a monthly basis.
- All oil-lubricated compressors will be equipped with required operational safety devices and reservoirs or equivalent devices, with sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in case of equipment failure.
- When used with a continuous flow type airline respirator, the compressor shall provide at least 4 cubic ft. of air per minute for tight fitting and at least 6 cubic ft. of air per minute or loose fitting face pieces such as helmets, hoods and suits. This requirement is for each user, supplied from the compressor.
- Breathing air couplings shall be incompatible with outlets for non-breathable air or other gas systems to prevent inadvertent servicing of airline respirators with non-breathable gases.
- Prior to initial use, the quality of breathing air supplied from compressors shall be tested for harmful contaminants.

Self-Contained Breathing Apparatuses

- LPC does not use self-contained breathing apparatuses.

29.3 Respirator Selection

- Only NIOSH approved respirators have been chosen for use in this program.
- The choice between these respirators is dependent upon the airborne contaminant present, the hazardous operation performed, and based on comfort and ease of obtaining a proper individual fit.
- The company will provide approved respirators, maintaining a supply at the Service Center.
- The useful life of each respirator will depend mainly on the employee's job duties and the actual time the respirator is in use.
- Approved respirators shall not be modified by any company personnel.
- Respirator selection is based on using the highest protection available until air monitoring data shows that a lesser respirator may be safely used. Respiratory needs shall be made on a job-by-job basis with the Superintendent and Project Manager making this selection and communicating this to the jobsite Foreman through the job planner.
- A respirator protection factor is a measure of the degree of protection provided by a respirator to a respirator wearer. Multiplying the permissible time-weighted average concentration or the permissible ceiling concentration, whichever is applicable, for a toxic substance, or the maximum permissible airborne concentration for a radionuclide, by a protection factor assigned to a respirator gives the maximum concentration of the hazardous substance for which the respirator can be used. Limitations of filters, cartridges, and canisters used in air-purifying respirators shall be considered in determining protection factors.

29.4 Cartridge Selection

- Selecting the correct cartridges is essential since they are designed for particular types of chemicals or dust. An evaluation of the processes that will be performed and the necessary type of cartridge needed will be done. A respirator vendor can assist in selecting the correct cartridges. These cartridges are typically removable and sometimes interchangeable. Cartridges are available for solvents, ammonia, chlorine, acids and other chemicals.
- Vapor and gas removing respirators are not approved for contaminants that lack adequate warning properties of odor, irritation, or taste at concentrations in air at or above the permissible exposure limits.
- All filters, cartridges, and canisters used in the workplace are labeled and color-coded with the NIOSH approval label. The label must not be removed and remain legible.
- The service life of a vapor or gas removing cartridge canister depends on the specific vapor or gas, the concentration of the vapor or gas in air, the temperature

and humidity of the air, the type, and quantity of the absorbent in the cartridge or canister, and the activity or exposure of the respirator wearer.

- Filter changes shall occur daily at the end of each shift or sooner if necessary.

29.5 Medical Evaluation

- Before performing work requiring the use of a respirator, the employee shall be required to fill out a respiratory questionnaire. This questionnaire will be reviewed by a physician to determine the qualification of the respirator user and to insure that the person wearing the respirator is able to perform the work.

- All employees that receive a fit-test shall complete a medical questionnaire prior to testing.

- All medical records are confidential and on a need to know basis. The Director of EHS shall oversee all medical surveillance documents and be responsible for securing such.

- Testing shall be conducted during normal work hours, and in close proximity to their respective home office. The questionnaire will be reviewed by a physician or licensed health care provider. The results will then be sent directly to the LPC Director of EHS or designated representative.

- All employees shall be afforded an opportunity to discuss, in private, all data concerning the medical results with the examining physician or other health care provider.

- If a test subject exhibits difficulty in breathing during the tests, they will be referred to a physician trained in respiratory diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing their duties.

29.6 Fit and Fit Testing

29.6.1 Fitting Respirators

- Proper fitting of respirators is essential to receive the necessary protection. Air that passes around the edges of the respirator is not filtered.

- It is essential that respiratory protective equipment be properly fitted to the employee when it is issued.

- The respirator and straps must be in place and worn in the appropriate position.

- To adjust the facepiece properly, simply position chin firmly in the chin cup and manually shift rubber mask until the most comfortable position is located. Make final adjustments in the headband and do not break the nasal seal.

- To adjust headbands, pull the free ends tight until a comfortable fit is obtained. All straps shall be secure.

- Modification to the respirator or straps shall not be made.

- Respirators shall not be worn when projections under the facepiece prevent a good face seal. Examples of such conditions are spray socks between the face and the

facepiece of the respirator, longer hair, growth of beard, mustache or sideburns, temple pieces on glasses, or skull caps that project under the facepiece.

- Individuals who have stubble (even a day's growth may permit excessive leakage of contaminant), a mustache, sideburns, or a beard that passes between the skin and the sealing surface will not be allowed to wear a respirator.

- If hair growth or apparel interferes with a satisfactory fit, then they shall be altered or removed to eliminate interference and allow a satisfactory fit.

- Corrective lenses that have temple bars or straps should not be used when a full-facepiece respirator is worn since the bars or straps could pass through the facepiece to the face seal. Manufacturers of respiratory protective equipment can provide kits for installing eyeglasses in their respirator face pieces.

- Respirators cannot be worn if hairstyles or eyeglasses can interfere with the seal between the respirator and the skin.

29.6.2 Fit Testing

- Respirator is put on and the straps adjusted.

- Visual check is made to ensure tight fit around facial contours.

- Prior to performing test, the test subject shall be given complete instructions as to their part in the test procedures. The test subject shall perform the following exercises, in the order given, for each independent test.

    - Normal breathing. In the normal standing position, without talking, the subject shall breathe normally for at least one (1) minute.
    - Deep breathing. In the normal standing position, the subject shall do deep breathing for at least one (1)-minute pausing so as not to hyperventilate.
    - Turning head side to side. Standing in place, the subject shall slowly turn their head from side between the extreme positions to each side. The head shall be held at each extreme position for at least five (5) seconds. Perform for at least three complete cycles.
    - Moving head up and down. Standing in place, the subject shall slowly move their head up and down between the extreme position up and the extreme

position down. The head shall be held at each extreme position for at least five (5) seconds. Perform for at least three complete cycles.

- Reading. The subject shall talk slowly and aloud so as to be heard clearly by the test conductor or monitor and read the “Rainbow Passage”.
- Bend over and touch toes. The test subject shall bend at the waist, touch their toes, and return to upright position. Repeat for at least 30 seconds.
- Normal breathing.

- The fit test should not be performed less than thirty (30) minutes after the last cigarette for smokers.

- There are two types of Fit Tests: Qualitative and Quantitative. Quantitative tests are required for all full-face negative pressure respirators. LPC owns and operates, a quantitative fit test machine and all respirator wearers are fit tested quantitatively.

29.6.3 Quantitative Tests

- Quantitative respirator performance tests involve placing the wearer in an atmosphere containing an easily detectable, relatively nontoxic gas, vapor or aerosol. The atmosphere inside the respirator is sampled continuously through a probe in the respiratory-inlet covering. The leakage is expressed as a percentage of the test atmosphere outside the respirator called “percent of penetration.”

- The respirator will be fit tested using a Quantitative Fit Test machine. This test shall be done for half mask, full-face respirators, and abrasive blast respirators.

- The proper fitting of respiratory protective equipment requires the use of some type of fit test. The fit-test is needed to determine a proper match between the facepiece of the respirator and face of the wearer.

- The test subject shall properly don the respirator selected as above, and wear it for at least ten (10) minutes before starting the fit test.

- The test conductor shall review this protocol with the test subject before testing.

- At least two face pieces shall be selected by the IAA test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one that is more comfortable to wear.

- The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

29.6.4 Qualitative Tests

- Proper seal must be checked each time the respirator is worn according to the manufacturer’s instructions.

- There are two forms of qualitative fit-checks that should be used each time a respirator is donned to check for any leakage, the positive pressure fit check and the negative pressure fit check. These tests are not designed to replace the required quantitative or qualitative fit test but designed to test the integrity of the mask each time it is worn.

29.6.5 Negative Pressure Check

- The wearer should use this check just before entering the hazardous atmosphere.
- In this check, the user closes off the inlet of the canister, cartridges, or filter by covering with the palms or squeezing the breathing tube so that it does not pass air.
- The user then inhales gently so that the facepiece collapses slightly and holds their breath for about ten (10) seconds.
- If the facepiece remains slightly collapsed and no inward leakage is detected, the respirator is most likely tight enough.

29.6.6 Positive Pressure Check

- This check is conducted by closing off the exhalation valve and exhaling gently into the facepiece. The fit is considered satisfactory if slight positive pressure can be built up inside the facepiece without any evidence of outward leakage.

- This check should be used sparingly if it requires removing and replacing a valve cover.

    - Fit testing shall be repeated at least every twelve (12) months. Testing will be recorded on **Form 912, Quantitative Fit Test Record.**

    - Fit testing is also required when there is a change in the wearer's physical status that includes, but is not limited to, growth of facial hair, change in the contour of the face, or a dramatic weight change.

29.7 Training

- Each respirator user will be trained how to use and maintain the respirator. Training will start during the new employee orientation process. They will review the procedures learned at orientation and be quantitatively fit-tested.

- Employees will be trained in the proper inspection, cleaning and storage of the respirators.

- Employees will be trained in what situations that a respirator will need to be used.

- All employees requiring the use of respirators shall be issued a half-mask respirator. All of the respirators shall be issued on an as needed basis with site refresher training given to ensure proper use of all respirator types used.

- Site Supervisors shall be responsible for ensuring proper use of respirators.

- All Supervisors shall undergo annual "Train the Trainer" training in the use of all respirators used by LPC.

- Annual training for all respirator users will be performed.

- Employee's proof of training and instruction received shall consist of the following: the respirator user must have read, understood, and be able to apply the contents of this respirator program in daily use, care, and safekeeping of the said respirator.

- Signed documentation shall be kept on file for three (3) years.

29.8 Inspection, Cleaning and Care

- All respirators require routine maintenance and cleaning.
- Respirators must be inspected for proper operation before each use, including conditions of the straps, valves, cartridges and face piece.
- Respirators must be cleaned after each day's use and placed in the container provided for this purpose.
- Employees wearing respirators must leave the work area to perform any maintenance on them or if they detect break-through or resistance.
- At the end of each week (or more often, if needed) respirators in continuous use, must be completely cleaned and disinfected by carrying out the following procedures:
    - Remove the air-purifying elements from the respirator. Air-purifying elements must never be washed and disinfected.
    - Immerse the respirator in a warm (approximately 110°F) solution of water and a germicidal detergent. The respirator facepiece and parts may be scrubbed gently with a cloth or soft brush. Make sure that all foreign matter is removed from all surfaces of the rubber exhalation valve flap and plastic exhalation valve seats.
    - After washing and disinfecting the respirator, rinse the same with clean, warm (110°F) water and then allow the respirator to dry.
    - After the respirator is dry, attach the air-purifying elements.
    - Any malfunctioning respirator shall be turned in for repair.
    - After normal use, a respirator shall not be hung or set down but must be stored in the provided container to protect against dust, sunlight, excessive heat, extreme cold, excessive moisture, damaging chemicals, and physical damage.
    - In storing the respirator, the facepiece and exhalation valve must be in a normal position to prevent the abnormal set of elastomer parts during storage.
    - Each worker assigned to use a respirator shall maintain and routinely inspect it before and after each use.
- The respirator will be inspected monthly by the job Foreman to assure that it is kept clean and in satisfactory working condition.
- Respirator inspection shall include:
    - Tightness of connections.
    - Condition of facepiece.
    - Condition of headband.

- Condition of cartridges.
- Condition of valves.
- Rubber or elastomer for pliability.
- Rubber or elastomer for deterioration.

- Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible during storage.

- Worn out parts shall be replaced immediately.

- Protect the respiratory system by:

  - Inspecting the respirator properly each time it is to be worn.
  - Changing the filter or cartridges, if they have expired.
  - Checking the fit on the face to reassure that the respirator has a chance to work properly.
  - Following an appropriate use procedure carefully.

30. HAZARD COMMUNICATION

30.1 Purpose

- Employees have a “Right to Know” about the hazards associated with the chemicals encountered in the workplace as well as information on the safe use, handling and storage these chemicals. This policy outlines the Hazard Communication Program for LPC operations.

30.2 General

- This policy is designed to ensure all employees are familiar with the LPC Hazard Communication Program, its administration, protective measures, chemical inventory; safety data sheets (SDS), container labeling, employee training, and employee responsibilities.

30.3 Definitions

Chemical: Any element, mixture and/or chemical compound. They will be included on the chemical inventory and SDS are required.

Manager: Service, Operation, Production, Business, Project Manager or Director and Superintendent.

Effects of Over Exposure: Health effects employees suffer when permissible exposure limits have been exceeded. These effects are identified on the SDS and include such health effects as nausea, irritation, vomiting, dizziness, etc.

Exposure: Health or physical hazards associated with chemicals that employees are subjected to in the course of employment by way of any route of entry (ingestion, inhalation, injection or skin absorption).

Hazardous Chemical: Any chemical, which is a physical or a health hazard. All purchased

chemicals will be regarded as hazardous for the purposes of this policy with regard to inclusion on the chemical inventory and required SDS.

Hazard Warning: Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s).

Health Hazard: A chemical for which scientific evidence exists those acute or chronic health effects may occur in exposed employees. These hazards include carcinogens, reproductive toxins, irritants, corrosives, or chemicals, which can damage the lungs, eyes, skin or mucous membranes.

Label: Any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

SDS: Safety data sheet

Route of Entry: The route in which a chemical enters the body. This route can be ingestion, inhalation, and injection or absorbed through the skin.

Work Area: Any defined space in a workplace where hazardous chemicals are produced or used and where employees are present. Vans, warehouses, mechanical rooms, and offices are considered work areas.

Workplace: An establishment, job site, or project at one geographical location containing one or more work areas.

30.4 Responsibility

30.4.1 Manager

- Will ensure all employees adhere to the requirements set forth in this policy.
- Ensures all new chemical SDS's are reviewed prior to purchase.
- Ensure employees attend training upon employment, annually, and whenever new hazards are introduced into the workplace.
- Annually a chemical inventory will be conducted.
- Ensure all employees can obtain an SDS as needed.
- Provide contractors/customers with information and/or SDS's about hazardous chemicals their employees may be exposed to on a jobsite.

30.4.2 Environmental, Health, and Safety (EHS) Department

- Assist with review requests for purchase of new chemicals and approve based upon review of hazards, control measures, disposal requirements, reporting requirements. No chemicals will contain chlorinated solvents.
- Ensure employee training programs address topics required by regulations, company policies, and hazards associated with employee exposure to chemicals used by LPC.

- Provide information and guidance regarding safe use, storage and handling of chemicals to management, employees, and visitors, outside agencies, visitors and other both internal and external requests.

- Coordinate hazard assessment, employee exposure monitoring and PPE assessments periodically to ensure protective controls are adequate, address hazards and ensure appropriate protective equipment.

30.4.3 Project Managers and Superintendents

- Support the program by helping to obtain the appropriate SDS from the supplier.

30.4.4 Purchasing Department

- Responsible for maintaining a current list of all chemicals used by the company employees and making sure that a SDS exists for each chemical substance.

30.4.5 Employees

- Follow the Hazardous Communication Program.

- Attend required training sessions.

- Shall know how to obtain a SDS.

- Obtain permission prior to purchase of new chemicals.

- Understand the SDS and hazards associated with chemicals that are being used.

30.5 Employee Training

- All LPC employees will complete Hazard Communication Training upon hire and annually thereafter.

- The training of employees will include:

    - Identifying any hazardous materials they will be exposed to.

    - Methods and observations that they may use to detect the presence or release of a hazardous material.

    - The physical and health hazards of the materials they use.

    - Training will include understanding the hazards associated with the chemical, the information on the labels and SDS's, safe handling procedures, proper PPE, flammability, firefighting and emergency procedures and other in relevant information about the chemical.

    - How to lessen or prevent exposure to hazardous chemicals through usage or control/work practices and PPE.

    - An explanation of the company Hazard Communication Plan, the labeling system for materials, the material SDS and how

employees can obtain and use these items.

- Employees will be trained whenever a new chemical is introduced into the workplace. This training will address hazards associated with the chemical that the employee may come into contact with during the course of the work.

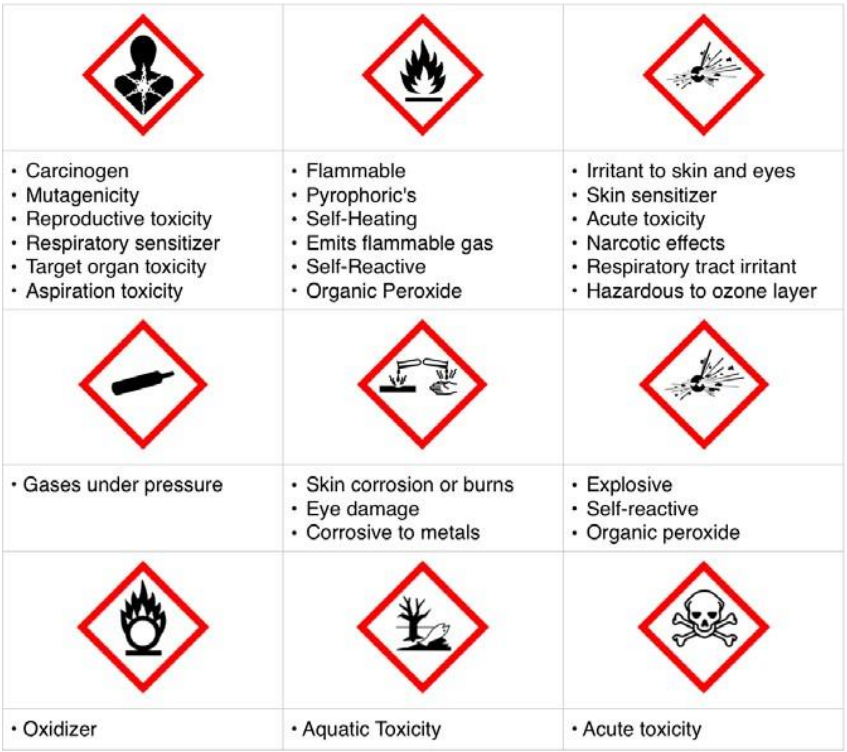
- Employees will be informed at the beginning of each project of the chemicals being used on that project.

- Training will be documented.

30.6 Safety Data Sheets (SDS)

- A Safety Data Sheet (formerly called Material Safety Data Sheet) is a detailed informational document prepared by the manufacturer or importer of a hazardous chemical. It describes the physical and chemical properties of the product. SDS's contain useful information such as toxicity, flash point, procedures for spills and leaks, storage guidelines, and exposure control.

- SDS's include pictograms to quickly describe the hazards associated with the product. There are nine pictograms that may be used. They are as follows:



• Carcinogen • Mutagenicity • Reproductive toxicity • Respiratory sensitizer • Target organ toxicity • Aspiration toxicity	• Flammable • Pyrophoric's • Self-Heating • Emits flammable gas • Self-Reactive • Organic Peroxide	• Irritant to skin and eyes • Skin sensitizer • Acute toxicity • Narcotic effects • Respiratory tract irritant • Hazardous to ozone layer
• Gases under pressure	• Skin corrosion or burns • Eye damage • Corrosive to metals	• Explosive • Self-reactive • Organic peroxide
• Oxidizer	• Aquatic Toxicity	• Acute toxicity

- All materials used by LPC will have a Safety Data Sheet (SDS) on file.

- The Production Department is responsible for maintaining a current list of all chemicals used by company employees, and for making sure a Material SDS exists for each chemical on the list.

- LPC will receive an SDS from the vendor for each chemical or product they

purchase. The Purchasing Department shall request an SDS for new material delivered with the shipment.

- Managers will forward any newly acquired SDS's to purchasing upon receipt.
- SDS for each job will be kept in the jobsite binder.
- SDS's are available to all employees. An SDS will be provided to an employee that requests to see one.
- If workers do not speak English, the Foreman will attempt to obtain SDS copies in their language.
- If an SDS is not available or new chemicals in use do not have an SDS, immediately contact the Service Center.

30.7 Labeling

- LPC employees are not to accept any shipment of chemicals with missing or illegible labels.
- Labels must be prominently displayed and contain the following information:
    - Common name of the chemical. This is the name that is listed on the SDSs such as, WD-40, etc.
    - Name and address of the manufacturer.
    - Physical and health hazards.
- All chemical containers must be labeled.
- Any substance put into a secondary container will have proper labeling on the container identifying the substance it contains.
- Label and hazard information can be found in the corresponding SDS's for the product.
- If a label applied to the chemical container becomes illegible or is removed, a new identical label shall be applied or an individual workplace label will be applied as long as it is used only by the employee labeling the container and the label contains the following information:
    - Product name
    - Precautionary information (flammable, keep away from open flame, etc.)
    - Statement that a SDS is available for the product.

30.8 Reporting Effects of Overexposure

- To minimize exposure to substances that are risk to health by ingestion, no food, drink or tobacco shall be taken into or consumed in any jobsite where the substances are used.
- After handling corrosive, poisonous or other substances with potential to

endanger their health, employees will thoroughly wash with clean water and soap.

- Employees will report any effect of overexposure to their immediate supervisor.
- The employee's supervisor will ensure employee receives medical treatment.
- The supervisor will have appropriate SDS's immediately sent to the treating medical facility. This is considered an emergency need and the SDS should arrive to the medical facility within 15 minutes.
- If necessary, the employee's supervisor will complete the appropriate documentation, (i.e., Supervisor Report of Injury and Incident Investigation).
- Effects of overexposure will be handled as any other injury.

30.9 Employee Access to Medical and Exposure Records

- Employees and their representatives may access their individual medical records by submitting a written request to the LPC Human Resource Department.
- Employees and their representatives may access their industrial hygiene exposure records by submitting a written request to the Director of EHS.
- All medical and exposure records are confidential information and may not be viewed by anyone except appropriate authorized personnel.
- Written requests are required to maintain confidentiality and to ensure unauthorized persons do not access confidential employee records.

30.10 HazCom Procedures for Jobsites

- The Project Manager and Project Superintendent will be responsible for informing the general contractor regarding hazardous materials to be used on the job and precautionary procedures to follow.
- A collection of SDS's will be assembled for every jobsite. This collection will include an SDS for every chemical brought on site. A copy of each SDS will be available to the customer or general contractor.
- The general contractor will be responsible to inform LPC employees of other chemicals on the job that may be hazardous. The superintendent will ask the general contractor about any such chemicals and relay that information to LPC employees.

31. LEAD AND OTHER HEAVY METALS

- Exposures from lead, cadmium, chromium and other harmful heavy metals can arise from removing paint from surfaces previously coated with paint containing these substances.

- Although we will reference lead in this section as it is the most common, we will use the same process for all heavy metals, meeting the established exposure limits for each of them.

- Operations that may generate dust, chip and/or fumes from these items include the following:

    - Abrasive and water blasting of items coated with lead-based paints.
    - Scraping, sanding, or removing any lead based paint.
    - Flame torch cutting, welding, and grinding of lead paint surfaces.
    - Any type of procedure that removes lead based paint from the coated surface.

- LPC will ensure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 µg/m3) averaged over an eight (8) hour period. Other heavy metal concentration levels will be established at the time of the projects.

31.1 Definitions

Action level: Employee exposure, without regard to the use of respirators, to an airborne concentration of lead of thirty micrograms per cubic meter of air (30 µg/m3) averaged over an eight (8) hour period.

Permissible Exposure Limits (PEL): Employee exposure, without regard to the use of respirators, to an airborne concentration of lead of fifty micrograms per cubic meter of air (50 µg/m3) averaged over an eight (8) hour period.

31.2 Routes of Exposure

- Lead can be absorbed into the body by inhalation (breathing) and ingestion (eating). Lead is not absorbed through the skin.

- When lead is in the air as a dust, fume, or mist, it can be inhaled and absorbed by the lungs.

- Lead may be absorbed through the digestive system if it gets into the mouth and is swallowed.

- Do not handle food, cigarettes, chewing tobacco, or make-up, which have lead on them or handle them with hands contaminated with lead.

31.3 Hazards and Symptoms of Lead Poisoning

- Some of the symptoms of lead exposure include the following:

    - General weight loss, fatigue, headaches decreased appetite.
    - Headaches, visual disturbances or decreased visual acuity, hearing deficits or hint of, pigmentation of the oral mucus, or metallic taste in mouth.
    - Shortness of breath, coughing, chest pains, constipation, or diarrhea.
    - Irritability, insomnia, weakness (fatigue), dizziness, loss of memory, confusion, hallucinations, ataxia, decreased strength in hands and feet,

disturbances in gait, difficulty in climbing stairs, or seizures.
- History of infertility, impotence, loss of libido, abnormal menstrual periods.
- Muscle and joint pains.

31.4 Exposure Monitoring

- Jobs involving potential disturbance of in-place lead paints and coatings will be evaluated of their potential for lead exposure.
- No employee may be exposed to airborne lead concentrations greater than 50 µg/m3 averaged over an eight (8) hour period without appropriate PPE.
- If any employee is or will be potentially exposed to airborne concentrations of lead, initial monitoring of the workplace must be conducted.
- All air monitoring results shall be documented and a copy of such provided to all affected employees. This information is to be mailed to the employees' home accompanied with a letter explaining the results and what, if any corrective measures were required.
- Written records of monitoring results should include exposure concentrations, sampling data, location within the work site, and the name of each employee monitored.
- Exposure monitoring should be performed for all job categories unless there are documents from previous monitoring that exposures are not significant in some specific categories.
- Whenever there has been a change in the job, crew, tools, materials, or setup that may result in new or additional exposures to lead, the employer should perform additional monitoring.

31.5 Frequency of Monitoring

- If the initial monitoring reveals employee exposure to be below the action level the measurements need not be repeated.
- If the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit monitoring will be done at least every six (6) months. Monitoring must continue until at least two consecutive measurements, taken at least seven (7) days apart, are below the action level at which time the monitoring may be discontinued.
- If the initial monitoring reveals that employee exposure is above the permissible exposure limit, monitoring must be done quarterly. Monitoring must continue until at least two consecutive measurements, taken at least seven (7) days apart, are below the action level at which time monitoring may fall into the following:
    - If the monitoring is above the action level, then monitoring will continue at a six (6) month intervals.
    - If the monitoring is below the action level, the monitoring may be discontinued.

31.6 Employee notification

- Within five (5) working days after the receipt of monitoring results, each employee exposed to lead must be notified, in writing, of the results represent that employee's exposure.

- Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, the notification must include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action(s) taken or to be taken to reduce exposure to or below the permissible exposure limit.

31.7 Site and Personal Hygiene for Lead

31.7.1 Housekeeping

- All surfaces must be maintained as free as practicable of accumulations of lead paint or lead debris.

- Cleaning must be done with a HEPA vacuum. The vacuums must be used and emptied in a manner that minimizes the reentry of lead into the workplace.

- Floors and other surfaces where lead accumulates may not be cleaned with compressed air.

- Food, beverages, tobacco products or cosmetics will not present, consumed or used in the areas of lead work. These may only be consumed or used in designated areas that are free from lead.

31.7.2 Showers and Changing Rooms

- When feasible, clean change rooms and showers will be provided for employees who work in areas where their airborne exposure to lead is above the PEL.

- To prevent cross-contamination the change rooms will be equipped with separate storage facilities for protective work clothing and equipment and for street clothes.

- Employees who work in areas where their airborne exposure to lead, when available, must shower at the end of the work shift.

- After showering, no clothing, shoes or equipment worn during the shift may be worn home.

- Clothing worn during the shift will be disposed of or washed by LPC. Persons responsible for handling or laundering contaminated clothing should be informed of the potential hazards.

- At no time should lead be removed from protective clothing or equipment by any means that put lead into the work area, such as brushing, shaking, blowing, or using a regular vacuum cleaner.

- Lunchrooms may not be entered while wearing protective clothing or equipment.

- If showers are not available, employees exposed to lead will triple wash and rinse both their

hands and faces at the end of their shift and prior to eating, drinking, smoking or applying cosmetics.

- All showers and washings will be recorded.

31.8 Engineering and Work Practice Controls

- Engineering controls will be determined specific to each project. An evaluation of each lead project will be done at the appropriate engineering controls implemented. Engineering controls methods may include but not be limited to:

    - Containment of the work area
    - General ventilation of the lead work area
    - Wet methods of clean up
    - Local exhaust ventilation
    - HEPA vacuums
    - Decon for demobe of containment
    - Selection of proper tools

31.9 Inspections

- There will be a daily review of each lead project by the foreman on the project using **Form 908, Worker Lead Protection Compliance Program.**

- Warning signs will be posted in and around the work area about the lead hazards and to prevent unplanned entry into the lead work area.

- Signs in the lead work areas where the PEL is exceeded must include: “DANGER LEAD MAY DAMAGE FERTILITY OR THE UNBORN CHILD CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM DO NOT EAT, DRINK OR SMOKE IN THIS AREA.”

31.10 Personal Protective Equipment (PPE)

- PPE will be supplied at no cost to protect employees from lead hazards. Each project will be evaluated to determine the necessary PPE required for the project. This PPE for lead projects, beyond the normal required PPE, may include, but not be limited to:

    - Air purifying respirators (half-mask or full face) with HEPA/P100 filters
    - Air-supplied or other types of respirators
    - Tyvek suits or head coverings
    - Rubber boots or boot covers
    - Goggles
    - Gloves

- The PPE should be sealed as much as possible to avoid lead getting inside the PPE or contacting the skin.

31.11 Respirators

- All respirator use will follow the respirator section of the LPC Safety Manual and include medical evaluations and annual fit testing.

- The appropriate type of respirator will be selected depending on the type of lead job

that is being done and the concentration of the lead based on the monitoring performed.

- Respirators should be donned before entering the work area and should not be removed until the worker has left the work area, or has entered a decontamination area.

31.12 Medical Surveillance

- LPC will institute a Medical Surveillance Program for all employees who are or may be exposed above the action level (30ug/m3) for more than thirty (30) days per year.
- LPC will assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician.
- All aspects of the medical surveillance program will be followed by LPC supervision.

31.13 Blood Lead Testing

- A pre-project blood lead testing and analysis will be done for all employees working on a lead job.
- Testing will be repeated every two (2) months during the duration on the job while the employee is exposed to lead.
- A post-project blood lead testing will be done for all employees who had a pre- job blood test.
- If an employee starts a new lead project within two (2) months of finishing another lead project, the post-project blood lead test for the previous project may be used as the pre-project blood lead test for the new project.
- Additional testing will be done at least every two (2) months for each employee whose last blood sampling and analysis indicated a blood lead level at or above 40 µg/100 g of whole blood. This frequency must continue until two consecutive blood samples and analyses indicate a blood lead level below 40 µg/100 g of whole blood.
- Within five (5) working days after receiving the blood lead testing results, LPC will notify, in writing, each employee of their results.

31.14 Medical Examinations and Consultations

- LPC will make available medical examinations and consultations to each employee:
- At least annually for each employee for whom a blood sampling test conducted at any time during the preceding twelve (12) months indicated a blood lead level at or above 40 µg/100 g.
- Prior to assignment for each employee being assigned for the first time to an area in which airborne concentrations of lead are at or above the action level.

- As soon as possible, upon notification by an employee that:
    - The employee has developed signs or symptoms commonly associated with lead intoxication.
    - That the employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child.
    - That the employee has demonstrated difficulty in breathing during a respirator fit test or use.
- Records of the results of medical examinations will be maintained for thirty (30) years past employment.

31.15 Training

- Potentially exposed employees will be informed of the hazards of lead and be trained in the precautions to be taken when working around it.
- The employee will be instructed in proper work practices, personal hygiene procedures, the use and limitations of protective equipment such as eye and face protection, head protection, coveralls, and respirators, and medical surveillance procedures.
- All employees that may be exposed to lead during the course of their employment shall be trained as follows:
    - Initially: Before assignment to a lead project.
    - Site Specific: Each project for specific lead and other hazards on the job.
    - Annually: Hazardous Environment and Exposure Training (HEET).
    - Post Incident: Any employee involved with an incident related specifically to lead activities, shall receive retraining to ensure competence.

32. ASBESTOS ABATEMENT

- LPC does not self-perform asbestos abatement work. All work pertaining to the removal and disposal of asbestos containing materials is strictly prohibited.

33. ISOCYANATES

- Isocyanates are used in many manufacturing processes and can be a component of certain paints, solvent solutions, and liquid resin.
- Read the Safety Data Sheets to learn about any isocyanates in the products being used.
- When practical, LPC will choose materials that do not contain isocyanates.

33.1 Symptoms of Isocyanate Exposure

- Burning and irritation of the nose and throat are common symptoms of breathing excessive amounts of isocyanates.

- Frequently the symptoms are delayed 6 - 12 hours. At that time, the person who was exposed may experience coughing, chest constrictions, low-grade fever, fatigue, and runny nose. These usually clear in 12 - 24 hours without treatment.

- Some workers who are exposed to isocyanates can become sensitized (which means they develop an allergy). When a worker has an isocyanate allergy, small exposures can cause skin or lung reactions. Asthma is the most common form of isocyanate allergy.

- Skin contact with isocyanates can cause some skin irritation, such as, reddening, swelling, and blistering.

- Eye contact with isocyanates can damage the eye or cause severe irritation.

33.2 Safety Precautions

- Design work areas to limit contact with isocyanates.

- Use ventilation systems to reduce the levels of isocyanates in the air.

- Clean up isocyanates that get on any work surfaces.

- Wash skin immediately with soap and water if it is contacted by isocyanates.

- An eyewash station and shower will be provided for emergencies.

- Where isocyanates are being used, restrict access to protected workers only.

- Wash with soap and water before taking breaks, going to lunch or leaving.

33.3 Personal Protection Equipment

- Cover all exposed skin. Use disposable suits over street clothes.

- Use gloves made from neoprene, nitrile, or butyl rubber.

- Wear a full-face supplied-air respirator when working in inadequately ventilated workplaces or isocyanate-containing material is heated or sprayed.

33.4 Emergency Procedures

- If a spill occurs, clear all unprotected personnel from the area. Put on the appropriate PPE and gear for the particular isocyanate that was spilled.

- Clean up the spill promptly. Spread absorbent material freely on the spill.

- Collect the material in an open top drum containing a decontaminate or neutralizer solution. Add the material slowly to prevent the release of excess heat and carbon dioxide. Cover the drum loosely and wait at least twenty-four (24) hours to seal it.

- After removing the spilled material, flood the contaminated area with some decontaminate solution. When it is impossible to collect the absorbent and spilled material, such as in an outside delivery area, pour the liquid decontaminate slowly over the spill. Allow it to react for at least ten (10) minutes. Flood the area with water.

- Dispose of the contaminated waste in accordance with environmental regulations and guidelines.

- In the event of a breathing problem, the employee should leave the area immediately. Arrange for medical attention, as soon as possible.

- If isocyanates come into contact with the eyes, hold the eyelids open and flush with large amounts of running water for at least fifteen (15) minutes. Seek medical attention.

- If skin contact occurs, flush the affected area with large amounts of running water for at least ten (10) minutes. Then wash thoroughly with soap and water.

- Remove contaminated clothing and protective equipment promptly. If isocyanates have soaked through the skin, remove the clothes under a safety shower, then flush with plenty of soap and water. Launder the contaminated clothing before using it again.

- Discard any contaminated clothing that cannot be laundered.

34. HAZARDOUS CHEMICALS

34.1 Elements of the Chemical Hazard Communication Program

- To insure the proper use and handling of hazardous chemicals, we have established the following requirements of our Chemical Hazard Communication Program:

    - Every work process involving hazardous chemicals must be performed according to procedures designed to minimize worker exposure.

    - Every worker who might be exposed to hazardous chemicals must receive training both in the appropriate operational procedures and in the properties and uses of the chemicals themselves.

34.2 General

- All operations, materials and equipment shall be reviewed to determine if toxic gases, vapors, fumes, or mists may be released into the work environment. If it is determined that such contaminants may be released their concentrations shall be brought within safe limits by design engineering controls and practices.

- Approved calibrated testing devices shall be provided for the measurement of toxic or flammable gases, vapors, fumes, dusts, and mists, as necessary.

- Records of all testing shall be maintained.

- Where irritant or toxic substances may contact skin or clothing, appropriate personal protective equipment such as full body protection, gloves, face shields, etc., and sanitary facilities shall be used.

- All handling and use of hazardous chemicals shall be under the supervision of a qualified person to handle such caustics or chemicals.

- All storage of hazardous chemicals shall be in accordance with the recommendations of the manufacturer and accessible only to authorized persons.

- Disposal of surplus or excess materials and containers shall occur in a manner which will not contaminate or pollute water supply, ground water, or streams; and will comply with federal, state, and local regulations and guidelines at all times.

- Containers that have been used for hazardous chemicals shall not be used for any other material.

- Distribution of hazardous chemicals shall be planned and controlled to prevent contamination of people, animals, food, water supply, and streams.

- Contamination or pollution of any river, stream, or public water is strictly prohibited and punishable by law.

- Facilities for quick emergency drenching of eyes and body shall be provided within immediate vicinity of work areas with hazardous chemicals.

34.3 Ventilation and Exhaust Systems

- Engineering controls shall be designed and installed in such a manner to ensure that emissions of atmospheric contaminants comply with federal, state, and local requirements.

- Control systems shall be operated continuously during operations where persons are exposed to airborne contaminants or flammable gases.

- Exhaust systems and air cleaning equipment shall be designed, installed, and used in a manner facilitating routine maintenance and the removal of hazardous contaminants of other collected material without contaminating the general atmosphere.

- Hazardous materials removed by exhaust systems or other methods shall be disposed of in a manner that will not create a hazard to other employees or the public and in accordance with federal, state, and local requirements.

34.4 Storage and Handling of Hazardous Materials

- All hazardous materials shall be stored in approved containers with properly fitting lids.

- Storage areas will have adequate ventilation to prevent concentration of vapors.

- Good housekeeping practices will be employed in and around storage areas to facilitate clear passageways and to reduce the chance of a fire hazard.

- Combustible and hazardous waste material shall be kept to a minimum and stored in covered metal containers.

- In areas where flammable materials are stored, handled, or dispensed, smoking and/or open flames are prohibited. “No Smoking” signs will be posted in such areas.

- Fire extinguishers will be available in or near the storage areas.

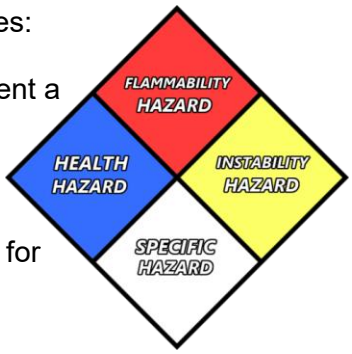
- Handle all hazardous materials with care. Read cautions on containers labels. Ask the LPC supervisor if there are any questions on the hazards and handling of materials. SDS’s are available.

34.5 NFPA Labels

- The National Fire Protection Association developed a hazard rating system for potentially dangerous materials using a blue, red, yellow and white diamond.

- Materials are rated according to four categories and color codes:

  - **Blue**: Health Hazard: The degree to which they represent a danger to human health.
  - **Red**: Flammability: Their susceptibility to burning.
  - **Yellow**: Reactivity: Their stability or instability under various environmental conditions.
  - **White**: Specific Hazards. These are generally symbols for acid, corrosive, oxidizer, etc.



- Each category has its own color-coded diamond within each category; materials are rated according to one of five codes, with the number placed inside the appropriate diamond:

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0 = Negligible
1 = Minor
2 = Dangerous
3 = Serious
4 = Severe

- A hazard rating at or above a 2 in any category means that protective or precautionary measures must be taken. Check the SDS for more information.

34.6 Waste Disposal Labels

- A hazardous waste is any toxic, corrosive, flammable, or reactive material that might pose a substantial threat to human health or the environment if disposed improperly.

- A hazardous waste label is required on all containers used to accumulate, store, or transfer such materials. This label warns the handler that the material is hazardous and must be disposed of properly.

- The hazardous waste label includes:

  - The name of the material in the container.
  - The name, address, and identification number of the company generating the waste.

- Any other information necessary to ship the material to the proper treatment or disposal facility.
- The date on which the chemical was put into the container is also included on the label.

- In many cases, a Department of Transportation hazard class label will accompany the hazardous waste label. The DOT label further identifies the nature of the material.

34.7 Hygiene and Work Area Practices

- By following good personal hygiene and work area practices, the chance of unintentional exposures can be minimized.

34.8 Minimize Exposure

- Avoid skin contact with the chemicals by wearing gloves, and using proper tools and containers to handle chemicals.

- Minimize ingestion by not smoking, eating, or drinking while using any chemicals.

- Wash hands well with soap and water as soon as the work is completed.

- Never, under any circumstances, taste or smell a chemical.

- Never drink from a chemical container or sink.

34.9 Wear Protective Equipment

- Wear the appropriate gloves, protective clothing, sleeves, and eye protection as required to perform the job safely.

- Wear safety glasses or goggles to avoid eye exposure and avoid rubbing or touching the eyes.

- It is the employee's responsibility to wear this equipment correctly and to maintain it so the PPE provides the intended protection.

- Check the SDSs to determine the correct PPE for the chemical.

34.10 Label, Handle, and Store Chemicals Correctly

- All chemicals in the work area must be properly labeled.

- Learn and follow the work area or job specific procedures for handling and storing chemicals.

- Flammables, corrosives, and oxidizing materials must be stored away from one another to avoid dangerous reaction.

34.11 Housekeeping

- Maintain equipment, tools, and work surface in proper condition.

- If there is any unsafe work methods or conditions, report them to a Supervisor immediately.

- Keep hazardous materials cleaned up and report any spills immediately.

34.12 Solvents and Thinners

- Solvents and thinners are used to dissolve paint, grease and oils.

- Solvents and thinners may cause skin to become dry, chafed, and cracked, a condition known as dermatitis. The severity of the dermatitis depends both on the sensitivity of the skin and on the amount of exposure.

- Avoid any health hazard by wearing gloves whenever handling solvents (or touch material that has been soaked in solvents).

- Wear proper gloves, eye protection, respirators, protective clothing and other PPE per the SDS.

- After handling solvents or thinners, immediately wash the skin using soap and water.

34.13 Flammable Liquids and Materials

- Flammable liquids have a flash point below 100°F. At normal room temperatures, these liquids produce enough vapors to be ignitable in the presence of a heat source.

- Flammable liquids also have a vapor density greater than 1. Vapors are heavier than air and collect near the floor, in low spots, and in areas of poor ventilation, making the fire hazard much greater in such areas.

- Flammable liquids have a low ignition temperature. The ignition temperature is the lowest temperature at which a vapor will burn with a flame. An electrical or static spark or a cigarette can start flammable liquids burning.

- No smoking is allowed within 25’ ft of an area where flammable solvents are being used.

- Keep heat sources away from areas where flammable materials are in use.

- For flammability information about a specific substance that may be used, refer to the product’s SDS.

- Flammable solvents for daily use should be stored in safety cans. Safety cans shall not be modified or changed.

- Always store large amounts of flammable solvents and materials only in the special bulk storage cabinets provided for this purpose and use only designated storage areas.

- When taking a flammable solvent out of a bulk storage container, take only the amount of flammable solvents needed that day to minimize vapor accumulation and liquid fuel availability.

- Use grounding and bonding when moving a flammable liquid from one container to another.
- Use a safety can with a flame arrester for storing any sizeable amount of flammable solvent, even if just using it for the day.
- Dispose of all wiping rage or materials in a covered container, and move the container to an appropriate storage area at the end of the shift.
- Keep containers closed as much as possible. Close lids or replace caps whenever not in immediate use.
- Make sure the work area is adequately ventilated.
- Avoid prolonged or repeated skin contact; wear protective equipment as necessary to keep exposure to a minimum.

34.14 Methyl Ethyl Ketone (MEK)

- MEK, is a very flammable solvent. It evaporates quickly, and if enough MEK vaporizes in a room, a spark of static electricity can set off an explosion.
- MEK is very flammable with flashpoint of MEK is 21°F.
- The lower flammable limit or lowest concentration of MEK vapor in the air that will burn is 1.8%, or 18,000 parts of MEK to a million parts of air.
- All MEK containers must be carefully grounded to prevent static buildup.
- Only non-sparking tools should be used around MEK.
- Spills evaporate quickly so they should be thoroughly cleaned up as quickly as possible.
- All cleanup materials should be disposed of properly.
- Use a dry chemical fire extinguisher for an MEK fire.
- MEK can dry out and irritate skin. Dermatitis is one of the most common effects of contact with MEK liquid. Under no circumstances should MEK be used as a solvent to wash hands.
- Use MEK only in a well ventilated area. Add ventilation in an enclosed area to prevent vapors from accumulating.
- Small spills can be wiped up with paper towels or disposable rags. Large spills can be cleaned up with a standard absorbent material, which should be disposed of immediately.
- Never store MEK in an open container.
- Wear the proper PPE when working with MEK. This will include eye protection and gloves. A respirator and protective clothing may also be needed depending on the

exposure.

- Clothing that is wet with MEK should be changed immediately and washed.
- Skin contact can be handled by washing hands with water and soap.
- If MEK makes contact with the eyes, flush the eyes with water for at least ten (10) minutes and call a physician.

34.15 High Solvent Coatings

- Many of the products used in the painting industry have a very high solvent content, including lacquer, varnish, urethane, etc.
- These high solvent products require the same safety precautions as the solvents contained in them. See solvents and thinners.
- Proper ventilation and respirator protection should be used when working with these products.

34.16 Acids and Caustics (Bases)

- Chemical Properties of Acids and Bases
  - Acids and bases can exist in solid, liquid, or gas form.
  - All forms of acids and bases are corrosive and can destroy materials including metals and tissue.
  - All corrosives are soluble in water and generally non-flammability.

34.16.1 The Difference Between Acids and Bases: pH

- pH is a measurement of hydrogen or hydroxyl ion in a corrosive compound. See the pH Scale – Relative strength, goes from 0 (highly acidic) to 14 (highly alkaline).
- A compound that is neither acidic nor alkaline, like pure water, would have a rating of 7 (neutral).
- The only safe procedure is to use water to neutralize all corrosives.
- Acids in the pH range of 0 to 2 are considered strong acids and bases in the pH range of 12 to 14 are considered strong caustics.
- When using a compound in either of these ranges, use all the required PPE and safety precautions
- To find out the pH of any of the corrosive compounds, consult the product's SDS.
- Direct contact with most of the strong acids will produce an immediate reaction at the point of contact (skin, eye, throat, etc.), ranging from mild irritation to severe pain.

- If the base comes in contact with eyes, or with a mucus membrane such as the mouth, nose, throat, there will be immediate irritation. However, the effects of such exposure are usually temporary.

34.16.2 Guidelines for the Safe Use of Acids and Bases

- Exposures to strong acids and bases can produce reactions ranging from discomfort and irritation to severe burns.
- Whenever working with corrosives, consult both the appropriate SDS to make sure of the proper PPE.
- Potential Required PPE
    - Always wear impermeable (rubber) gloves.
    - Impermeable apron.
    - Eye protection.
    - If handling large volumes of acids or bases, or if a significant splash hazard exists, wear special liquid proof goggles.
- Make sure there is adequate ventilation when working with acids and bases.
- Never mix chemicals without knowledge of the chemicals.
- Corrosives react with other chemicals and mixing them with other compounds can produce an explosion or the release of hazardous gas.
- Do not combine acids with flammable solvents.
- When mixing an acid or base with water, always add the acid or base to the water to prevent a violent reaction.
- Store acids and bases away from one another, and away from other chemicals, especially flammable compounds.

34.17 <u>Oxidizers</u>

- Oxidizers are chemical compounds that contain oxygen, which can be readily involved in a reaction. This can make oxidizers highly reactive.
- Oxidizers may also generate oxygen spontaneously or upon exposure to heat.
- The rate at which oxidizers generate oxygen varies from slow to very fast, depending on the types and quantities of compounds involved. The faster the reaction occurs, the greater the danger, including explosions.
- Oxidizers can exist as solids, liquids, and gases.
- Personal Protective Equipment (PPE)
    - Exposing the skin or eyes to oxidizers can cause reactions from irritation to burns. The following PPE is required:
        - Safety glasses or goggles

- Impermeable (rubber) gloves
- Aprons

- First Aid

  - If an oxidizing compound contacts the skin or eyes, rinse the affected area with water for at least fifteen (15) minutes.
  - Seek medical assistance if symptoms persist.

34.18 Adhesives

- Adhesives (glues) are used for bonding and repairs. The exact composition of adhesives varies from one product to the next.

- Adhesives may be flammable or have chemicals that require special treatment, so check the label before using an adhesive and follow the directions and warnings.

  - Tightly cap adhesive containers when not in use to prevent unnecessary vapors or odor.

  - Do not eat, drink, or smoke while using an adhesive.

  - Wash hands thoroughly with soap and water after working with adhesives.

  - Do not smoking when using adhesives.

  - Avoid skin contact with adhesives. If contact does occur, never use a solvent to remove glue residue or “unstick” the skin.

  - The best way to remove an adhesive is to soften the glue by soaking the effected part in warm, soapy water.

34.19 Training

- Employees handling hazardous materials in the service center will have 40 Hazwoper training with yearly 8 hour refreshers. The training will include the use, hazards, necessary PPE and emergency procedures as a first responder for the chemicals we use.

- There will be a Dangerous Waste Contingency Plan that is shared with first responders to allow them to effectively handle an emergency situation the service center.

- All employees that handle hazardous materials in the field will be trained in their use, hazards, necessary PPE and what to do in the event of an emergency.

34.20 Storage

- Because oxidizers are highly reactive, they must be stored in such a way as to minimize the possibility of reaction.

- Store oxidizers away from corrosives, flammables, and reducing compounds, since these materials tend to be highly reactive.

- Store oxidizers in a cool, dry place, since heat and water can trigger a reaction.
- Keep containers capped when not using them to minimize the likelihood of spontaneous reaction.

35. HAZARDOUS MATERIAL TRANSPORTATION

- LPC generally does not transport hazardous waste, although some of the materials used by LPC (i.e. alkyd paints, stains, thinners, and acids) may need to be classified as hazardous materials and have special requirements when being transported.
- LPC does not transport any large quantities (over 1,000 lbs.) of hazardous materials.
- Transporting paint and paint related materials classified as flammable or corrosive in most cases requires only that they be listed on a shipping paper.
- A copy will be saved from the shipping papers for materials when they are delivered. This information will be used to complete proper shipping papers for transporting the material. If shipping papers are unavailable, refer to the products label or SDS.
- Avoid re-packaging or transferring regulated materials from their original containers. This eliminates having to mark or label containers.
- Minimize the quantity of regulated materials transported at any one time. This can reduce or eliminate shipping paper and vehicle placarding requirements.

35.1 Combustibles

- A combustible liquid has a flashpoint at or above 100° Fahrenheit, and below 200° Fahrenheit. Many of the regulated coatings used by LPC will fall into this category.
- If carrying a combustible liquid in containers having a capacity of 110 gallons or less, the material is not a hazardous substance or hazardous waste, and the gross weight of all hazardous materials in the shipment is less than 1,000 lbs., the containers need only be marked. Labels, shipping papers, or placards will not be needed.
- The containers must be marked with the proper shipping name and identification number of its contents. The original packaging will contain this marking.

35.2 Flammables

- Flammable liquid has a flashpoint of less than 100° Fahrenheit.

35.3 Corrosives

- Corrosives is defined as a liquid or solid material that causes visible destruction or irreversible alterations in human skin tissue at the site of contact, or in the case of leakage from its packaging, a liquid that has a severe corrosion rate on steel.

35.4 Compliance Requirements

- Packages containing flammable liquids or corrosive material must be secured against movement within the vehicle on which it is being transported.

35.5 Shipping Papers

- Most of the time when hazardous materials are transported, shipping papers are required.

- The shipping paper must be properly prepared and is required to accompany each shipment.

- The basic description of hazardous materials on a shipping paper must contain the following information:

    - The proper shipping names as listed in column 2 of the Hazardous Materials Table.
    - The hazard class as listed in column 3 of the Hazardous Materials Table.
    - The identification number with alpha prefix as listed in column 3 of the Hazardous Materials Table.
    - The total quantity, by weight or volume, must be shown before or after the basic description.
    - If the material shipped qualifies for limited quantity exceptions, the notation “Limited Quantity” or “LTD. QTY.” must follow the basic description.
    - The required information must be printed in English.
    - Abbreviations or codes are not permitted except to specify type packaging (ctns.), weight (lbs.), volume (gals.) or limited quantity (ltd. qty.).
    - Each shipping paper must contain the shipper’s certification that it conforms to hazardous material regulations. The certification must be printed (manually or mechanically) and must read as follows: “This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.”

- The certification must be signed by an authorized representative of the shipper. The signature may be shown manually or mechanically.

35.6 Shipping Paper Accessibility

- During transportation, shipping papers for hazardous materials must be accessible in case of accident or for inspection by authorities as follows:

    - When the driver is at the wheel, the hazardous materials shipping papers must be within his reach when restrained by a seat belt, readily visible to a person entering the cab, or in a container affixed to the inside on the driver’s door.

    - When the driver is not at the wheel, the hazardous materials shipping papers must be left on the driver’s seat or they must be in a container on the driver’s door.

    - Shipping papers for hazardous materials should be carried separately from all other shipping papers utilizing a hazardous materials envelope.

35.7 Marking and Labeling

- Labeling and marking only need to be done if transporting materials not in their original packaging or container. The original shipper and supplier of materials will have complied with all labeling and marking regulations. Use original containers and packaging whenever possible.

- A marking includes the proper shipping name of the hazardous material as shown in the Hazardous Materials Table.

- A marking also includes the proper hazard identification number of the material as shown in column 3 of the Hazardous Materials Table. The identification number is not required on packages containing limited quantities, or materials classed as "ORM-D" when transported with no other hazardous materials.

- Markings must:

    - Be durable, in English, and printed on packages or on labels, tags, or signs affixed to packages.
    - Be on a background of sharply contrasting color.
    - Be unobscured by labels or attachments.
    - Be located away from any other display such as advertising, which would reduce their effectiveness.

- Packages of liquid hazardous materials must be marked "This Side UP" or "This End UP" to indicate the upward position of the closure of inside packages during transportation.

- Labels identify the hazard class of the contents of the container. Specifications for labels are very detailed. They encompass color of ink, durability, size, etc. LPC will use the proper labeling for each specific type of hazard.

35.8 Placarding

- Materials used by LPC require placarded vehicles only when 1,000 lbs. or more of hazardous materials are on the vehicle.

- This includes all materials when 1,000 lbs. or more aggregate gross weight of one or more of a hazardous class is loaded on the vehicle.

- COMBUSTIBLE placards are required only for containers larger than 110 gallons or when the gross weight exceeds 1,000 lbs.

- Limited quantity shipments do not require placards nor is the weight of materials shipped as limited quantity considered when computing total weight of hazardous materials in the shipment.

- Liquids, which have been identified as "Toxic by Inhalation" must have a POISON placard in addition to any other placard required for any package in excess of 1 liter. In this case, the 1,000 lbs. exception does not apply.

- When two or more classes of hazardous materials requiring different placards are loaded into the same vehicle, and their aggregate gross weight is 1,000 lbs. or more, DANGEROUS placards may be used in lieu of the specific class placard.

35.9 Emergency Procedures

- Information on the hazardous materials or wastes being transported will be kept in case of an emergency. This information should be kept with shipping papers. The information includes:

    - The basic description and technical name of the hazardous material;
    - Immediate hazards to health;
    - Risks of fire or explosion and methods for handling fires;
    - Immediate precautions to take in case of an accident;
    - Initial methods for handling leaks and spills;
    - Preliminary first aid measures.

- The information must be printed in English and may be printed on the shipping paper, a SDS, or an emergency response guidance document.

- The emergency number during transportation is the main number for LPC, (253) 234-8050. Calls will be routed to the Service Center. This number must be put on the shipping paperwork.

- In case of an accident involving a vehicle containing hazardous materials, the following should be observed:

    - Keep fires and lighted cigarettes, etc. away from the scene.
    - Set up warning signals (not flame producing signals).
    - Refer to shipping papers for name and hazardous materials classification and show papers to emergency personnel.

- In case of vehicle break down:

    - If possible, move the vehicle to a place where the hazards of the load being transported may be protected against exposure.
    - Except for vehicles placarded COMBUSTIBLE, repair and maintenance may be made in a garage or closed space only under the following conditions:
        - The cargo containment and fuel containment systems are closed.
        - Provisions must be made for immediate removal of the vehicle in case of emergency.
        - The vehicle must be removed from the building upon completion of work.
        - No heat producing repairs.

35.10 Required Reporting

- A call to the National Response Center must be made as quickly as possible if an incident involves hazardous materials during transportation, loading, unloading, or storage and results in one or more of the following:

    - Death of any person(s).
    - Injury requiring hospitalization.
    - Estimated damage to carrier or other property exceeding $50,000.
    - A continuing danger to life exists.

35.11 Numbers for the National Response Center:

Nationwide: (800) 424-8802 or Washington, D.C. (202) 426-2675

- A written report must follow-up any report by telephone within fifteen (15) days. Written reports are not required for consumer commodities, paint, or paint- related materials in containers of five gallons or less, unless a death occurs.
  Information Systems Manager
  Research and Special Programs Administration US
  Department of Transportation
  Washington, D.C. 20590

36. MATERIAL STORAGE

36.1 General

- All material in bags, containers, bundles, or stored in tiers shall be stacked, blocked, interlocked, and limited in height so that it is stable and secured against sliding or collapse.
  - Bagged materials shall be stacked by stepping back the layers and cross keying the bags at least every 10 bags high.
  - Material shall be stacked as low as practical and in no case higher than 20' ft. unless otherwise specified in this section.
- Access ways shall be kept clear at all times.
- Flammable and combustible liquids in a storage building shall be in a "NO SMOKING" area and separated from construction activities and other stored materials by 50' ft.
- Unauthorized persons shall be prohibited from entering storage areas. All persons shall be in a safe position while materials are being loaded or unloaded from trucks or other vehicles or containers.
- Non-compatible materials shall be segregated in storage.
- Materials will not be moved overhead or suspended above personnel unless positive precautions have been taken to protect the personnel from falling objects.
- Persons shall not work or pass under elevated work areas unless protected by overhead protection.
- A clearance of 24" in. shall be maintained around the path of travel of fire doors unless a barricade is provided. Material shall not be stored within 36" in. of a fire door opening.
- Solvents and other flammable items must be stored in a flammable cabinet when on a jobsite.
- Solvents and other flammable items stored at the Service Center will be stored in flammable cabinets or in the HazMat Room.

37. SPILL PROCEDURES

- Despite safeguards, the possibility still exists that a material spill may occur. For this reason, emergency reaction procedures have been developed and taught to all persons who could potentially be affected by a spill.

- If a spill should occur:

    - Immediately notify the necessary personnel that a spill has occurred, including the Director of EHS.

    - Clear the area of all persons except those necessary to contain or clean up the spill.

    - Determine the nature of the spill and consult SDS's for information on precautions necessary to deal with the spill and to determine the seriousness of the spill.

    - The Director of EHS will notify authorities if required. (Consult SDS's.)

    - Control and contain the spill if safe to do so. Stop sources of supply and prevent the spill from spreading further. Close off drains and shut off heating, ventilation and air conditioning systems if necessary.

    - If necessary, build an enclosure around the spill. If required, construct a decontamination facility as well, making sure to leave enough room inside for cleanup of equipment. All workers entering the decontamination enclosure should wear protective clothing and respirators.

    - Requirements for soil, water and /or air testing will be determined by the Emergency Coordinator.

    - Approved cleanup measures must be taken and proper disposal of waste shall be made.

    - Removal of enclosure and decontamination facilities should be done in accordance with recognized procedures and disposed of properly.

    - The Director of EHS will notify personnel and required government agencies when cleanup is completed and a safe working environment has been restored.

38. EMPLOYEE EMERGENCY PLAN

- This will provide employee instructions should it become necessary to evacuate the location due to earthquake, fire, tornado, blizzard, flood, bomb threat, toxic chemical release, or any other emergency cause.

- Should an emergency arise that might result in an evacuation of the premises or jobsite, the information will be provided to the location manager or jobsite supervisor at the earliest indication that an emergency is happening.

- In the absence of the location manager, the information will be provided to the shop manager or to the person present occupying the most senior management position. Employees will notify their immediate supervisor.

- The person present who is the most senior manager will be in charge of determining if evacuation is appropriate.

- Notice to evacuate will be given by way of an alarm, the paging system, or by verbally spreading the instructions.

- Once the instructions are issued to evacuate, employees will follow the established evacuation routes for the area in which they work. Evacuation maps with specific routes of evacuation are located conspicuously in each LPC facility.

- Should the primary evacuation route be blocked due to an emergency, employees will follow their alternate evacuation routes also shown on the evacuation maps.

- Employees will proceed immediately to the assigned assembly area when they have evacuated the building.

- Upon reaching the assembly area, they will check in with their immediate supervisor, or their designated representative. Employees should also be capable of reporting on other employees. Supervisors must keep the location manager, or the person in charge of the evacuation, current on the status of their employee accounting status so rescue efforts can be instituted, continued, or terminated.

- Employees must understand that they should keep supervision advised of unusual situations in case they could develop into a serious situation.

- Emergency telephone numbers and reporting instructions for ambulance, physician, hospital, fire, and police shall be conspicuously posted at the work site.

- Fires, regardless of how small, will be promptly reported even though extinguishing actions or controlling actions are being taken. Fires quickly can become uncontrollable if notification and requests for assistance are delayed.

- Other contact information will be provided to employees depending on the jobsite and their duties.

- New employees will be briefed on the Emergency Action Plan during their initial orientation. A record of the training will be made on the appropriate orientation form, signed by the employee and the person giving the orientation before being filed in the employee's personnel folder.

- The Emergency Action Plan is available to any employee to review at any time.

38.1 Emergency Services Information

- Reporting fires, explosions of serious injuries:

38.1.1 Company Premises

- Dial 911 - Emergency Response
- Identify your name and address. State, "this is (name) of (location)" and address.
- Calmly give the following information:
  - Nature of incident (fire, explosion, injury)
  - Exact location (office, shop, blast booth, etc.)
- Remember, to stay on the line.

- Hang up only after emergency services says it is ok to do so.

38.1.2 Field/Jobsite

- Dial 911 - Emergency Response or appropriate emergency response number at the subject site.
- Remember, to stay on the line.
- Hang up only after emergency services says it is ok to do so.

39. FIRE PREVENTION

39.1 General

- A survey of the fire prevention and protection measures and facilities shall be made at least annually. Records of the survey findings and recommendations shall be retained on file at the project or installation.
- Fires and open flame devices shall not be left unattended.
- Smoking shall be prohibited in all areas where flammable, combustible, or similar hazardous materials are stored, except in those locations specifically provided for such purposes. NO SMOKING or OPEN FLAME signs will be posted in all prohibited areas.
- All sources of ignition shall be prohibited within 50' ft. of operations which constitute a fire hazard. The area shall be conspicuously posted: NO SMOKING or OPEN FLAME.

39.2 Flammable and Combustible Liquids

- All tanks, containers, and pumping equipment, portable or stationary, used for the storage or handling of flammable and combustible liquids, shall be UL listed.
- All sources of ignition shall be prohibited in areas where flammable liquids are stored, handled, and processed. Suitable NO SMOKING or OPEN FLAME signs shall be posted in all such areas.
- Flammable or combustible liquids shall not be stored in areas used for exits, stairways, or safe passage of people.
- Explosion-proof electrical lighting shall be the only means used for artificial illumination in areas where flammable liquids, vapors, fumes, dust, or gases are present. All electrical equipment and installations shall be in accordance with the National Electrical Code for hazardous locations.
- All buildings, rooms, and compartments where flammable liquids are stored, processed, or used shall be ventilated by a mechanical exhausting system. Such system shall commence not more than 12" in. above the floor and be designed to provide for a complete change of air within the room at least six (6) times per hour.
- Drums, barrels, and other flammable liquid containers shall be tightly capped. Safety cans or other portable service containers of flammable liquids shall have the name of the contents conspicuously painted or stenciled on the container.
- In buildings, shops, or rooms where flammable liquids are handled or stored, a UL

listed self-closing metal refuse can shall be provided and maintained in good condition.

- Dispensing systems shall be bonded and grounded.
- Storage tanks shall be equipped with relief vents. Tank vents shall not be located close to open flames, stacks, heating apparatus, or any other source of ignition.
- Workers shall guard carefully against any part of their clothing becoming contaminated with flammable or combustible fluids. They shall not be allowed to continue work when their clothing becomes contaminated.
- Equipment using flammable liquid fuel shall be shut down during refueling, servicing, or maintenance.

39.3 Paints and Painting (Flammable)

- Packages containing paints, varnishes, lacquers, thinners, or other volatile painting materials shall be kept tightly closed when not in use and shall be stored in accordance with NFPA recommendations.
- Unopened containers of paints, varnishes, lacquers, thinners, and other flammable paint materials shall be kept in a well-ventilated location, free of excessive heat, smoke, sparks, flame, or direct rays of the sun.
- Paint-soiled clothing and drop cloths, when not in use, shall be stored in well-ventilated steel cabinets.
- Paint scrapings and paint-saturated debris shall be removed daily from the premises.
- Ventilation adequate to prevent the accumulation of flammable vapors to hazardous levels shall be provided in all areas where painting is done or paints are mixed.
- No smoking, open flame, exposed heating elements, or other sources of ignition shall be permitted in areas or rooms where spray painting is done.
- Spray paint booths and equipment shall be in accordance with recommendations of the NFPA.

40. FIRE EXTINGUISHERS

40.1 General

- Portable fire extinguishers shall be provided where needed and inspected monthly for full charge. Annual maintenance will be performed on all these extinguishers and noted in the maintenance log.
- Fire extinguishers shall be suitable placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
- A fire extinguisher, rated not less than 5 lb., shall be provided for each 3,000 sq. ft. of the protected building area.

- A fire extinguisher, rated not less than 10 lb., shall be provided within 50' ft. of wherever more than 5 gallons of flammable or combustible liquids or 5 lbs. of flammable gas are being used on the work site.

- At least one (1) portable fire extinguisher, having a rating of not less than 10 lb., shall be located outside of but not more than 10' ft. from the door opening into any room used for storage of more than 60 gallons of flammable or combustible liquids.

- A fire extinguisher rated not less than 5 lb. shall be provided where melting pots, torches, or open flames are in use.

- A fire extinguisher is located in every company vehicle.

- All employees will be trained upon initial assignment and annually thereafter in the proper use of fire extinguishers used by LPC.

41. BLOODBORNE PATHOGENS

41.1 Exposure Control Plan

- LPC shall have processes and procedures in place to minimize the risk of exposure to bloodborne pathogens in the workplace. People who might be exposed to another person's body fluids must take universal precautions by protecting themselves first before providing care to an accident victim.

- This exposure control plan is readily available to all employees and subcontractors upon request.

41.2 Infectious Materials

- AIDS is only one of about a dozen diseases caused by pathogenic bloodborne microorganisms. Others include malaria, syphilis, brucellosis and hepatitis B (HBV).

- Although blood and blood products are the most common places for bloodborne pathogens, they may be present in other bodily fluids including semen, vaginal fluid, cerebrospinal fluid, synovial fluid, amniotic fluid, saliva in dental procedures, and any other body fluids visibly contaminated with blood.

41.3 Workplace Transmission

- While intact skin offers some protection against bloodborne pathogens, they may be transmitted through the skin via accidental injection with needles, shards of glass, and other sharp objects. They may also enter the body through open cuts, nicks, and skin abrasions.

41.4 Infection Control

41.5 Universal Precaution

- Any person that is around any bodily fluids must take universal precautions to prevent accidental exposures.

- Universal precautions means all employees must always assume that blood or other bodily fluids are carrying a disease and always take the necessary precautions to protect themselves.

41.6 Personal Protective Equipment (PPE)

- The PPE necessary for protection from blood and bodily fluids include:
    - **Gloves** – Constructed of latex or other impermeable materials that will not allow fluids to pass through.
    - **Eye protection** – Goggles or glasses with tight fitting side shields which will not allow fluids to enter.
    - **Masks or face shields** – To protect from fluids entering the mouth or nose.
    - **One-way CPR mask** – To be used during rescue breathing.
    - In certain situations, a **gown or apron** may be necessary.
- PPE (to include but not limited to CPR protective shields and latex gloves) is provided at no cost and accessible to all employees.
- Each first aid kit contains gloves and masks and is inspected periodically (at least monthly) to ensure adequate supplies are available.
- Proper PPE may also be available in infection control kits.

41.7 Safe Handling and Disposal

- All objects or items which have blood and/or bodily fluids on them must only be handled while taking universal precautions. These items could include machinery, work surfaces, materials, clothing, and personal protective equipment.
- All objects or items which have blood and/or bodily fluids on them must be properly cleaned or disposed of as a biohazard.
- Items which must be dispose of shall be put in an approved container that is red or has the biohazard symbol on it, leak proof, and able to be sealed to prevent leaking.
- Approved containers containing contaminated items are regulated waste and must be disposed of at an approved waste disposal facility.
- Objects or items that have been exposed to blood or bodily fluids may be decontaminated with a solution of 10% chlorine bleach and 90% water.
- Special precautions must be taken when working around sharp objects.
- Sharp objects should not be handled directly, instead use dustpans, tongs or other devices to pick them up. For very small fragments of glass, use several layers of dampened paper towels to wipe them up.
- Any object or device that is used in cleaning up blood and bodily fluids must be treated as a biohazard and decontaminated or properly disposed.

41.8 Personal Hygiene

- Employees shall wash their hands and any other exposed body parts after administering first aid to another person.

- Each jobsite shall have adequate hand washing facilities to include, but not limited to an adequate supply of tepid potable water, soap, and single-use towels. Further, antiseptic solutions are placed in various locations around all office areas as well as included in job box first aid kits.

41.9 Exposure Incident

- An exposure incident is defined as a specific eye, mouth, mucous membrane, non-intact skin, or parental contact with blood or other potentially infectious materials.

- Parental means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

41.10 Post Exposure

41.10.1 Reporting

- In the event of an exposure incident, the exposed employee must immediately report the incident to their supervisor who will document the route of exposure and the circumstances under which the exposure occurred.

41.10.2 Source Individual

- If the source individual can be determined, and permission is obtained the source person's blood shall be collected and tested to determine the presence of HBV and HIV infection.

41.10.3 Medical Evaluation

- A person, who has been exposed to bodily fluids, will be sent for a medical evaluation within 24 hours of the incident.

- The attending physician will be notified the employee has been potentially exposed to bloodborne pathogens.

- The medical evaluation will evaluate the exposure and offer counseling and a Hepatitis B vaccination at no cost to the exposed employee.

- Blood samples will be collected from the exposed employee for determination of HIV and/or HBV status, although actual testing may be performed up to 90 days later at the employee's request.

- The HBV vaccine and counselling shall be offered at no expense to the employee and facilitated during normal work hours and in close proximity to their respective home or office.

- If the employee declines the Hepatitis B vaccination, they must sign a HBV declination form. If the change their mind in the future, they must be offered the vaccination again at no cost.

- LPC will receive a medical report, limited to information about the exposure, from

the evaluating doctor within fifteen (15) days. A copy of the report will be given to the exposed employee and another copy put into their medical records file.

41.11 Recordkeeping

- All exposure incident documentation shall be kept for a minimum of thirty (30) years past last day of employment.

41.12 Waste Disposal

41.12.1 Biohazard Waste

- Human body fluids shall be considered a biohazard when they are in free flowing form or in absorbed form in any amount if not packaged in a leak proof container.
- Biohazard waste must be packaged in a leak proof container, labeled with the BIOHAZARD warning and processed through an approved biohazard waste treatment facility.

41.12.2 Treated Biohazard Waste

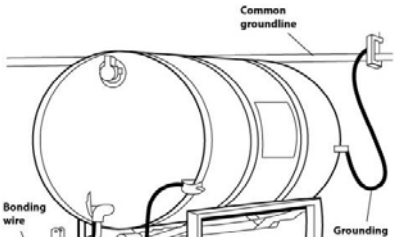
- Human body fluids shall be considered treated biohazard waste when they are poured directly into an approved sanitary sewer system, or absorbed by materials such as bandages, sanitary napkins, or commercial absorbents so that the fluid will not be released during normal solid waste handling procedures.
- Treated biohazard waste packaged in leak proof containers shall be considered solid waste and may be disposed into a general solid waste facility.

41.13 Training

- The company will provide general training to all employees on the dangers of bloodborne pathogens and the procedures to protect themselves from them.
- Training will be provided at the time of initial hire, before the commencement of any job where severe injuries could be sustained, and annually thereafter.
- Selected LPC employees will receive extensive first aid and CPR training. The training will cover the danger of bloodborne pathogens and will include the proper use of personal protective equipment and the procedures to be used.
- All new employees will be advised of the presence and purpose of PPE located in the company's first aid kits, and will be advised of the procedures for reporting exposure incidents and of their rights relating to post exposure medical evaluations.
- The Director of EHS shall retain all bloodborne pathogen training documents for a minimum of three (3) years.

42. BONDING AND GROUNDING

- If a flammable solvent is agitated by pouring or running it through a hose, static electricity can build



up. Using the proper bonding and grounding procedures will usually prevent the static electricity from building to the point where it produces a spark.

- When pouring or pumping a flammable solvent from a metal drum, ground the dispensing drum by attaching a grounding line from the metal drum to a grounded location.

- Bonding must be maintained between the metal drum and the container the solvent is being transferred to by connecting the container and the drum together with a metal wire or strap. This will drain off any developed static charge.

- The bonding wire must be clamped securely to both containers to ensure constant contact throughout the operation.

43. DISPOSAL OF PAINT AND SOLVENTS

- To eliminate the possibility of improper disposal of unused paints, solvents, or other hazardous materials these rules must be followed:

    - The Service Center will maintain a stock of thinners for field use.

    - Recycled thinner will be canned up in one and five-gallon sizes.

    - New thinners will be canned up in the one-gallon size only.

    - The Service Center will provide labeled, square metal five-gallon cans for returning dirty thinners.

    - Requisitions must be filled out and left with a Service Center representative when checking out solvents.

    - A Service Center representative must be present when returning dirty solvents (or waste paints).

      Note: All containers must be labeled with:

        - Contents, hazards warnings special precautions (if any)
        - Job number
        - Must have a lid

43.1 Do's/Don'ts for Paint and Solvents

- Do keep solvents separated and labeled!
- Do keep water out of solvents!
- Do keep waste containers labeled and organized on jobsites!
- Do return solvents to the Service Center during regular working hours!
- Do not return solvents to the Service Center without a representative present!
- Do not mix solvents!
- Do not allow alcohol to be mixed with other solvents!
- Do not let waste accumulate at jobsites or in trucks!
- Do use only labeled square metal cans with lids for dirty solvents!

Remember: No unused paints or solvents are to be disposed of by dumping on the ground, in a sewer, by pouring down a drain or by dumping in a landfill. All such materials must be returned to the Service Center for proper disposal.

Failure to comply with these rules may result in termination of employment.

44. HOUSEKEEPING

- All stairways, passageways, gangways, and access ways shall be kept free of materials, supplies, and obstructions at all times.
- Loose or light material shall not be stored or left on roofs or floors that are not closed in unless it is safely secured.
- Tools, materials, extension cords, hoses, or debris shall be kept so as not to cause tripping or other hazards.
- Tools, materials, and equipment subject to displacement or falling shall be adequately secured.

45. FORKLIFTS

- Forklifts shall be operated by authorized personnel who are trained on how to use them and authorized to do so.

45.1 Operator Training

- LPC will ensure that employees are competent to operate forklifts, as demonstrated by successful completion of a training program that includes both a written and an operational evaluation.
- The Forklift Training Program will include a combination of formal instruction, practical (hands on) demonstrations or exercises, and evaluation of the trainee's performance.
- Training will be documented and include the name of the operator, the date of the training, the date of the evaluation, the name of the instructor and the specific forklift that the operator was trained on.
- Operators must be trained for each specific piece type of forklift they are authorized to use.
- The training will be done before any employee is allowed to operate any forklift.

45.2 Periodic Evaluations and Refresher Training

- An evaluation of each operator's performance will be conducted at least every three (3) years. The evaluation should generally include:
    - The individual's performance since last evaluation;
    - An observed evaluation of the specific type of work to be performed (e.g. loading dock, materials handling and stacking, truck loading);

- A review of any special considerations (e.g. loading stability, hazardous locations).

- Refresher training will be provided to operators under the following situations:

  - Operator is involved in an accident or near miss incident;
  - Operator observed operating the vehicle in an unsafe manner;
  - Operator has been determined in an evaluation to need additional training;
  - There are changes in the workplace that could affect safe operation of the forklift;
  - The operator is assigned to a different type of forklift.

45.3 Operator Authorization

- LPC will train and authorize each forklift operator through appropriate documented training and evaluation records.

- No employee is to operate a forklift unless properly trained and authorized.

45.4 Industrial Vehicle Specifications

- Seatbelts must be installed on all forklift.

- Nameplates and safety related information must be attached to the forklift and legible.

45.5 Forklift Inspections and Maintenance

- All forklift will receive a safety inspection at the beginning of each operating shift.

- Inspections will include a functional check of brakes, lights, backup alarms, operating controls and other critical components. Inspections will be documented through a checklist, tag or equivalent system.

- Defects noted during forklift inspections will be promptly reported and corrected. In the event that defects cannot be immediately resolved, the equipment will be removed from service until repaired by authorized person(s).

- All forklifts will receive documented inspections and maintenance, per manufacturer recommendations.

45.6 Forklift Operation

- Seatbelts must be used on a forklift at all times.

- Operators shall stop at doorways and assure adequate clearance between boom, load, doorway, or other objects.

- Operators shall sound the horn in designated areas such as entering doorways or blind turns to warn personnel of their presence.

- Equipment shall be operated at safe speeds at all times for existing conditions.

- Equipment shall be checked by the operator prior to being placed into service. Record of the inspection is to be recorded on **Form 950**, **Daily Forklift Inspection Checklist** and maintained for thirty (30) days.

- Do not lift more than the rated capacity on the nameplate.

- Turn the engine off prior to fueling.

- Do not lift personnel with the forklift.

- When picking up a load, always set the forks squarely and as far as possible under the load.

- Do not raise or lower the load while truck is in motion.

- Forks, whether loaded or empty, should be carried as low as possible, but high enough to clear uneven surfaces.

- When traveling across vehicle parking lots or in other areas where pedestrians or vehicle traffic may be encountered use extreme caution and be prepared to yield the right of way. Keep the speed down!

- Equipment shall be maneuvered carefully, particularly in tight areas such as stock rooms and other storage areas.

- Only attachments provided by or approved by the manufacturer may be used.

- The operator shall not allow other personnel to ride on the truck, forks, or other areas except when seats are provided for this purpose.

45.7 Records Retention

- Forklift operator training and evaluation records will be retained for at least three (3) years.

- Forklift inspection and maintenance records will be retained for at least two (2) years.

46. ABRASIVE BLASTING

46.1 Blasting Material

- LPC will not use sand or silica based products as a blasting media.

- Other alternates will be evaluated depending on the project. In determining the hazards for abrasive blasting operations, LPC will consider the hazardous substances contained in the blasting materials, as well as any airborne toxins from metals such as lead, chromium, cadmium, and zinc, and any coatings applied to the surface where abrasive blasting is being performed.

46.2 Required Personal Protective Equipment (PPE)

- The following PPE is required when performing abrasive blasting:

- Type CE NIOSH-certified blasting airline respirator with positive pressure blasting helmet.
- Hearing protection.
- Leather gloves that protect to full forearm.
- Blasting aprons (or coveralls).
- Safety shoes or boots.

46.3 Static Electricity

- Static electricity can be generated by abrasive blasting equipment, the surfaces being blasted, and exhaust ventilation systems (fans and ductwork).

- To prevent static electricity, bonding and grounding will be used when blasting.

46.4 Reduction of Hazards

- To help minimize safety and health hazards associated with abrasive blasting, the following must be followed:

  - All personnel shall be current with medical and fit testing approvals.

  - Specific procedures and facilities established for personal hygiene shall be covered in the site-specific safety plan and covered with all team members.

  - Air monitoring should be planned for and completed for activities which involve known/suspected hazards (lead, silica, PCB, etc.), unless there are similar operations which have monitoring results on file and are approved to use by the Director of EHS.

  - Conduct abrasive blasting activities in a blasting enclosure or use isolated areas for non-enclosed blasting operations (e.g., barriers and curtain walls) and control access to the area.

  - Ventilation systems will be used in enclosed areas and containment structures.

  - Do not blast in atmospheres that contain flammable fumes.

  - Schedule blasting when the least number of workers are at the site.

  - Keep unnecessary people out of the abrasive blasting area.

  - Inspect all hoses and connections frequently and replace any that are worn or damaged before worker use.

  - Metal nozzles and hose couplings will be used.

  - The nozzle of the blasting hose will be equipped with a dead-man control device.

  - Hose-coupling safety locks and hose whip checks will be used.

  - Guards will be installed to protect the operator from high-speed particles.

- Clean and remove accumulated dust from tarps and other equipment on the worksite.
- Perform routine cleanup using wet methods or HEPA filtered vacuuming to minimize the accumulation of toxic dusts.
- Never tape, strap, or tie down an air actuated remote control lever or choke electric remote control switch.
- Never point the blasting hose at another person.
- Avoid blasting in windy conditions to prevent the spread of any hazardous materials.
- There will be no eating, drinking, or using tobacco products in blasting areas.
- Remove contaminated work clothes before eating, drinking or smoking.
- Wash stations will be provided and employees must wash their hands and face each time before eating, drinking, or smoking.
- Before leaving work areas, ensure protective clothing is removed, properly stored in a controlled area and wash facilities used to remove any contaminants from exposed skin.

46.5 Disposal

- Waste materials must be properly disposed of in accordance with State, Federal, Local and Contractual Requirements.
- Prior to shipping materials, a sample should be analyzed for positive identification and proper manifesting.
- Waste materials must be disposed of through one of LPC's approved hazardous materials and waste disposal companies.

47. RESPIRABLE CRYSTALLINE SILICA

47.1 Purpose

- This Respirable Crystalline Silica Program was developed to minimize or prevent employee exposure to hazardous levels of respirable crystalline silica that could result through construction activities or nearby construction activities occurring on worksites.
- All work involving chipping, cutting, drilling, grinding, blasting or similar activities on materials containing crystalline silica can lead to the release of respirable- sized particles of crystalline silica. Many materials found on constructions sites include crystalline silica; including but not limited to – cement, concrete, asphalt, and pre-formed structures (inlets, pipe, etc.).
- Exposure to silica is usually from an airborne dust.

- Three types of silicosis may result from exposures:
    - Acute Silicosis: Develops after a few weeks to few years, after an exposure to a very high concentration of crystalline silica.
    - Accelerated Silicosis: Develops 5 - 10 years after initial exposure to a high concentration of crystalline silica.
    - Chronic Silicosis: Develops after long-term exposure (10 or more years) to relatively low concentration of crystalline silica.
- Silicosis can result in shortness of breath, a severe cough or weakness.

47.2 Scope

- This LPC Respirable Crystalline Silica Program applies to all employees who have the potential to be exposed to respirable crystalline silica.
- This applies to all occupational exposures to respirable crystalline silica work, except where employee exposure will remain below 25 micrograms of respirable crystalline silica per cubic meter of air (25 µg/m3) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

47.3 Responsibilities

- LPC believes protecting the health and safety of our employees is everyone's responsibility.
- All levels of the organization assume some level of responsibility for this program.

47.3.1 Project Manager

- Conduct job site assessments for silica containing materials and perform employee respirable crystalline silica hazard assessments in order to determine if an employee's exposure will be above 25 µg/m3 as an 8-hour TWA under any foreseeable conditions.
- Ensure that the materials, tools, equipment, PPE, and other resources (such as worker training) required to fully implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.

47.3.2 Director of EHS

- Select and implement into the project's Site Specific Safety Plan (SSSP), the appropriate control measures in accordance with the Construction Tasks identified in OSHA's Construction Standard Table 1; and potentially including (but not limited to) a written SSSP, exposure monitoring, Hazard Communication Training, medical surveillance, housekeeping and others.
- Ensure that the materials, tools, equipment, PPE, and other resources (such as worker training) required to fully implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.
- Ensure that Project Managers, Superintendents, Foremen, Competent Persons, and employees are educated in the hazards of silica exposure are trained to work safely

with silica. Managers and Competent Persons may receive more advanced training than other employees.

- Maintain written records of training (for example, proper use of respirators), SSSP's, inspections (for equipment, PPE, and work methods/practices), medical surveillance (under lock and key), respirator medical clearances (under lock and key) and fit-test results.

- Conduct an annual review (or more often if conditions change) of the effectiveness of this program and any active project SSSP's that extend beyond a year. This includes a review of available dust control technologies to ensure these are selected and used when practical.

- Ensure that employees using respirators have been properly trained, medically cleared, and fit-tested in accordance with the company's Respiratory Protection Program. This process will be documented.

- Where there is risk of exposure to silica dust, verify employees are properly trained on the applicable contents of this program and the project-specific SSSP.

47.3.3 Supervisor

- Select and implement into the project's SSSP, the appropriate control measures in accordance with the Construction Tasks identified in OSHA's Construction Standard Table 1; and potentially including (but not limited to) a written SSSP, exposure monitoring, Hazard Communication Training, medical surveillance, housekeeping and others.

- Ensure that the materials, tools, equipment, PPE, and other resources (such as worker training) required to fully implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.

- Coordinate work with other employers and contractors to ensure a safe work environment relative to silica exposure.

- Ensure that employees using respirators have been properly trained, medically cleared, and fit-tested in accordance with the company's Respiratory Protection Program. This process will be documented.

- Ensure that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring that workers use appropriate engineering controls, work practices, and wear the necessary PPE.

- Where there is risk of exposure to silica dust, verify employees are properly trained on the applicable contents of this program and the project-specific SSSP.

- Ensure employees are provided appropriate PPE when conducting such work.

47.3.4 Competent Person and/or Site Manager (Superintendent, Foreman, etc.)

- Make frequent and regular inspections of job sites, materials, and equipment to implement the written SSSP.

- Identify existing and foreseeable respirable crystalline silica hazards in the workplace and take prompt corrective measures to eliminate or minimize them.

- Notify the Project Manager and/or the Director of EHS of any deficiencies identified during inspections in order to coordinate and facilitate prompt corrective action.

- Assist the Project Manager and the Director of EHS in conducting job site assessments for silica containing materials and perform employee respirable crystalline silica hazard assessments in order to determine if an SSSP, exposure monitoring, and medical surveillance is necessary.

47.3.5 Employees

- Understand the hazards and symptoms of exposures to crystalline silica.

- Follow recognized work procedures (such as the Construction Tasks identified in OSHA's Construction Standard Table 1) as established in the project's SSSP and this program.

- Use the assigned PPE in an effective and safe manner.

- Participate in respirable crystalline silica exposure monitoring and the medical surveillance program, as needed.

- Report any unsafe conditions or acts to the Site Manager and/or Competent Person.

- Report any exposure incidents or any signs or symptoms of silica illness.

47.4 Definitions

Note: If a definition is not listed in this section, please contact the Competent Person or the Director of EHS.

- **Action Level**: A concentration of airborne respirable crystalline silica of 25 µg/m3, calculated as an 8-hour TWA.

- **Competent Person**: An individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them.

- **The Construction Standard Table 1**: A list developed by OSHA of 18 common construction tasks along with acceptable exposure control methods and work practices that limit exposure for those tasks.

- **Employee Exposure**: The exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

- **Permissible Exposure Limit (PEL):** The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 µg/m3, calculated as an 8-hour TWA.

- **Respirable Crystalline Silica:** Quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device.

47.5 Requirements

- The task(s) most often being performed by LPC is grinding or blasting on concrete.
- Grinding on concrete is included in OSHA's Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica Table 1.
- Blasting will require monitoring and alternative exposure methods.

47.6 Specified Exposure Control Methods

- When possible and applicable, LPC will conduct activities with potential silica exposure to be consistent with OSHA's Construction Standard Table 1.
- Supervisors will ensure each employee under their supervision and engaged in tasks identified on OSHA's Construction Standard Table 1 have fully and properly implemented the engineering controls, work practices, and respiratory protection specified for the task on Table 1.
- Where an employee performs more than one task included on OSHA's Construction Standard Table 1 during the course of a shift and the total duration of all tasks combined is more than four (4) hours, the required respiratory protection for each task is the respiratory protection specified for more than four (4) hours per shift. If the total duration of all tasks on Table 1 combined is less than four (4) hours, the required respiratory protection for each task is the respiratory protection specified for less than four (4) hours per shift.

47.7 Alternative Exposure Control Methods

- Alternative Exposure Control Methods apply:
  - For tasks not listed in OSHA's Construction Standard Table 1, or
  - Where LPC cannot fully or properly implement the engineering controls, work practices, and/or respiratory protection described in Table 1.
- Alternative control methods will require monitoring to determine the necessary control methods used.

47.8 Monitoring

- If LPC cannot fully or properly implement the engineering controls, work practices, and/or respiratory protection described in Table 1, we will assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level with monitoring.
- LPC will perform initial monitoring to assess the eight (8) hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, and in each work area.

- Where several employees perform the same tasks on the same shift and in the same work area, LPC will plan to monitor a representative fraction of these employees.

- When using representative monitoring, LPC will sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

- If initial monitoring indicates that employee exposures are below the action level, LPC may discontinue monitoring for those employees whose exposures are represented by such monitoring.

- Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, LPC will repeat monitoring within six (6) months of the most recent monitoring.

- Where the most recent exposure monitoring indicates that employee exposures are above the PEL, LPC will repeat monitoring within three (3) months of the most recent monitoring.

- Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the action level, LPC will repeat monitoring within six (6) months of the most recent monitoring until two consecutive measurements, taken seven (7) or more days apart, are below the action level. At which time LPC will probably discontinue monitoring for those employees whose exposures are represented by the monitoring, except when a reassessment is required.

- LPC will reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when LPC has any reason to believe that new or additional exposures at or above the action level have occurred.

- LPC will ensure that all respirable crystalline silica samples taken to satisfy the monitoring requirements are collected by a qualified individual and the samples are evaluated by a qualified lab with respect to crystalline silica analysis.

- Within five (5) working days after completing an exposure assessment, LPC will individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

- Whenever an exposure assessment indicates that employee exposure is above the PEL, LPC will describe in the written notification the corrective action(s) being taken to reduce employee exposure to or below the PEL.

- Where air monitoring is performed, LPC will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to respirable crystalline silica.

- When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, LPC will provide the observer with protective clothing and equipment at no cost and shall ensure that the observer uses such clothing and equipment.

- Once air monitoring has been performed, LPC will determine its method of

compliance based on the monitoring data and the hierarchy of controls.

- LPC will use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica at or below the PEL, unless LPC can demonstrate that such controls are not feasible.

- Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, LPC will nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection.

47.9 Control Methods

- LPC will provide control methods that are either consistent with Table 1 or use other controls to minimize worker exposures to silica. These exposure control methods can include engineering controls, work practices, and respiratory protection.

- LPC will not use silica sand in the sandblasting process. Alternative media that does not include silica will be used.

- Containment methods will be used to control the hazard and protect adjacent workers from exposure.

- Use respiratory protection when source controls cannot keep silica exposures below the NIOSH Recommended Exposure Limit (REL).

- When implementing the control measures specified in Table 1, LPC may, depending on required controls, do the following:

    - For tasks performed indoors or in enclosed areas, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;

    - For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;

    - For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:

        - Is maintained as free as practicable from settled dust;
        - Has door seals and closing mechanisms that work properly;
        - Has gaskets and seals that are in good condition and working properly;
        - Is under positive pressure maintained through continuous delivery of fresh air;
        - Has intake air that is filtered through a filter that is 95% efficient in the 0.3- 10.0 µm range (e.g., MERV-16 or better); and
        - Has heating and cooling capabilities.

- Signs will be placed to notify workers that a silica hazard is present and proper controls and PPE must be used.

- Tools used must have the proper vacuum, wet system or other control methods installed per the SSSP and be in proper working order. Defective equipment must

not be used and removed from the area until fixed.

47.10 Respiratory Protection

- Where respiratory protection is required by this program, LPC will provide each employee an appropriate respirator that complies with the requirements of the LPC Respiratory Protection Program.

- Employees using the respirators must also comply with all parts of the respirator program.

- Respiratory protection is required where specified by the OSHA Construction Standard Table 1, for tasks not listed in Table 1, or where the company has not fully and properly implemented the engineering controls, work practices, and respiratory protection described in Table 1.

- Situations requiring respiratory protection include:

    - Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls.
    - Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible.
    - During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.

47.11 Personal Protective Equipment (PPE) and Clothing

- PPE and clothing used during operations involving silica must not be worn off site and must be laundered or replaced on a regular basis.

- Safety glasses, gloves, and safety footwear are required in all operations. Additional PPE will be determined by the hazards involved in the operation. This may include face shields, blast hoods, gloves and suits, Tyvek suits, hart hats, or any other type of PPE deemed necessary.

47.12 Decontamination

- Adequate washing facilities will be provided on site to enable worker decontamination.

- Prior to eating, drinking, smoking, or leaving the worksite, workers should thoroughly wash their face and hands with a mild detergent solution or wipes.

- Procedures required for decontamination and disposal of protective clothing and equipment:

    - Remove disposable protective clothing and PPE and put it into a waste receptacle.
    - Remove contaminated clothing and place in a laundry receptacle.
    - Wash hands, face, head and respirator.
    - Properly store the respirator.

47.13 Housekeeping

- Clean up should be done with a HEPA filtered vacuum or wet sweeping. This includes vacuuming and cleaning the tools.

- LPC does not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not feasible.

- LPC does not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica unless the compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air.

47.14 Site Specific Safety Plan (SSSP) for Silica

- When employee exposure on a construction project is expected to be at or above the action level, a written SSSP for silica will be established and implemented. This SSSP will contain at least the following elements:

    - A description of the tasks in the workplace that involve exposure to respirable crystalline silica;

    - A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task;

    - A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica; and

    - A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to respirable crystalline silica and their level of exposure, including exposures generated by other employers or sole proprietors.

- The written SSSP will designate a Competent Person to make frequent and regular inspections of job sites, materials, and equipment to ensure the SSSP is implemented.

47.15 Medical Surveillance

- Report all cases of silicosis to the Washington State Labor and Industries or other relevant governing agencies.

- Medical surveillance will be made available for each employee who will be exposed to respirable crystalline silica above the PEL (50 µg/m3) for thirty (30) or more days per year.

- Medical surveillance (i.e. medical examinations and procedures) will be performed by a DOCTOR and provided at no cost to the employee at a reasonable time and place.

- LPC will make available an initial (baseline) medical examination within thirty

(30) days after initial assignment, unless the employee has received a medical examination that meets the requirements of the Crystalline Silica Construction Standard within the last three (3) years.

- LPC will make available medical examinations that include the aforementioned procedures at least every three (3) years. If recommended by the doctor, periodic examinations can be more frequently than every three (3) years.

- When a medical examination will be performed for silica exposures, the following items will be supplied to the doctor performing the examination:

    - A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;

    - The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;

    - A description of any personal protective equipment (PPE) used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

    - Information from records of employment-related medical examinations previously provided to the employee and currently within the control of LPC.

- LPC will ensure that the doctor explains to the employee the results of the medical examination and provides each employee with a written medical report within thirty (30) days of each medical examination performed.

- LPC will also obtain a written medical opinion from the doctor within thirty (30) days of the medical examination.

- If the doctor's written medical opinion indicates that an employee should be examined by a specialist, LPC will make available a medical examination by a specialist within thirty (30) days after receiving the doctor's written opinion. LPC will ensure that the examining specialist is provided with all of the information that the employer is obligated to provide to the doctor.

- LPC will ensure that the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within thirty (30) days of the examination.

- LPC will obtain a written opinion from the specialist within thirty (30) days of the medical examination.

47.16 Training and Communication

- LPC will include respirable crystalline silica in the company's Hazard Communication Program.

- All employees will be trained in accordance with the provisions of this program and will have copies of the written program available.

- LPC will ensure that each employee has access to information of the types of crystalline silica they may encounter and the respective SDS's.

- This training will cover concerns relating to cancer, lung effects, immune system effects, and kidney effects.

- LPC will ensure that each employee with the potential to be exposed at or above the action level for respirable crystalline silica can demonstrate knowledge and understanding of at least the following:

    - The health hazards associated with exposure to respirable crystalline silica.

    - Specific tasks in the workplace that could result in exposure to respirable crystalline silica.

    - Specific measures LPC has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used.

    - The contents of the LPC Respirable Crystalline Silica Program.

    - The identity of the Competent Person designated by LPC.

    - The purpose and a description of the company's Medical Surveillance Program.

47.17 Recordkeeping

- LPC will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica. This record will include at least the following information:

    - The date of measurement for each sample taken.
    - The task monitored.
    - Sampling and analytical methods used.
    - Number, duration, and results of samples taken.
    - Identity of the laboratory that performed the analysis.
    - Type of PPE, such as respirators, worn by the employees monitored.
    - Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

- LPC will ensure that exposure records are maintained and made available as required.

- Exposure records will be kept for at least thirty (30) years.

- LPC will make and maintain an accurate record for each employee enrolled in the medical surveillance portion of this program. The record shall include the following information about the employee:

    - Name and social security number;
    - A copy of the doctors and/or specialists' written medical opinions; and
    - A copy of the information provided to the doctors and specialists.

- LPC will ensure that medical records are maintained and made available as

required.

- Medical records will be kept under lock and key for at least the duration of employment plus thirty (30) years.

- If an employee works for an employer for less than one (1) year, the employer does not have to keep the medical records after employment ends, as long as the employer gives those records to the employee.

47.18 Program Evaluation

- This program will be reviewed and evaluated on an annual basis by the Director of EHS.

48. CONFINED SPACES

48.1 Confined Space Criteria

- A confined space is a space that is:
  - Not intended to be occupied by humans on a regular basis.
  - Has limited access and egress.
  - Is large enough that an employee may fully enter the space.

- A **permit-required confined space** is a confined space that has one or more of the following characteristics:
  - Contains or has a potential to contain a hazardous atmosphere.
  - Contains a material with the potential for engulfing someone who enters.
  - Has an internal configuration that could allow someone entering to be trapped or asphyxiated by inwardly converging walls or by a floor, which slopes downward and tapers to a smaller cross section.
  - Contains any physical hazard.
  - Contains any other recognized serious safety or health hazard that could either:
    - Impair the ability to self-rescue.
    - Result in a situation that presents an immediate danger to life or health.

- A **non-permit confined space** is a confined space that does not have any atmospheric hazards. It also does not actually or potentially contain hazards that could cause death or serious physical harm.

- A typical confined space may be, but is not limited to:
  - Tanks
  - Holds
  - Tunnels
  - Vaults
  - Vessels
  - Silos
  - Manholes

48.2 Designations

Entrant: The person(s) that will enter a confined space. Entrants must be trained on and understand:

- The hazards of the confined space including the signs or symptoms of exposure.
- The work needed to be perform.
- Proper use of the necessary equipment.
- Proper communication with the attendant.
- To alert the other entrants and attendant if conditions change.
    - To exit the confined space if ordered to by the attendant, entry supervisor or any other person with knowledge of the confined space procedures.
    - The entrant recognizes a change in the confined space hazards.
    - An alarm sounds.
- Entrant duties listed on **Form 920B, Confined Space Hazard Training**.

Attendant: An individual stationed outside a confined space responsible for monitoring entrants and performing assigned confined space entry duties.

Competent Person: A person capable of identifying existing and predictable hazards in the surroundings or working conditions including those that are unsanitary, hazardous, or dangerous to employees, and has the authorization to take prompt corrective measures to eliminate them.

Entry Supervisor: The foreman on the job is responsible for identifying permit-required confined spaces and performing the Entry Supervisor responsibilities and job duties, including:

- Understanding the hazards and determining if acceptable entry conditions are present at a permit-required confined space before and during entry.
- Train the employees involved in the confined space entry.
- Authorizing entry and overseeing the entry operations are performed properly.
- Making sure the tests are performed, the permit is properly documented, and filled out.
- Signs the entry permit and ensures it is followed.
- Checking all equipment is available and ready to use.
- Verifying rescue procedures are in place.
- Keeping the area clear of unauthorized people.
- Terminating entry as required.
- Entry Supervisor duties listed on **Form 920E, Permit Confined Space Entry Supervisor Training.**

- **Program Administrator:** The confined space program administrator is the LPC Director of EHS.

48.3 Hazardous Atmospheres

- Hazardous atmospheres may expose employees to risk of death, incapacitation, impairment of ability to perform self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

48.4 Oxygen-Deficient Atmosphere

- An oxygen-deficient atmosphere has less than 19.5% available oxygen (02). Any atmosphere with less than 19.5% oxygen may not be entered.

- The oxygen level may be decreased if oxygen is displaced by another gas, such as carbon dioxide, nitrogen, or a toxic substance.

48.5 Flammable or Explosives Atmospheres

- Two things must be present to make an atmosphere flammable:

    - Oxygen in the atmosphere.
    - Flammable gases, vapor, or dust.

- Any oxygen-enriched atmosphere (above 23.5%) will create a potentially flammable atmosphere. Pure oxygen should never be used for ventilating confined spaces. All ventilation is to be done with atmospheric air.

- Flammable gas, vapor, or mist in excess of ten percent of its lower flammable limit (LFL) or lower explosive limit (LEL).

- If a source of ignition (e.g. a sparking electrical tool) is introduced into a space containing the proper mixture of air and flammables, an explosion or fire may result.

48.6 Toxic Atmospheres

- Most substances: (liquids, vapors, gases, mists, solid materials, and dust) should be considered hazardous in a confined space. A toxic atmosphere contains a concentration of any substance that may exceed a Permissible Exposure Limit. (PEL).

- Toxic substances may come from the following conditions:

    - Work being performed in a confined space: including welding, cutting, brazing, painting, scraping, sandblasting, degreasing, etc.
    - Residual material from storage, such as in cargo holds or fuel cells.
    - Work being performed near the entrance to the confined space including: fumes from internal combustion engines, other painting, solvents, etc.
    - Fumigation residues, etc.

- Common toxic substances found in confined spaces are carbon monoxide and hydrogen sulfide.

48.7 Dust

- Airborne combustible dust at a concentration that meets or exceeds its LFL. The concentration may be approximated as when the dust obscures vision at a distance of 5’ or less.

48.8 Immediately Dangerous to Life or Health (IDLH)

- Any condition that is immediately dangerous to life or health.

- LPC employees will not enter any confined space designated as IDLH.

48.9 Permit Required Confined Spaces

- Prior to working in a confined space, the space must be inspected by a company management representative in consultation with the Director of EHS. If a space is determined to meet the criteria of a permit required confined space, then permit required confined space procedures will be followed. The pre- planning will:
    - Analyze the potential hazards of the confined space.
    - Review the tasks that will be performed in the confined space.
    - Determine the required safety equipment.

48.10 Attendant(s)

- Attendant(s) will be required for each permit required confined space entry. Attendant(s) will:
    - Know the processes and work being performed in the confined space.
    - Understand the potential hazards and effects of the hazards in the confined space.
    - Monitor all activities in and around the confined space.
    - Keep track of who and how many people are in the confined space.
    - Keep people not involved in the entry away.
    - Maintain constant communications with confined space entrants.
    - Order evacuations if the conditions in the confined space changes.
    - Perform non-entry rescue.
    - Call the rescue team if needed.
- Attendants must never enter confined spaces while functioning in a standby capacity. Attendants will not engage in any activity that may distract from monitoring the confined space entry.

48.11 Confined Space Entry Permit

- **Form 920C, Confined Space Entry Permit,** will be completed and signed by the entry supervisor and reviewed with all employees involved in the permit required confined space entry prior to conducting entry operations.
- The Entry Permit will include the identity of the confined space to be entered, hazards and associated controls, the purpose of entry, and the signatures of authorized entrants, attendants and the entry supervisor.
- The Entry Permit will be posted at the entrance to the confined space.
- The entry permit shall be valid for the duration of the job with a maximum period of one shift only. The permit shall be updated for any subsequent shifts.
- Any issues with the confined space entry will be noted on the permit and reviewed.
- The Confined Space Permit will be terminated when the work is complete by the entry supervisor.
- Completed Entry Permits will be reviewed by the entry supervisor. Any noted discrepancies will be communicated to the Director of EHS.

- All expired permits will be kept on file for one (1) year.

48.12 Isolation

- If necessary, before entering any confined space, isolation procedures shall be completed to prevent any materials from entering the confined space or any equipment parts in the confined space from moving.

- The isolation process will be approved by the entry supervisor.

- Isolation of the confined space could involve the following:

    - Blanking or blinding.
    - Misaligning or removing sections of lines, pipes, or ducts.
    - Double block and bleed system.
    - Machine guarding.
    - Blocking or disconnecting all mechanical linkages.
    - Placement of barriers to eliminate the potential for employee contact with a physical hazard.
    - Lockout of all sources of energy.

- The lockout procedures shall be specified for each potential hazard of confined space. Equipment requiring lockout in this procedure shall be identified by a qualified person. Each person entering the confined space will apply their own lock to the lockout device and will maintain control of the key throughout their entry. See Lockout/Tagout Procedures.

- In continuous systems where complete isolation is impossible, such as sewers or utility tunnels, job specific written safety procedures shall be followed.

48.13 Ventilation and Purging

- For confined spaces with a potential hazardous atmosphere, ventilation must be performed. Purging of the area may be used to adjust the atmosphere in a confined space to acceptable standard (PEL, LEL, etc.).

48.13.1 Ventilation

- Confined spaces will be purged as necessary with continuous fresh air provided from a reliable source before and during entry as required to ensure the atmosphere conditions. Local exhaust ventilation may be provided when general ventilation is not effective due to restriction in the confined space or when high concentration of contaminants occurs in the breathing zone of the workers.

48.13.2 Purging

- Purging is accomplished by displacing the atmosphere in the confined space with forced air ventilation or fluid or vapor (inert gases, water, steam, and/or cleaning solutions). Once the atmosphere within the confined space is brought to a safe level, continuous mechanical ventilation shall be provided to maintain the toxic and flammable atmosphere below the PEL and/or LEL.

48.14 Monitoring the Atmosphere

- Before entry, the internal atmosphere content shall be tested with a calibrated 4 gas direct-reading instrument and must meet the following conditions:
    - Oxygen content
        - Between 19.5% and 23.5%
    - Flammable gases, vapors and mists
        - Below 10% of their lower explosive limits
    - Potential toxic air contaminants
        - Below applicable Permissible Exposure Limits (PELs) and Threshold Limit Values (TLVs)
- If conditions do not meet specifications, the confined space must not be entered.
- These readings must be entered onto the Confined Space Permit.
- When the results of atmospheric monitoring of a confined space (prior to entry of a person into the space) show that the atmosphere is oxygen deficient, a LPC employee will not enter the area.
- The employees involved with the entry of the confined space may watch the testing of the confined space and the results will be available to each employee before entry.
- The confined space should be monitored throughout the entry and periodic readings documented on the entry permit. If the confined is exited for breaks and lunches, it will be monitored before it is re-entered.
- If the readings fall outside the above safe ranges:
    - The confined space will be immediately evacuated.
    - It will be determined what changed the atmospheric conditions.
    - The confined space purged with fresh air and re-evaluated.

48.15 Entering the Confined Space

- When entrance covers are removed, opening(s) shall be promptly and effectively guarded.
- Notification of the confined space will be done for all people in the area through either signs or other forms of communication.
- Unauthorized people will be kept away from the confined space.
- Confined spaces will be purged as necessary with continuous fresh air provided from a reliable source before and during entry as required to ensure the atmosphere conditions.
- It shall be demonstrated and documented in writing that space is safe for entry and that all of the above requirements have been met.

- Personnel will be designated and trained in confined space entry rescue procedures.

- Additional appropriate equipment will also be available as necessary including fire extinguishers, non-sparking tools, personal protective equipment, communication means and lighting.

- Entrants and attendants will understand the potential hazards of the confined space and how to properly use the necessary equipment to enter the confined space.

- All employees involved in the confined space entry will wear the proper PPE for safe entry.

- There will be effective means of communication between the entrants and the confined space attendant, this may include communication equipment.

- Ladders may be used for entering and exiting the confined space.

- Lighting will be adequate for entrant(s) to be able to see to perform their work. All portable lights and tools shall be explosion proof when working in potentially flammable atmospheres.

- The work area will be inspected when work is completed to verify safe conditions prior to resuming normal operations.

- Any problems encountered during a confined space entry will be noted on the confined space permit.

48.16 Confined Space Rescue

- Persons entering a confined space will wear a rescue harness or other means to provide connection to a lifeline. Additional rescue equipment such as a tripod with safety winch should be available if needed to remove a worker from a confined space. This equipment shall be capable of being hand operated. For certain confined spaces, this requirement may be waived if documentation exists that alternate effective means exist for safe retrieval in the event of an emergency.

- Where off-site rescue services are used, the effectiveness of these services will be evaluated and documented.

- The Entry Permit will identify the emergency rescue plan. The plan may be for the attendant to summon an emergency rescue team (means of communication must be present) or the attendant may initiate rescue procedures. If attendant is to perform rescue, they must have a hoist or other mechanical means immediately available that will allow for rescue from outside the confined space (i.e. tripod and winching device).

- Any employee assigned rescue duties shall be trained and demonstrate proficiency in the use of rescue equipment. Rescuers shall not enter a confined space without first notifying others. No persons shall enter a confined space in a rescue attempt without the proper equipment, up to and including a self- contained breathing apparatus (SCBA), full body harness, and lifeline.

- All personnel designated as confined space rescuers shall carry a current First Aid/CPR card.

48.17 Training

- Training shall be conducted by a Competent Person for all employees directly or indirectly affected by tasks involving confined spaces before being allowed to participate in a confined space entry.

- The training shall include identifying the hazards and correct procedures for working in and around confined spaces. A record of the training will be maintained on **Form 939, Confined Space Job Safety Orientation**. The trainee will acknowledge they received the training with a signature. The instructor's signature will also be on the record. Training records will be available for inspection by the employee or their authorized representative. Training will consist of at least:

    - Confined space hazard recognition.
    - Use of powered ventilation equipment.
    - Atmosphere sampling and testing devices.
    - Use of all rescue and support equipment.
    - Emergency rescue procedures - Practice if required.
    - Isolation and lockout procedures.
    - Confined spaces and hazards expected to be encountered.
    - Required PPE.

- Additional training may be done if deviations in the confined space policy are noted or employee knowledge is inadequate. All confined space trainings will be documented.

48.18 Other Employers Confined Spaces

- If we are required to enter a confined space that is on another company's property or facility, we must:

    - Get all information about the confined space from the company including potential hazards of the space, rescue procedures and any other necessary information.

    - Coordinate the entry of the confined space with the company and have them approve our confined space entry permit.

    - Inform them of when the entry will take place, the process and any issues that we may encounter.

    - If there are additional entry requirements by the owner of the confined space, these will be discussed with the LPC Director of EHS to make sure we can meet these requirements.

49. HYDROGEN SULFIDE

49.1 Purpose

- The following Hydrogen Sulfide (H2S) Program has been established for LPC.

49.2 Responsibilities

49.2.1 Company

- Implement, train, and manage the program.
- Provide HAZCOM training to all employees that may be exposed to work areas that may contain hydrogen sulfide.
- Implement administrative and engineering controls to prevent/mitigate elevated concentrations of H2S.
- Provide appropriate PPE and equipment to exposed employees.
- Maintain exposure monitoring records for all affected employees

49.2.2 Managers and Supervisors

- Know and understand the hazards of H2S.
- Implement appropriate administrative and engineering controls to prevent/mitigate elevated concentrations of H2S.
- Ensure adequate supply of appropriate PPE for exposed employees.

49.2.3 Employees

- Comply with all aspects of this program.
- Know and understand hazards of H2S and how to protect yourself.
- Use any and all administrative or engineering control as directed by supervision.
- Use PPE in accordance with company policy and as instructed by supervision and the SSSP.
- Know and understand each jobsite, site-specific safety, contingency and emergency action plans.

49.3 Hazards

- H2S is a colorless, flammable gas that smells like “rotten eggs”. H2S is detectable by the human nose at approximately 10ppb (parts per billion). It is highly toxic and highly flammable.

- H2S is produced naturally by decaying organic matter, released from liquid manure and natural gas, and as a by-product of such industrial processes as petroleum refining and wood pulp processing.

- Exposure to H2S in excess of the PEL can cause adverse health effects that include, but not limited to eye irritation; central nervous system (CNS) specifically the area of the brain that controls breathing; shock, convulsions and death at high concentrations.

- Symptoms of overexposure include, but are not limited to eye irritation; nose and throat irritation; headache, dizziness; nausea; coughing, breathing difficulty.

49.4 Evaluation

- Any space that may contain H2S will be monitored using a 4-gas meter.

- All calibration of the monitor shall be done in accordance with manufacturer’s instructions and documented. All employees that use this equipment shall be properly trained in its use and limitations. Monitoring data shall be recorded using **Form 905A, Confined Space Entry Permit.**

- Alarms shall be calibrated to go off when the H2S concentration reaches 10ppm.

46.2. Hazard Control

- No employee shall work in an area with airborne concentrations of H2S above the PEL.
- In confined space applications where H2S may be present, ventilation shall be used to reduce the concentrations.
- If H2S is present in the workspace, it shall be determined if work continues or if supplied-air (airline) respiratory equipment shall be used.

49.5 Training

- Training shall include the contents of this program, the hazards of H2S, and how to safely mitigate elevated concentrations of H2S in the work area.
- All employees that work in confined spaces shall have training prior to entry. See Confined Space Program.

49.6 Recordkeeping

- All training records are retained for three (3) years post termination of employment. All monitoring when there is an exposure retained for thirty (30) years.

50. EXPOSURE TO CARBON MONOXIDE

- LPC's specific operating procedure for the monitoring of carbon monoxide during the usage of any combustion engine powered equipment used indoors or inside a containment.
- A carbon monoxide monitor (CO monitor) will always be supplied when combustion engine powered equipment is used indoors or inside a containment. The atmosphere must be measured for the CO levels. The foreman is responsible for establishing a regulated area, and assuring that these procedures are followed.
- Always read and understand the manufacturer's manual before using the instrument.
- Proper ventilation is used at all times when operating fuel-powered equipment indoors or inside a containment.
- Since CO rises in the air, the atmosphere must be measured frequently at different levels; for example, if a person is working off a ladder, make sure to measure the atmosphere at the working level.
- The CO monitor will be calibrated with a known concentration of gas at least once per month, or more often if necessary.
- At lower levels, people sometimes mistake the symptoms of CO exposure for the flu, or do not associate their severe headache and nausea with carbon monoxide exposure. Be

aware of symptoms.

- WISHA permissible limits for carbon monoxide are 35 ppm averaged over eight (8) hours with a 200 ppm ceiling limit.

51. SEWAGE AND FECAL WASTE POLICY

- This policy is to be implemented when workers, in the course of job-related activities, are potentially exposed or are exposed to sewage or other environments that may contain human fecal wastes at wastewater treatment facilities, sewage-holding tanks on ships or other similar projects.

- Bacteria, viruses, and even parasites can be transmitted through exposure to human and/or animal waste.

- The use of protective clothing, proper personal hygiene, and immediate treatment of cuts and abrasions to prevent contact with wastewater or sludge will reduce significantly the risk of transmission. Workers are to be provided with suitable protective gear to minimize actual exposure.

- Hepatitis A concerns involve the risk of acquiring Hepatitis A from potential hand-to-mouth transmission of material containing that virus.

- Workers, who have been exposed, need to be immunized with Tetanus and Hepatitis A vaccinations. Workers potentially exposed to sewage and/or human fecal wastes are to be immunized prior to potential exposure.

- A supervisor assigning a worker's duties where there is a potential exposure to sewage or other environments that may contain fecal wastes is responsible for assuring that the employee is offered a Tetanus and Hepatitis A vaccination, receives a copy of this policy, and completes **Form 972 Safety Rules on Premises**.

- Workers who have suffered an unexpected exposure are to be immunized as soon as possible and in no event any later than ten (10) days after actual exposure.

- Workers are to be banned from eating, drinking, or smoking in environments that may contain sewage or fecal wastes.

- Workers are to be provided a facility for washing hands and face prior to coffee breaks, lunchtime and at the end of their shift. Where hand-washing facilities are not available, antiseptic hand cleanser will be provided along with paper towels.

- Contaminated protective gear and/or clothing are not to be worn off the work site.

- All equipment that comes into contact with sewage or fecal wastes is to be decontaminated at the work site by washing with a 10% percent solution of bleach.

- Workers are to be provided a copy of this written policy and are to be advised of the importance of practicing good personal hygiene and of obeying the workplace rules.

52. LOCKOUT/TAGOUT

- LPC will establish and implement lockout/tagout procedures and practices to protect

employees from hazards associated with the unexpected activation or release of energy from machinery and equipment during maintenance, repair, servicing and modifications.

52.1 Definitions

Affected Person: An individual who works or has occasion to work in the vicinity of machinery or equipment systems covered by lockout/tagout procedures.

Approved Locks: Padlocks used exclusively for machinery and equipment lockout by authorized persons. Approved locks are RED and uniquely keyed for each authorized person.

Authorized Person: An individual qualified to perform lockout/tagout procedures by virtue of training and demonstrated competency. Only authorized person(s) can perform lockout/tagout procedures.

Energy Isolating Device: A disconnect switch, valve shut-off or other physical device for isolating energy from machinery or equipment.

Lockout: The use of an approved red padlock, hasp and personal identification to physically lock a disconnect switch, valve shutoff or other energy isolation device in the off position.

Tagout: The application of a highly visible “Do Not Operate” hazard warning tag to machine or equipment system activation control(s) prior to conducting repair, maintenance or servicing activities. Tags must clearly identify the type of work being performed and the signature of the authorized person performing the work.

Lockout/Tagout Procedure: A procedure for eliminating energy from equipment and machinery prior to maintenance, repair, servicing or modification that contains the following sequence of steps:

- Identification of all energy sources
- De-energization
- Lockout
- Tagout
- Relief of stored energy
- Testing and verification

Locked Out State: The physical state of equipment and machinery following complete de-energization and verification through implementation of lockout/tagout procedures.

52.2 Responsibilities

52.2.1 Director of EHS

- The Director of EHS is responsible for providing support and expertise to the implementation of the Lockout/Tagout Program.
- This includes developing procedures for lockout/tagout and helping to educate all employees.

52.2.2 Foreman

- The foreman is responsible for supporting the Lockout/Tagout Program. They are required to assist in the assessment and implementation of the program.

52.3 Lockout/Tagout Procedures

- Lockout/tagout procedures will be written and describe specific method(s) applicable to local machinery and equipment systems.

- Written lockout/tagout procedures shall include:

    - Name of the equipment or machinery being locked out.
    - Type(s) and magnitude(s) of the energy being locked out.
    - Types of lockout devices and locks needed.
    - How to prepare and shut down the machinery or equipment.
    - How to isolate the machinery or equipment.
    - Proper application of lockout/tagout locks, identification and devices.
    - The release of stored energy.
    - Verification of isolation.
    - Release from lockout/tagout.
    - Lockout/tagout removal.
    - Testing or positioning of equipment.

- Each piece of equipment and all new equipment must be analyzed to determine if lockout/tagout procedures are needed. All energy sources must be identified and a procedure for eliminating the energy sources will be written. The procedures must be posted on or near the machines or equipment requiring lockout/tagout and must be visible from the point of operation.

- Energy isolating devices will be secured in the off position using red locks and appropriate devices. These red locks and devices shall be used exclusively for lockout/tagout. Locks are required unless it is demonstrated and documented that an alternate procedure provides equivalent protection.

- Approved locks and tags will be provided to each authorized person for their use. Each person potentially exposed to an energy source will apply their own lock(s) and tag(s).

- Each lock must identify who placed that lock on the equipment.

- Whenever two or more authorized persons are working on the same system, each person will apply their own locks and tags to each energy isolation point using a multi-lock hasp or equivalent.

- Lockout/tagout procedures will include provisions to ensure the continuity of lockout and tagout protection during shift or personnel changes.

    - Lockout and tagout devices will be removed by the same authorized person who applied these devices. No one may remove someone else's lockout and/or tagout device without the Director of EHS's approval and the absent employee lock removal procedure is followed. The absent employee lock removal procedures include at least the following:

        - Verifying the authorized employee who applied the device is not at the facility.

        - Making all reasonable efforts to contact and inform the authorized

employee that the lockout or tagout device is being removed.

- Making sure the authorized employee is informed, before resuming work at the facility, that the lockout or tagout device has been removed.

- In the event that the individual who applied the lock and tag is not available, these devices may be removed by a superintendent or foreman after following the lockout removal steps and having the approval of the Director of EHS. The person who applied the lockout devices must be notified before coming back into the workplace.

- Equipment with electrical cords and plug in will not need a lockout/tagout device if the cord is always in direct control of the person working on the equipment.

- Affected persons will be notified whenever locks and tags are applied and removed in connection with lockout/tagout procedures.

- Authorized persons will inspect the work area prior to removal of energy controlling devices to ensure non-essential items (e.g., tools, parts, etc.) have been removed and machinery or equipment guards and other critical components have been replaced.

- Contractors and other non-LPC personnel performing work to machinery or equipment on a LPC site will be educated on and required to comply with LPC's lockout/tagout procedures.

- Single energy source equipment may not need a written procedure in specific applications. Check with the Director of EHS for further information.

52.4 Jobsite Lockout/Tagout Procedures

- LPC employees will follow either the Jobsite Lockout Program or the LPC Lockout Program, whichever one is more stringent.

- Each jobsite requiring lockout will be evaluated by the Superintendent, Foreman or Director of EHS for hazards and have a site-specific lockout procedure written.

- This site-specific procedure will be shared with all LPC employees on each jobsite.

52.5 Training

- Authorized persons will be trained yearly in the recognition of machinery and equipment energy sources, their associated hazards and applicable lockout/tagout procedures. Training will be documented and include the requirement that authorized persons successfully demonstrate the application of lockout/tagout.

- Affected persons will be trained yearly on the existence and purpose of lockout/tagout procedures. Training will be documented and include the fact that affected persons are prohibited from attempting to re-energize, restart or modify locked or tagged out machinery or equipment systems.

- Retraining will be provided as necessary based on personnel, facility or

procedural changes or if a violation of procedures is noted during an audit or observation.

52.6 Annual Audit

- An annual, documented audit of the lockout/tagout procedure will be conducted by an authorized person. The audit will include direct observation of lock and tag application by authorized persons and verification that procedures are appropriate, understood and implemented.

52.7 Documentation Retention

- Training records and annual program audits will be retained for at least two (2) years.
- All training will be documented on **Form 974, Lockout Tagout Procedure Review**.

53. HAND AND POWER TOOLS

53.1 General

- All hand tools shall be in good repair and used only for the purpose for which designed.
- Tools having defects that will impair their strength or render them unsafe shall be removed from service.
- When work is being performed overhead, tools not in use shall be secured or placed in holders.
- Insure all required safety guards are in place prior to operating machinery. Report immediately any missing guards and/or unsafe machinery to the LPC supervisor.
- Use the proper hand tools for the job being accomplished. Maintain hand tools in a safe operating condition and report unsafe or faulty tools to the LPC supervisor.
- Throwing tools from one location to another, from one person to another, or dropping them to lower levels will not be permitted.
- Only non-sparking tools shall be used in locations where sources of ignition may cause a fire or explosion.
- Power tools shall be inspected, tested, and determined to be in safe operating condition prior to use. Continued periodic inspections shall be made to assure safe operation condition and proper maintenance.
- All tools and machinery shall have the manufacturer's shields/guards in place during usage. No modifications shall be made to such guards.
- All hydraulic or pneumatic tools, which are used on or around energized lines or equipment, shall have non-conducting hoses having adequate strength for the normal operating pressures.

- Loose and frayed clothing, loose long hair, dangling jewelry, rings, chains, and wristwatches shall not be worn while working with any power tools or machinery.

- PPE shall be worn in accordance with the specific tasks being performed. Employees shall refer to the SSSP for guidance on the specific types of PPE to be worn.

53.2 Pneumatic Tools and Equipment

- Safety clips or retainers shall be installed and maintained on pneumatic impact tools to prevent dies and tools from being accidentally expelled from the barrel.

- Pressure shall be shut off and exhausted from the line before disconnecting the line from any tool or connection.

- Safety lashing shall be provided at connection between tool and hose, and at all quick makeup-type connections.

- Air hose, pipes, valves, filters, and other fittings shall be pressure rated by the manufacturer and this pressure shall not be exceeded. Defective hoses shall be removed from service.

- Hoses shall not be laid over ladders, steps, scaffolds, or walkways to create a tripping hazard.

- The use of compressed air for blowing dirt from hands, face, or clothing is prohibited.

- Compressed air shall not be used for other cleaning purposes except where reduced to less than 30 PSI and then only with effective chip guarding and PPE.

- Hoses shall not be used for hoisting or lowering tools.

- Airless spray guns of the type which atomize paints and fluids at high-pressures (1,000 lbs. or more PSI) shall be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released.

- A diffuser nut which will prevent high-pressure, high velocity release while the nozzle tip is removed plus a nozzle tip guard, which will prevent the tip from coming into contact with the operator or other equivalent protection may be provided.

54. CRANES

- LPC does not own any cranes and all crane work will be contracted out to a crane company.

- LPC will follow the crane company's rules for work around cranes.

- LPC employees will not act as riggers, signal persons or spotters for crane operations.

55. RIGGING

55.1 General

- The use of ropes, slings, and chains shall be in accordance with the safe recommendations of their manufacturer and the equipment shall not be loaded in excess of its recommended safe working load.
- Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to insure that it is safe. Defective rigging equipment shall be removed from service.
- All hooks used to carry loads shall be closed.
- Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.
- Rigging equipment, when not in use, shall be removed from the immediate work area and properly stored so as not to present a hazard.

55.2 Slings

- Slings, their fittings, and fastenings shall be inspected prior to use on each shift and as necessary during its use for evidence of overloading, excessive wear, or damage.
- Defective slings shall be removed from service.
- Protection shall be provided between the sling and sharp unyielding surfaces of the load to be lifted.
- The use of slings will be such that the entire load is positively secured.

55.3 Fiber Robe (Natural and Synthetic)

- Frozen fiber rope shall not be used.
- Fiber rope that has been subjected to acids or excessive heat shall not be used for load carrying.
- Fiber rope shall be protected from abrasion by padding where it is fastened, drawn over square corners, or sharp or rough surfaces.

56. HOT WORK, WELDING AND CUTTING

- Hot work is any work involving burning, welding, or similar fire producing operations including work, which produces a spark or ignition source such as drilling, abrasive blasting, or grinding.
- Procedures will be in place to protect personnel and property from the hazards associated with burning, welding, cutting, grinding, and other hot work.

56.1 Definitions

Fire Watch: Direct observation for uncontrolled sparks, arcs and fires during burning, welding and/or cutting and continued surveillance of the area following conclusion of the work.

Fire Watchers: Persons designated to observe hot work procedures and conduct a fire watch.

Hot Work: Burning, welding, cutting, grinding, abrasive blasting on steel, or other operations that may generate arcs, sparks, open flames or other fire hazards.

Hot Work Checklist and Permit: A written or printed document completed and signed by an authorized person prior to initiating burning, welding or cutting operations that verifies appropriate safety precautions have been completed.

56.2 Hot Work Requirements

- Machinery and equipment on which hot work is being performed must first be purged of all flammable, combustible or hazardous materials.
- Flammable and combustible materials in the vicinity of burning, welding and cutting operations will be removed or shielded.
- Operations in the immediate vicinity of burning, welding and cutting activities, which may present a hazard (e.g., processes generating solvent vapors), will be discontinued during hot work.
- Objects to be welded, cut, or heated shall be in a safe location or, if they cannot be moved, all moveable fire hazards in the vicinity shall be taken to a safe place or the combustible material and construction shall be protected from heat, sparks, and the slag of welding.
- Employees shall be shielded from welding rays, flashes, sparks, molten metal, and slag.
- Abrasive blasting on metal will be part of the Hot Work Program.
- Ventilation must be adequate for the area hot work is being performed.
- Hotwork is not permitted in areas where existing, overhead sprinkler systems are out of service or are otherwise compromised, unless alternate fire protection measures (e.g., extinguishers, hose lines, etc.) are available.

56.3 Extinguishers

- Use the proper style, generally ABC, and size of fire extinguisher. (Do not use water on electrical fires).
- Keep one or more extinguishers rated at least 10 lbs. in immediate work area for hot work.
- Check extinguishers to insure they are charged and operable. Report defective or uncharged extinguishers to the LPC supervisor or the Director of EHS.

56.4 Welding Equipment

- All welding equipment shall be inspected daily. Defective equipment shall be removed from service, replaced or repaired, and re-inspected before again being placed in service.

56.4.1 Cylinders and Gas Equipment

- All cylinders shall have caps on them and the caps be kept in the closed position.
- Unless the cylinders are in use, the valves should be kept in the closed or off position.
- Oxygen cylinders shall be stored at least 20’ ft. away from fuel gas cylinders and/or combustible materials, or have at least a 5’ ft. tall barrier that provides a fire resistant rating of thirty (30) minutes.
- Cylinders must be chained up or held in some fashion that prevents them from tipping over.
- Cylinders shall be kept beyond the range of sparks, hot slag, or flame.
- Do not lift cylinders with the valve caps.
- Do not roll cylinders on their side.
- All oxyacetylene or other fuel gas-oxygen combinations used in cutting or welding equipment shall have reverse-flow check valves between torch and regulator.
- Do not change or alter the pressure relief valve.
- Acetylene regulators shall not be adjusted to permit a discharge greater than 15 PSI.
- Hoses that have been subject to flashback or show severe wear or damage, shall not be used.
- Do not stand in front of the valve when opening it.

56.4.2 Arc Welding Equipment

- Neither terminal of the welding generator shall be bonded to the frame of the welder.
- The equipment shall be shut down and secured when leads are unattended.
- Cables with splices or repaired insulation within 10’ ft. of the holder shall not be used.

56.5 Hot Work Permit

- A Hot Work Permit is required whenever hot work is performed in a construction environment or other areas where there is open flame, sparks or other ignition sources.

- Prior to initiating burning, welding and cutting activities, a hot work checklist and permit will be completed and posted. The checklist and permit will be signed by the authorized person performing the work.

56.6 Fire Watch

- Whenever hot work operations are taking place above or within 35' ft. of appreciable combustible material, responsible individual(s) shall be appointed as Fire Watch and shall be on duty continuously during such operations.
- The Fire Watch will have no other duties but to watch for fire.
- The Fire Watch shall have fire extinguishing equipment readily available and be trained in its use.
- The Fire Watch shall be familiar with facilities for sounding an alarm in the event of a fire.
- The Fire Watch 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 continue for at least a half hour after completion of hot work operations, to detect and extinguish possible smoldering fires.

56.7 Training

- Any individual assigned duties as a Fire Watch shall receive training. Training is to be jobsite specific. Any individual providing training must be familiar with the entire contents of the Hot Work Policy.
- The supervisor assigning an individual the duties of Fire Watch is responsible for assuring that individual is properly trained. In addition, to the training outlined above, person(s) designated as Fire Watch shall review and sign **Form 973, Fire Watch Review**.
- Employees will be trained yearly in fire extinguisher knowledge and use.

56.8 In Case of Fire

- Sound an alarm; Fire Watch shall know the location of the nearest fire alarm, telephone or radio, and the phone number of nearest fire department.
- Emergency phone numbers are to be posted in a conspicuous place on the jobsite.
- Try to put out fire only if within the capacity of the equipment present. If the fire is too large or becomes out of control, immediately evacuate the area.

56.9 Personal Protective Equipment (PPE)

- Proper eye protection shall be used for performing all hot work.

- Electric welding, gas welding, thermal cutting, brazing, pressure and fusion welding, shall require goggles, face masks, shield, or helmets, suitable to the type of work, providing protection from all angles of direct exposure and lenses of appropriate shade.

- Welding operations will require a welding hood.

- Face shields will be worn during spark producing cutting and grinding operations.

- For all hot work, non-flammable gloves shall be used. In welding operations, aprons and sleeves of a non-flammable material should be used.

56.10 Documentation

- Completed hot work permits and jobsite specific training records will be maintained for at least two (2) years.

57. ASSURED EQUIPMENT GROUNDING PROGRAM

57.1 Policy

- Ground Fault Circuit Interrupters (GFCI) are required for all 120-volt, single- phases, 15-20 ampere receptacle outlets which are not a part of the permanent wiring of a building or structure on a construction project.

    - If GFCI's are not being used, then cord sets and receptacles not a part of the permanent wiring of buildings or structures, including all electrical equipment and tools used in connection with processes of construction or alterations, must follow the assured grounding procedures.

57.2 Assured Grounding Procedure

- All electrical tools and equipment to be used on the construction site shall be tested, identified, and coded using the following procedures with the exception of the "double insulated" system, which need not be tested.

57.3 Competent Person

- A Competent Person must perform the inspection and testing of the equipment.

57.4 Inspections and Testing

- All equipment shall be tested before first use for grounding and continuity of the circuitry.

- Equipment shall be visually inspected before use each day for external defects, including deformed or missing pins, insulation damage, and indications of possible internal damage.

- Equipment returned to service following repairs shall be tested before being used.

- Tests and inspections shall also be done quarterly.

- Tested equipment shall be identified by color-coding the cord with tape. The colors shall be:

    - White - January/February/March
    - Green - April/May/June
    - Red – July/August/September
    - Orange – October/November/December

- Defective equipment shall not be used until repaired and re-tested.

58. ELECTRICAL SAFETY

58.1 Purpose

- The purpose of this section is to establish the requirements for protecting Long Painting Company (LPC) employees from electrical hazards encountered during normal painting and coating operations.
- LPC employees are not qualified electrical workers and do not perform electrical work. LPC employees do not work on or near exposed energized electrical parts. The electrical hazards addressed in this section arise from the use of power tools and extension cords during construction and industrial painting operations, and from the proximity of overhead power lines at outdoor jobsites.

58.2 Scope

- This section applies to all LPC employees at all jobsites and at the Service Center.
- This section covers:
    - The safe use of power tools, extension cords, and temporary electrical equipment.
    - Clearance requirements for work performed near overhead power lines.
    - Awareness requirements for unqualified employees who work in areas where electrical hazards may be present.
    - Prohibition of conductive materials and tools in the vicinity of electrical equipment.

58.3 Definitions

Unqualified Person: An employee who is not trained and authorized to work on or near exposed energized electrical parts. All LPC field employees are unqualified persons for purposes of this section.

58.4 Responsibility

58.4.1 Employees

- Complete initial electrical safety awareness training during new employee orientation.
- Inspect power tools, extension cords, and GFCIs before each use.
- Report any damaged, defective, or uncoded electrical equipment to the

supervisor immediately. Do not use defective equipment.
- Maintain all required clearance distances from overhead power lines.
- Never use conductive tools or materials in areas where contact with electrical equipment is possible.
- Exercise Stop Work Authority if an electrical hazard is identified that is not addressed in the pre-task plan or JHA. See Section 67, Stop Work Authority.

58.4.2 Supervisors (Foremen and Superintendents)

- Identify electrical hazards during pre-job planning and document them in the JHA and Site-Specific Safety Plan.
- Ensure GFCI protection is in place before any power tools or temporary electrical equipment are energized.
- Verify overhead power line clearance distances before work begins. Establish physical controls or boundaries as needed to maintain the required 20-foot clearance.
- Conduct electrical safety awareness training with crew as part of the pre-job orientation on any jobsite where electrical hazards are present.
- Remove defective electrical equipment from service immediately.

58.4.3 Director of EHS

- Maintain and update this Electrical Safety program in accordance with applicable regulations.
- Conduct periodic field inspections to verify compliance with this program.
- Investigate any electrical-related incidents or near misses and communicate findings to field employees.

58.5 Training

- All LPC employees will receive electrical safety awareness training during new employee orientation. Training will cover the following:
  - The nature of electrical hazards and how contact with electrical current can cause injury or death.
  - The requirement that LPC employees do not work on or near exposed energized electrical parts.
  - Required clearance distances from overhead power lines.
  - Proper inspection and use of power tools, extension cords, and GFCIs.
  - The prohibition on conductive materials near electrical equipment.
  - Stop Work Authority procedures when an uncontrolled electrical hazard is identified.
- Site-specific electrical hazard information will be communicated to employees during the pre-job orientation for each project where electrical hazards are present.
- Retraining will be conducted following any electrical-related incident or near miss.

58.6 Engineering Controls and Work Practices

58.6.1 Ground Fault Circuit Interrupter (GFCI) Protection

- GFCI protection is required for all 120-volt, single-phase, 15- and 20-ampere receptacle outlets that are not part of the permanent wiring of a building or structure on a construction project. See Section 56, Assured Equipment

Grounding Program, for complete GFCI and assured grounding requirements.

- Portable GFCIs will be used whenever permanent GFCI-protected outlets are not available at the point of use.
- GFCIs will be tested before each use using the test/reset button. A GFCI that fails the test will be removed from service and tagged out.

58.6.2 Power Tools and Extension Cords

- All power tools and extension cords will be inspected before each use for cracked or damaged insulation, bent or missing ground prongs, damaged plugs, and any signs of overheating or burning.
- Defective tools and cords will be removed from service immediately, tagged out, and not returned to service until repaired and re-tested by a competent person.
- Extension cords will be of adequate gauge for the load and length of run.
- Cords will not be run through doorways, windows, or other openings in a manner that could damage the insulation.
- Extension cords will not be used as a substitute for permanent wiring.
- Cords will not be fastened with staples, hung from nails, or suspended by wire.

58.6.3 Working Near Overhead Power Lines

- LPC maintains a minimum clearance of 20 feet from all overhead power lines for all employees, equipment, tools, ladders, scaffolding, spray equipment, and materials. No work will be performed, and no equipment will be positioned, within 20 feet of any overhead power line.
- This clearance requirement applies to all overhead power lines regardless of voltage level.
- Prior to beginning work at any outdoor jobsite, the supervisor will identify the location of all overhead power lines and establish work boundaries to ensure the 20-foot clearance is maintained. Boundaries will be documented in the JHA.
- If the scope of work requires any employee, tool, or equipment to operate within areas where the 20-foot clearance cannot be maintained, work will stop and the Director of EHS will be contacted before any work resumes. The Director of EHS will evaluate the situation and determine the appropriate controls, which may include requesting de-energization from the utility owner.
- Employees will be informed of the location of overhead power lines during the pre-job orientation and pre-task plan review for each applicable project.

58.6.4 Conductive Materials and Equipment

- Conductive materials and tools will not be used in areas where contact with electrical equipment or energized parts is possible.
- Metal ladders will not be used in areas where contact with overhead power lines or other electrical hazards is possible. Non-conductive (fiberglass) ladders will be used in those areas.
- When work is being performed near electrical equipment at client facilities, the supervisor will review the client’s site-specific electrical hazard requirements and communicate them to the crew prior to beginning work.
- Spray equipment with metal components will not be positioned or operated in areas where contact with electrical equipment is possible. Non-conductive spray equipment components will be used where required by the site-specific

safety plan.

58.6.5 Documentation

- Electrical hazards identified at each jobsite will be documented in the Job Hazard Analysis (Form 962) and the Site-Specific Safety Plan.

59. PRESSURIZED EQUIPMENT

55.1. General

- The normal operating pressure of the vessel or system shall not exceed the design pressure.
- Any pressurized equipment or system found to be in an unsafe operating condition shall be tagged at the controls as Out of Service, Do Not Use, and its use prohibited until unsafe conditions have been corrected.
- No safety appliance or device shall be removed or made ineffective, except for making immediate repairs or adjustments, and then only after the pressure has been relieved and the power shut off.
- The discharge from safety valves, relief valves, and blow-offs shall be located so that it does not constitute a hazard to personnel.
- All pressurized equipment and systems shall be equipped with a pressure gauge.
- Safety or relief valves shall be provided on all pressurized equipment and systems.
- Piping shall meet requirements of the Code of Power Piping (ANSI b 31.1)
- When the pressure registers above the maximum allowable working pressure on the gauge without the safety or relief valve operating, the pressure gauge shall be checked immediately. If such check indicates that the safety or relief valve is inoperative, the equipment shall be removed from services until the safety or relief valve has been adjusted or replaced.
- Pressurized manual equipment, subject to whipping or rotation if released, shall be provided with an automatic shut-off.

59.1 Testing

- Pressurized equipment and systems shall be inspected and performance tested before being placed in service and after any repair or modification.
- Temporary or portable pressurized equipment and systems shall be tested at intervals of not more than six (6) months.
- Permanent installations shall be inspected and performance tested at least annually.

- Inspections and tests will be performed only by personnel qualified in accordance with the ASME Code.
- Records of the inspections and tests shall be available for review on request.
- As a minimum performance test, the equipment and system shall be subjected to at least the over-pressure for actuating a properly adjusted safety-relieving device.
- The operability of gauges and relieving and control devices shall be demonstrated to the designated authority.

59.2 Safety Lashing

- Quick makeup connections shall be secured with a safety lashing.
- Safety lashings shall consist of two metal hose clamps connected by a flexible lacing. The metal hose clamps shall be attached to the hose ends separate from the quick makeup connection.
- The flexible lacing shall be suitable strong cables, chains, or wires.
- Wires or pins through the quick makeup connection are not acceptable for use as safety lashing.

59.3 Compressed Air Equipment and Systems

- Air receivers shall be constructed in accordance with the ASME Code for Unfired Pressure Vessels. Compressors and related equipment shall be located to provide safe access to all parts of the equipment for operation, maintenance, and repairs.
- Safety appliances, such as valves indicating devices and controlling devices, shall be constructed, located, and installed so that they cannot be readily rendered inoperative by any means, including the elements.
- A speed governor, independent of the unloader, shall be installed on all air compressors except those driven by electrical induction or electrical synchronized motors. If the air compressor is engine or turbine driven, an auxiliary control to the governor shall be installed to prevent racing when the unloader operates.
- Every air compressor shall automatically stop its air-compressing operation before the discharge pressure exceeds the maximum working pressure allowable on the weakest portion of the system. An air by-pass and alarm may be used as an alternative.
- If this automatic mechanism is electrically operated, the actuating device shall be so designed and constructed that the electrical contact or contacts cannot lock or fuse in a position that will cause the compressor to continue its operation.
- Provision shall be made to exclude flammables, toxic gases, vapors, or dusts from the compressors and to prevent steam, water, or waste being blown or drawn into the compressor intake.
- If a stop valve is installed between the compressor and the receiver, spring- loaded safety valves shall be installed between the air compressor and the stop valve.

- Piping shall be equipped with traps or other means for removing liquid from the lines.

- Air discharge piping shall be installed to eliminate possible oil pockets.

- Air receivers shall be installed so that all drains, hand holes, and manholes are accessible.

- An automatic relief device will be installed on a high-pressure side of the pump set to relieve at not higher than the maximum allowable working pressure of the lowest rated component in the high-pressure system and will be tested annually. Documentation will be maintained on the test results.

- Prior to starting the job, a visual inspection of the high-pressure components (including rupture disk pressure rating) should be performed and documented.

- Hose with exposed or damaged wire braid will be removed from high-pressure service.

- The assembled high-pressure water cleaning components will be slowly pressurized to the maximum operating pressure to verify integrity of the system.

- A hose inspection and testing program (per manufacture's guidelines) will be conducted at least quarterly. The inspection test will be conducted at 1 ½ times the maximum operating pressure and will be observed and documented by personnel responsible for the site procedure.

- Hose failures usually occur near fittings due to bending stresses during use and handling. Pressurized hoses will not be handled within 1' ft. of hose-to-hose connections.

- Hose-to-tool connections, which are in frequent contact with the operator, must be shielded by a shroud to protect the operator. These shrouds must have sufficient rigidity to resist bending to radius smaller than those recommended by the hose manufacturers.

60. HIGH-PRESSURE AND ULTRA HIGH-PRESSURE WATER CLEANING AND JETTING

60.1 Purpose

- This program outlines the minimum requirements that will be met by LPC and contractors/subcontractors when performing high-pressure water cleaning (HPWC) or ultra high-pressure water jetting (UHPWJ).

60.2 Responsibilities

60.2.1 Management

- Provide proper equipment and procedures.
- Provide safety training for all operators of HP or UHP water systems.
- Perform periodic inspections and audits.

60.2.2 Supervisors

- Oversee all operations involving use of high-pressure water or ultra high-pressure water jetting.
- Ensure equipment is safe prior to use.
- Allow only qualified employees to operate equipment.
- Ensure areas are safe for passersby and other workers.
- Establish work plan or permit for the operation.

60.2.3 Contractors

- Ensure all equipment meets the requirements of this program.
- Provide contractor employees with certification training.
- Maintain records of maintenance and training.
- Provide safety controls at all work sites.

60.3 Definitions

High-Pressure Water Cleaning: The use of high-pressure water, with or without the addition of other liquids or solid particles, to remove unwanted matter from various surfaces.

High-Pressure Water Cleaning Systems: Water delivery systems, which have nozzles or other openings whose function is to increase the speed of liquids. Solid particles or additional chemicals may also be introduced, but the exit in all cases will be a free stream. The system includes pumps (pressure reducing devices) and the hoses, lances, nozzles, valves and safety devices as well as any heating elements or injection systems attached thereto.

Ultra High-Pressure Water Jetting: Cleaning with water pressures above 1,700 bar (25,000 psi) (defined by SSPC and NACE) or above 1,400 bar (21,000 psi) (defined in ISO 8501-4) with or without the addition of other liquids or solid particles, to penetrate into surfaces of a material for the purpose of cutting or profiling that material.

60.4 Safety

- The pressure in ultra high pressure water jetting may easily amputate a body part. Extreme care must be taken when using these devices.
- No portion of the body must ever be placed in front of the water jet.
- Horseplay with such equipment is strictly forbidden. Violators will be disciplined and subject to immediate termination.

60.5 Personal Protective Equipment (PPE) - High Pressure Water

- The following identifies at a minimum the PPE that will be issued to employees performing high-pressure water cleaning outside of the required hard hat and safety glasses with side shields:

- Face Shields
  - Clear shield 9” in. deep by 15.5” in. wide by 0.60 thick 9ANSI Z87.1-1979 or equivalent.

- Rain Suit
    - Made of nylon fabric coated with Neoprene on both sides.
- Gloves
    - Made of Neoprene, rubber and PVC with rough wet grip finish.
- Rubber Steel Toed Boots
    - Knee length with ribbed steel shanks and heavy tread soles for non-slip traction (ANSI Z41.1-1967 or equivalent).
- Metatarsal and Shin Guards
    - Designed to be worn with lace up steel toe boots.
- Respiratory Protection
    - When cleaning equipment which could possibly be contaminated with hazardous chemicals or produce or create a hazardous environment, appropriate additional respiratory protection specified by the project management or the Director of EHS will be worn by the operator as well as other employees who may be affected.
    - At operating pressures over 5,000 psi and above, employees are required to wear protective suits made of Kevlar and must have foot and shin protection adequate for operations being performed.
    - Hearing protection is required.

60.6 Tools

- When maintaining or assembling high-pressure water cleaning systems, the correct size tool must be used.
- The use of adjustable tools having serrated gripping jaws (i.e. pipe wrenches), which can damage equipment, will not be used.
- Only manufacture's parts may be used for repairs to equipment. Manufacturer's equipment will not be altered or modified under any circumstances.

60.7 Procedure

- All ultra high-pressure water cleaning jobs must be assessed prior to performing any high-pressure water cleaning to determine if there are alternate methods for performing the task that are less hazardous.
- High-pressure water cleaning equipment must be designed and maintained to achieve a minimum safety factor of three to one (3:1) against maximum allowable working pressure.
- The high pressure guns must be at least 66"in length from the shoulder pad to the nozzle.

- All equipment must be inspected before use.

- The area around the job, pump and hoses will be barricaded a minimum of 15’ ft. and signs stating DANGER – HIGH-PRESSURE WATER CLEANING must be placed at the perimeters. Barricades may be of rope, tape, barrels, etc. as long as they give an effective warning and are highly visible.

- If the job is above ground level, barricades may be required below. Warning signs should be placed along those portions of the high-pressure water hose, which are outside the barricades.

- A pressure washing crew will be composed of at least two operators. One will be operating the nozzle and the other manning the pump. Each crewmember will be in view of each other at all times.

- Operators will not operate equipment for more than eight (8) consecutive hours in any sixteen (16) hour period.

- The team members should rotate their duties during the job to minimize fatigue to the operator holding the tools.

- Never hold the item being blasted.

- The equipment operator nearest the high-pressure nozzle must always have a means of immediately reducing pressure or interrupting the flow to the nozzle.

- When the hose drop exceeds 10’ ft., the hose will be securely tied off to a rigid support with a fiber rope to limit the pull due to hose weight.

- High-pressure cleaning hose will be positioned and handled to minimize bends and turns. Bend radius limits on the hoses may be identified by the manufacturer.

- At least one control valve or switch will control each high-pressure tool.

- An employee will operate only one high-pressure gun/lance at one time.

- High-pressure hose connections will have safety cables, chains or the equivalent bridging at each joint.

- When the hose is pressurized, personnel must not handle the hose within 1’ ft. of the hose-to-hose connections.

- The UHPWC system will be shut down and depressurized when:

    - Not in use.
    - Unauthorized or inadequately protected personnel enter the barricaded area.
    - Replacement or repairs are made to the system.
    - Tightening or loosening fittings.
    - Recommended practices are violated.
    - Situations that could be considered an emergency.

- Hose data, i.e. manufacturer’s symbol, serial number, working and test pressure and certified rating, which will provide a safety factor of three to one (3:1) against burst will

be recorded and retained in the job files.

- The pressure of the system will never exceed the lowest rated capacity of any of the components.

- Any incident, near miss or abnormal occurrence will be immediately reported to the responsible supervisor and an investigation conducted.

60.8 Back Thrust

- Back thrust forces results from water leaving the nozzle at a high velocity.

- Reactive back thrust forces from the high-pressure water jets physically stress the operator and affects operator control. Sound footing conditions and a stable work surface must be established and maintained during use. Operators should not work from a ladder, step stool or bench.

- Operators of the shotgun type equipment will not be required to withstand a back thrust or more than one-third (1/3) of their body weight.

- If the area to be blasted is in a confined space or the operator must climb to an elevated position such as on a ladder or scaffolding, it is required that a safety harness be used. Railing or other protection should be provided.

60.9 Training

- All employees will be trained on the use of the UHPWC system. This will include a video showing the hazards of the system.

61. AIRLESS SPRAY WOUNDS

- The flow from the spray tip is at very high-pressure. Contact with any body part may be dangerous.

- To prevent airless spray wounds:

    - Do not place finger on gun outlet.
    - Do not point the gun at any person.
    - Never operate the spray gun without the proper tip guard.
    - Do not spray without the tip guard in place.
    - Never trigger the gun unless the tip is in either the spray or the unclog position.
    - Always engage the gun trigger lock before removing, replacing, or cleaning tip.

- Injection in the skin is a serious traumatic injury and consultation with a doctor is required.

- It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with all coatings injected directly into the bloodstream.

- The seriousness of the wound depends on where the injury is on the body, whether the substance hit something on its way in and deflected causing more damage, and many

other variables including skin microflora residing in the paint or gun, which are blasted into the wound.

- If the injected paint contains acrylic latex and titanium dioxide that damage the tissue's resistance to infection, bacterial growth will flourish.

- The treatment that doctors recommend for an injection injury to the hand includes immediate decompression of the closed vascular compartments of the hand to release the underlying tissue distended by the injected paint, judicious wound debridement, and immediate antibiotic treatment.

62. SANITATION

62.1 Water

- An adequate supply of drinking water shall be supplied.

- Outlets dispensing non-potable water will be conspicuously posted. CAUTION-WATER UNFIT FOR DRINKING, WASHING, OR COOKING.

- Only approved potable water systems shall be used for the distribution of drinking water.

- Containers for drinking water shall be clearly marked as to contents and not used for other purposes.

- There shall not be any cross-connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water.

62.2 Toilets

- Toilet facilities shall be provided at each construction jobsite.

62.3 Washing Facilities

- Washing facilities shall be provided as needed to maintain healthful and sanitary conditions. Washing facilities for persons engaged in the application of paints, coatings, or in other operations where contaminants may be harmful, shall be at or near the work site and shall be adequate for removal of the harmful substance.

- Each washing facility shall be maintained in a sanitary condition and provided with water, soap, and a means of drying.

63. HIGHWAY SIGNS, SIGNALS, AND BARRICADES

- LPC will not assign employees' traffic control responsibilities but will comply with both the federal revisions to the MUTCD and Washington State modifications to the MUTCD by subcontracting with firms possessing current licenses and/or permits to design Traffic Control Plans, provide flaggers, and the required equipment for highway projects.

- All projects using traffic control devices or requiring traffic control revisions will be designed, implemented and maintained by a person with specific training or

certifications for those responsibilities.

64. CONSTRUCTION SITE SAFETY

64.1 General

- Employees engaged in construction activities will conduct themselves in a manner conducive to safe operations with respect to fellow employees and the general public.
- Emergency phone numbers for fire, police, ambulance, and medical facilities are available at each jobsite. A job safety and health protection poster is to be posted at all fixed jobsites with eight (8) or more people.

64.2 Pre-Job Orientation

- All employees of LPC will go through a pre-job orientation covering the requirements of LPC along with the general contractor requirements and any other rules of the jobsite.
- This orientation will include **Form 980, Job Safety Employee Orientation**, **Form 962, Job Hazard Analysis**, and, if necessary, **Form 931, Fall Protection Work Plan** and **Form 930, Employee Acknowledgement Fall Restraint Arrest Training**.
- Other pre-job training will be done as determined by the SSSP.
- Any other orientation as required by the owner or general contractor will be done before an employee begins work on the jobsite.
- Training on reading and using Job Hazard Analysis will be provided to all employees.

64.3 Pre-Task Plans

- Each day the foreman will fill out a Pre-Task Plan form to cover the task being done that day.
- This form can either be the LPC Form 960 or the general contractors Pre-Task Plan.
- The form will cover the tasks being done that day and the safety consideration and step that must be done to safely complete those tasks.
- This form will be shared with the crew and they will sign the form.

64.4 Jobsite Safety Toolbox Meetings

- Toolbox meetings are held at the jobsite once a week, usually every Monday.
- Topics discussed and attendance will be documented.
- The attendance and subjects discussed shall be documented and maintained on file for a period of one (1) year.

- Copies of the minutes are available to employees.

64.5 On the Job

- All employees will understand the emergency procedures for the jobsite including evacuation and a meeting site.
- There will be a restroom and washing facilities available.
- Employees shall eat in designated areas.
- Smoking will only be allowed in designated areas.
- Park only in the authorized areas.
- LPC will provide training in handling emergency situations that may arise in the use of any equipment on the project.
- All persons who may have to use rescue or lifesaving equipment shall be trained in its proper use and familiarized with the location of the equipment.
- All persons required to handle or use flammable liquids, gases, or toxic materials shall be instructed in the safe handling, storage, disposal, and use of these materials and specific requirements for protection.
- Operators shall be trained and authorized to operate equipment.
- Prior to bringing hazardous substances on the jobsite, all employees involved will be advised of SDS information and a copy of each hazardous substance's SDS will be kept in the foreman's binder.
- Make sure storage lockers, job boxes and trailers are properly locked when they are not being used.
- Defective or broken equipment should be removed from service immediately.

64.6 Jobsite Inspections

- A weekly walk-around safety inspection shall be conducted at each jobsite by one member of management: Production Manager, Project Manager, Superintendent, Foreman or the Director of EHS and or the Foreman.
- The inspection will be documented on **Form 961, Weekly Jobsite Safety Inspection**.
- A copy of this inspection will retained by the company in Procore

64.7 Personal Protective Equipment (PPE) – Construction Sites

- PPE will vary from jobsite to jobsite. Most common PPE required are listed below. Check with the general contractor for specific PPE required on each jobsite.
    - Head Protection
    - Eye Protection/Safety Glasses

- Foot Protection/Safety Toed Shoes
- Safety Vests
- Gloves

- Depending on the jobs being performed, other PPE may also be required.

  - Respiratory Protection
  - Hearing Protection
  - Fall Restraint, Fall Arrest Systems
  - Life Jackets

65. SUBCONTRACTOR MANAGEMENT

65.1 Purpose

- When LPC engages subcontractors to perform work, those subcontractors are required to comply with all applicable federal, state, and local regulatory requirements, all LPC safety requirements, and any client-specific safety requirements applicable to the project.
- LPC does not lower its safety standards when subcontractors are involved. Subcontractors working on LPC projects are held to the same requirements as LPC employees.

65.2 Qualification

- Before a subcontractor is authorized to perform work for LPC, the subcontractor shall provide the following to the LPC superintendent or Director of EHS:
  - A current written safety program.
  - Evidence of applicable licenses, certifications, and training for the work to be performed.
  - Current Experience Modification Rate (EMR) documentation.
- Subcontractors whose safety program, EMR, or safety record does not meet LPC requirements will not be authorized to perform work.

65.3 Supervisor Responsibilities

- The LPC superintendent assigned to a project where subcontractors are working is responsible for:
  - Verifying that subcontractors have completed site orientation before beginning work.
  - Communicating LPC and client-specific safety requirements to subcontractor personnel.
  - Ensuring subcontractors participate in applicable JHA and Pre-Task Plan reviews.
  - Directing subcontractors to stop work if unsafe conditions or non-compliant work practices are observed.

- Reporting any subcontractor incidents to the Director of EHS.

65.4 Orientation and Training

- All subcontractor personnel shall complete a site-specific safety orientation before beginning work on any LPC project. Orientation shall cover LPC safety requirements, client site rules, emergency procedures, and applicable JHAs.
- Subcontractor personnel shall participate in weekly toolbox meetings and Pre-Task Plan reviews with the LPC crew for the duration of their work on the project.
- Subcontractors are responsible for ensuring their employees hold all required licenses, certifications, and training for the scope of work assigned.

65.5 Hazard Communication

- Prior to beginning work, subcontractor personnel shall be informed of all known site hazards relevant to their assigned tasks through the site orientation and JHA review process.
- Subcontractors shall likewise inform the LPC superintendent of any hazards their work activities may create that could affect LPC employees or other personnel on site.

65.6 Incident Management

- All incidents involving subcontractor personnel — including injuries, near misses, and property damage — shall be reported to the LPC superintendent immediately and to the Director of EHS the same day.
- Subcontractor incidents shall be investigated in accordance with Section 3, Injury, Illness and Accident Reporting and Recordkeeping.
- Subcontractors are responsible for their own OSHA recordkeeping and regulatory reporting obligations. LPC shall verify that applicable reporting requirements have been met.

65.7 Performance Evaluation

- At the conclusion of each project, the LPC superintendent shall evaluate the subcontractor's safety performance. This evaluation shall be considered when determining whether to engage the subcontractor on future projects.
- Subcontractors with unresolved safety violations, incidents, or non-compliance will not be considered for future work.

66. HEAT RELATED ILLNESSES

66.1 Purpose

- LPC heat stress/illness prevention has been developed to provide workers with the

training and equipment necessary to protect them from heat related exposures and illnesses.

66.2 Responsibilities

66.2.1 Supervisors Responsibilities

- Perform a pre-work site assessment to determine areas for shade and cool-downs.
- Give workers frequent breaks in a cool area away from heat.
- Adjust work practices as necessary when workers complain of heat stress.
- Oversee heat stress training and acclimatization for new workers and for workers who have been off the job for a period of time.
- Monitor the workplace to determine when hot conditions arise.
- Increase air movement by using fans where possible.
- Provide potable water in required quantities.
- Make allowances for workers who must wear personal protective clothing (welders, etc.) and equipment that retains heat and restricts the evaporation of sweat.
- Schedule hot jobs for the cooler part of the day; schedule routine maintenance and repair work in hot areas for the cooler times of the day.

66.2.2 Worker Responsibilities

- Follow instructions and training for controlling heat stress.
- Employees should be alert to symptoms in themselves and others.
- Employees should determine if any prescription medications they are taking could increase heat stress.
- Wear light, loose-fitting clothing that permits the evaporation of sweat.
- Wear light colored garments that absorb less heat from the sun.
- Drink small amounts of water approximately 1 cup every 15 minutes.
- Avoid beverages such as tea or coffee.
- Avoid eating hot, heavy meals.
- Do not take salt tablets unless prescribed by a physician.

66.3 Training

- All LPC employees who are or may be exposed to potential heat related illnesses will receive training on the following:

    - The environmental and personal risk factors that may cause heat related illnesses.
    - The employer's procedures for identifying, evaluating and controlling exposures to the environmental and personal risk factors for heat illness.
    - The importance of frequent consumption of small quantities of water, up to 4 cups per hour under extreme conditions of work and heat.
    - The importance of acclimatization.
    - The different types of heat illness and the common signs and symptoms of heat illness.
    - The importance of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers.
    - The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.
    - Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an

emergency medical service provider.

66.4 Supervisor Responsibilities

- All supervisors will be provided a copy of this program and training documents prior to assignment of employees working in environments where heat exposures may occur.
- Supervisors will be provided the procedures to follow to implement the applicable provisions of this program.
- Supervisors will be provided the procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

66.5 Provision of Water

- LPC employees shall have access to potable water provided in sufficient to provide one quart per employee per hour for drinking the entire shift. Employees may begin the shift with smaller quantities of water if effective procedures for replenishment of water during the shift have been implemented to provide employees one quart or more per hour.

61.2. Access to Shade

- Employees suffering from heat illness shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling.

66.6 High Temperatures

- If the heat index is over 80 degrees:
  - Employees will be provided 32 ounces of suitably cooled water each hour.
  - Employees must have ample time to drink the water.
  - Shade with ventilation as close to the work areas as possible must be provided for breaks.
  - The shade must be large enough to accommodate all employees on site.
  - Employees will be encouraged to take cool-down rest periods.
- If the heat index is over 90 degrees these additional items will be done:
  - A communication system will be set up with all employees. This could be verbal, radios or phones.
  - Regular communication with all employees must be maintained or a buddy system will be implemented.
  - A designated employee will be available to call for emergency services.
  - Break will be provided for 10 minutes every 2 hours. If the heat index is over 100, the breaks will be provided 15 minutes every hour. These may be increased depending on the PPE, the clothing being used and the intensity of the work.
- Workers will be given the ability to acclimatize to the high temperatures over a 5 day period if they have not been exposed to high temperature or if they are removed from a high temperature situation for more than 7 days.
- Supervisors and employees will be trained on heat illness prevention.

66.7 Heat Stress Disorders

66.7.1 Heat Rash

- Symptoms
  - Red blotches and extreme itchiness in areas persistently damp with sweat.
  - Prickling sensation on the skin when sweating occurs.
- Treatment
  - Cool environment.
  - Cool shower.
  - Thorough drying.
- Heat rashes typically disappear in a few days after exposure. If the skin is not cleaned frequently enough the rash may become infected.

66.7.2 Heat Cramps

- Symptoms
  - Loss of salt through excessive sweating.
  - Cramping in back, legs and arms.
- Treatment
  - Stretch and massage muscles.
  - Replace salt by drinking commercially available carbohydrate/electrolyte replacement fluids.

66.7.3 Heat Exhaustion

Heat exhaustion occurs when the body can no longer keep blood flowing to supply vital organs and at the same time send blood to the skin to reduce body temperature.

- Symptoms
  - Weakness
  - Difficulty continuing work.
  - Headache
  - Breathlessness
  - Nausea or vomiting.
  - Feeling faint or actually fainting.
- Treatment
  - Call 911
- Help the victim to cool off by:
  - Resting in a cool place.
  - Drinking cool water.
  - Removing unnecessary clothing.
  - Loosening clothing.
  - Showering or sponging with cool water.
- It takes 30 minutes to cool the body down once a worker becomes overheated and suffers heat exhaustion.

66.7.4 Heat Stroke

Heat stroke occurs when the body can no longer cool itself and body temperature rises to critical levels.

- Symptoms
  - Confusion
  - Irrational behavior
  - Loss of consciousness
  - Convulsions
  - Lack of sweating
  - Hot dry skin.
  - Abnormally high body temperature.

- Treatment
  - Call 911

- Provide immediate, aggressive, general cooling by:
  - Immerse victim in tub of cool water or;
  - Place in cool shower; or
  - Spray with cool water from a hose; or
  - Wrap victim in cool, wet sheets and fan rapidly.
  - Transport victim to hospital.

- Do not give anything by mouth to an unconscious victim.

67. WILDFIRE SMOKE

67.1 Purpose

- With the increase of wildfires and the associated smoke from them, Long Painting has put together this Wildfire Smoke Response Plan.

67.2 Monitoring

- Long Painting will monitor the smoke levels as they begin to climb at each jobsite at the beginning of the shift and will implement the plan when the AQI reaches and exceeds the 69 level.
- The levels will be monitored through AirNow.Gov or a similar website or app.

67.3 Notification

- Long Painting will notify employees of the increased smoke levels and any updates and changes to the work using email, phones and / or texts.

67.4 Effects

- If any employee is feeling adverse symptoms of wildfire smoke exposure from the job, they must inform their supervisor. All employees have the right to obtain medical treatment for these symptoms without fear of reprisal.

67.5 Respirators

- All Long Painting field employees are part of a respiratory program that include proper fitting and training yearly and are supplied with half-mask respirators.
    - When the AQI levels exceed 69, the employees will be able to wear their respirators with a P100 filter.
    - When the ACI levels exceed 101, Long Painting will encourage respirator use with a P100 filter and implement exposure controls listed below as needed.
    - When the ACI levels exceed 500. Long Painting will require respirator use with a P100 filter and implement the exposure controls listed below as needed.

67.6 Exposure Controls

- Changing work hours to when there are lower concentrations of smoke
- Avoiding and or reducing work that creates additional dust, fumes or smoke.
- Reduce work intensity.
- Provide additional rest periods in an area that has lower concentrations of smoke.
- Stopping work.

67.7 Training

- All employees will be trained in the hazards, symptoms and effects along with precautionary measures including respiratory protection needed to protect themselves during these events.

68. MAINTENANCE

- Competent employees will conduct servicing equipment in accordance with manufacturer's servicing requirements.

- The following items will be overhauled and inspected for proper functioning at the manufacturer's recommended intervals:
    - Pressure relief valve
    - Bursting discs (if used)
    - Pressure control valves
    - Hand or foot operated dump control valve or dry shut-off valve
    - Dry shut-off valve or dump systems
    - Changeover valve

69. EXPOSURE PREVENTION PLAN FOR WORKING DURING A PANDEMIC

69.1 Purpose

- The following is Long Painting's guide for offices and projects that are operating during a pandemic. This guide addresses the steps and procedures Long Painting will be implementing in order to operate on all projects and offices during the pandemic.

69.2 COVID-19 Supervisor

- The foreman on each job will be the pandemic supervisor unless another person is specifically designated. The Director of EHS will be the office pandemic supervisor.

69.3 Mandatory Crew Meetings

- The day a project starts or reopens, before any work is started; all LPC personnel will review this information and attend an orientation and/or acknowledge receipt electronically.
- Each day, job tasks will be reviewed and a daily pandemic safety action plan for those tasks will be developed and communicated in a morning meeting.

69.4 Daily Procedures

- The following items must be done daily when arriving at an office or jobsite.
  - Documented any pandemic questions
  - Mask Up: Verify all personnel are wearing a face covering
  - Verify all personnel are wearing gloves
  - Clean and disinfect the work and common areas per LPC policies

69.5 Pandemic Screening

- Each day, before an employee or visitor is allowed onto a LPC job, they must answer questions regarding the symptoms of the illness.
- If a person answers YES to any of these questions, they will be asked to leave the site and self-quarantine for a 14-day period or until they get a negative result for the illness.
- Each person going onto a jobsite will have a temperature screening with a 'no touch' or 'no contact' thermometer. Any worker with a temperature of 100.4°F or higher is considered to have a fever and will be sent home.
- The thermometer used during the daily screenings will be cleaned after each person is screened.
- The answering of the questions and the temperature screening will be documented daily for each employee and visitor by the site pandemic supervisor.
- If an immunization is available, employees will be encouraged to have the immunization.

69.6 Initial and On-Going Site Cleaning

- A thorough cleaning will be done of all work, office, trailer and break areas. This cleaning will be done using disinfectant wipes to wipe down any surfaces (doorknobs, keyboards, remote controls, desks) that are commonly touched each day. In addition, all equipment and tools that are shared will be wiped down.
- Twice a day, a thorough cleaning will be done of all work, office, trailer and break areas using disinfectant wipes.
- Trucks and equipment will be cleaned and disinfected regularly.
- If disinfectant wipes are not available, a solution of 1 gallon of water mixed with 1/3 cup of bleach will be used.

- Employees performing cleaning will be issued proper PPE, such as nitrile gloves and eye or face protection as needed.

69.7 Gloves and Personnel Protective Equipment (PPE)

- Gloves will be required at all times while on jobsite. The type of glove worn should be appropriate to the task. If gloves are not typically required for the task, then any type of glove is acceptable including latex gloves.
- Eye protection should be worn all times while on site.
- Other PPE will be required per the job specifications.
- Employees will not share any PPE.

69.8 Mask Up

- All personnel at all Long Painting jobsites will be required to "Mask Up" at all times. This means each person will have a face covering over their nose and mouth while on the jobsite.
- The covering must have two layers and cover both the nose and the mouth. N95 paper facemasks or cartridge respirators may be used, but are not required.
- The only time where this is not required is during lunch periods while employee are actually eating. During this time, employees will be required to maintain a 6-foot distance between each other.
- Specific jobs may require different types of face coverings, and this will be addressed on a job-by-job basis.

69.9 Social Distancing

- Only personnel that are essential to maintaining progress of the project should be working on site.
- Personnel and subcontractors are to implement "social distancing" procedures to protect workers and limit community spread of the virus. Social distancing means keeping 6 feet minimum between all employees at all times.
- Since every jobsite has unique working conditions, we expect social distancing procedures will be customized to each site. "Choke Points" and "High Risk" areas at jobsites will be identified and plans to maintain the 6-foot social distancing in these areas will be communicated.
- People delivering equipment and supplies to our jobsites will be required to follow our COVID-19 policies. Interaction with them should be kept at a minimum and the 6-foot distancing shall be maintained.
- Large crowds should be limited or avoided.

69.10 Hygiene for Personnel

- ALL PERSONNEL ARE REQUIRED TO CONTINUE TAKING SAFE HYGIENE MEASURES.
- Hygiene Habits: Wash your hands frequently with soap and water for 20 seconds or utilize alcohol-based hand sanitizer with at least 60% alcohol. Washing must be done before eating, smoking, or drinking, and generally after blowing your nose, coughing, or sneezing. Workers should refrain from touching their face.
- Coughing and Sneezing Etiquette: Cover your mouth and nose with a tissue when you cough or sneeze, or cough into elbow.

- Hand Sanitizing: Hand Sanitizer will be provided for use by personnel in both the office and at jobsites.
- Additional Sanitation Recommendations:
    - Limit exchange/sharing of paper documents by encouraging use of electronic communication whenever possible.
    - Do not congregate in lunch areas
    - Sanitize re-usable PPE per manufacturer's recommendation prior to each use.
    - Ensure used PPE is disposed of properly.
    - If possible, utilize disposable hand towels and no-touch trash receptacles.
    - Clean and wipe down all hand tools, and equipment.
    - Clean surfaces of vehicles, steering wheel, gear shift, instrument panels, etc.; use aerosol sanitizers inside closed cabs (I.E. Forklifts, Scissor Lifts, & Aerial Lifts)
    - Do not share multi-user devices and accessories such as iPads, laptops, hand-held radios, computer stations, etc.

69.11 Breaks

- Long Painting will coordinate breaks and lunch to maintain a minimum of six (6) feet of clear space between employees, whether by enlarging break areas or staggering break times.

69.12 Meetings / Toolbox Talks

- Each person will perform morning stretch and flex on their own. Safety toolbox talks will be held where employees can maintain a minimum of six (6) feet of clear space between them. Meetings that can be held outdoors or in larger spaces should be. Meetings held in enclosed, close quarters (such as jobsite offices, conference rooms, etc.) should be eliminated if they cannot allow for proper social distancing.
- If possible, all meetings will be done via Zoom, Skype, cell phone or some other electronic method.
- Even with social distancing, a maximum of six (6) personnel will meet at one time. If more personnel need to meet, then the meeting will be split into multiple meetings to accommodate smaller groups.

69.13 Jobsite Work

- To the furthest extent possible, LPC will evaluate ongoing work scope activities to provide workers with single person tasks. If single person can be assigned to a task, LPC will make accommodations to do so.
- LPC will move employees between projects as necessary to maintain business continuity. This will be communicated to affected customers.

69.14 Employees With Symptoms or Possible Infection of COVID-19

- The symptoms of the pandemic will be identified and posted in all locations.
- If any supervisors or managers are told by an employee about any of these symptoms, they must contact LPC Human Resources or Director of EHS immediately.
- Any LPC personnel with any of these symptoms who have not been in close contact with a person with a confirmed pandemic infection are to stay home from work until they are free of a fever or other symptoms for at least 72 hours and notify Human Resources of the reason for staying home.

- Employees with these symptoms who have been in close contact with a person with a confirmed infection are to follow the protocol for personal exposure: Immediately notify LPC Human Resources and your supervisor, leave the work site and self-quarantine until you have a received confirmation of a negative test for the virus.
- If an employee has been in close contact with a confirmed case of illness even if they are not showing symptoms, will be sent home to self-quarantine.

69.15 Jobsite Exposure Clean Up Plan

- If an employee of Long Painting has been diagnosed with the illness or has been in close contact with another person with a confirmed case of the illness, it may be necessary to clean the jobsite before allowing work to resume.
- Ideally, the cleaning should be done as quickly as possible after the person has left the jobsite. Open doors and windows to ventilate the area as best as possible.
- Employees performing cleaning will be issued proper personal protective equipment for COVID-19 including nitrile, latex, or vinyl gloves, facemask or respirator and Tyvex coveralls.
- The disinfection shall be conducted using one of the following:
    - Common EPA-registered household disinfectant
    - Alcohol solution with at least 60% alcohol or
    - Diluted household bleach solutions (if appropriate for the surface).
- The cleaning should include cleaning and disinfecting of:
    - Desks, computers, keyboards, touch screens, mice, time clocks, remote controls, phones, radios, etc.
    - Offices, jobsite trailers, break/lunchrooms, bathrooms, common areas. This would include tables, chairs, microwaves, refrigerators, coffee pots, sinks, and any handle or doorknobs, light switches, etc., focusing on frequently touched items.
    - Tools and power equipment
    - Vehicles and equipment the person may have operated, especially the handles and controls
    - Portable jobsite toilets especially frequently touched items (i.e. door pulls and toilet seats)
- The cleaning should be documented.

69.16 Postings

- At all jobsites, this information along with information on social distancing and hygiene will be posted and maintained.

69.17 Training

- All employees will have periodic training on pandemic preparedness along with how to avoid spread diseases and Long Painting's policy regarding illness.

69.18 Compliance

- To keep everyone safe and to prevent construction activities from shutting down, all employees are expected to comply with this pandemic policy. Any employee not complying with the policy will result in that employee being sent home until the emergency actions are repealed.
- Throughout a pandemic, Long Painting will reviewed and stay within the

established compliance set forth by national, state and local governments.

- During and after a pandemic, Long Painting will review our processes to see where we can improve if there is another one.

70. STOP WORK AUTHORITY

70.1 Purpose

- Long Painting Company (LPC) is committed to providing a safe and healthy work environment for all employees, subcontractors, and site personnel. This Stop Work Authority program establishes the right and responsibility of every individual to stop any task or operation when they believe conditions exist that pose a danger to people, property, or the environment.

- Every employee and subcontractor has the authority and obligation to stop work when they observe a condition or behavior that presents a risk of injury, illness, property damage, or environmental harm. This authority may be exercised without fear of reprimand or retaliation.

70.2 Scope

- This program applies to all LPC employees, subcontractors, and visitors at all job sites and company facilities.

70.3 When to Exercise Stop Work Authority

- Any individual shall exercise Stop Work Authority when they observe or become aware of any of the following:
    - An imminent danger or life-threatening situation.
    - An unsafe act or condition that could result in injury, illness, or environmental harm.
    - A deviation from the approved Job Hazard Analysis (JHA), work plan, or established safe work procedures.
    - Inadequate or missing fall protection, confined space procedures, or other critical safety controls.
    - Improper use or condition of equipment, tools, or scaffolding.
    - Failure to follow permit requirements (hot work, confined space entry, etc.).
    - Lack of required personal protective equipment (PPE).
    - Environmental conditions (weather, chemical exposure, structural instability) that create unacceptable risk.
    - Any situation in which an individual feels uncertain about the safety of a task.

70.4 Stop Work Authority Process

The following five-step process shall be used when exercising Stop Work Authority:

- **Step 1 — STOP:** Immediately notify affected workers to cease the task or operation. Remove personnel from the hazard area if necessary. If conditions present an immediate threat to life or health, initiate emergency procedures.

- **Step 2 — NOTIFY:** Inform the foreman, superintendent or the Director of EHS of the concern. Clearly describe the observed hazard or unsafe condition.
- **Step 3 — ASSESS:** The supervisor and affected workers shall evaluate the hazard and determine the appropriate corrective action. The Director of EHS shall be consulted as needed. On client-controlled sites, the client's site safety representative shall also be notified.
- **Step 4 — CORRECT:** Implement corrective actions to eliminate or adequately control the hazard before work resumes. This may include revising the JHA, obtaining additional equipment, providing additional training, or modifying the work procedure.
- **Step 5 — RESUME:** Work shall only resume when all involved parties agree that the hazard has been adequately addressed and it is safe to proceed. The resolution and any corrective actions taken shall be documented.

70.5 Documentation

- All Stop Work events shall be documented. Documentation shall include:
  - Date, time, and location of the event.
  - Name of the person who initiated the stop work.
  - Description of the observed hazard or unsafe condition.
  - Personnel involved and affected.
  - Corrective actions taken.
  - Name of supervisor who authorized resumption of work.
  - Date and time work resumed.
- Completed Stop Work Reports shall be submitted to the Director of EHS for review and retention.
- Management will follow up with all parties after the Stop Work Action is closed to make sure all parts of the Stop Work were fully addressed.

70.6 Non-Retaliation Policy

- LPC strictly prohibits any form of retaliation, intimidation, or disciplinary action against any individual who exercises Stop Work Authority in good faith. Employees who believe they have experienced retaliation should report the matter immediately to the Director of EHS or company management.

70.7 Training

- All LPC employees and subcontractors shall receive training on the Stop Work Authority program as part of their initial safety orientation. Training shall cover:
  - The purpose and scope of the SWA program.
  - Individual rights and responsibilities under the program.
  - How to recognize conditions that warrant a stop work action.
  - The five-step SWA process.
  - Documentation requirements.
  - The non-retaliation policy.
- Refresher training shall be conducted annually and as needed. Training records shall be maintained by the Director of EHS.

71. WORKING ALONE

71.1 Purpose

- Long Painting Company (LPC) employees are occasionally assigned to work alone at commercial and industrial job sites. This program establishes the requirements for supervising employees who work alone, where assistance may not be readily available in the event of an emergency or incident. The program ensures effective communication is maintained throughout the work assignment and that a response can be initiated promptly if needed.

- This program applies to all LPC employees who perform work tasks at a location where no other LPC employee or co-worker is immediately present. Common examples include:
    - Touch-up painting or minor coating work at commercial buildings
    - Small single-person jobs such as door frames, trim, or spot repairs
    - Work performed after hours or when a client site is otherwise unoccupied
    - Any assignment where an employee is working independently without another person on site

71.2 Hazard Assessment

- Prior to beginning any lone worker assignment, the supervisor or project manager shall review the task with the employee to identify hazards and establish appropriate controls. This assessment shall address hazards and identify control measures in order to minimize risk associated with working alone.

- Hazards to consider include:
    - Slips, trips, and falls
    - Ladder use or work at height
    - Chemical or coating exposure requiring ventilation or PPE
    - Working in areas with limited cell coverage
    - Security concerns at unoccupied sites

- If the hazards cannot be adequately controlled for a lone worker, a second employee or observer shall be assigned to the job.

71.3 Communication Requirements

- LPC requires that every lone worker carry a functioning communication device and maintain contact with a designated contact throughout the assignment.

- Communication Device
    - All lone workers shall carry a fully charged cellular phone at all times while working alone.

- Before departing for the assignment, the employee shall verify they have cellular coverage at the worksite.
- If cellular coverage is not available at the worksite, the supervisor shall establish an alternative means of communication (two-way radio or regular in-person check) before work begins.
- If no reliable communication method is available, the employee shall not work alone until this is resolved.

71.4 Designated Contact

- The superintendent will serve as the designated contact for each lone worker assignment.
- The designated contact shall be reachable throughout the duration of the lone worker's assignment.
- If the designated contact is unavailable, a backup contact shall be identified before the employee departs.

71.5 Check in and Out

- All lone workers shall participate in a check-in and check-out process to ensure they are monitored at regular intervals throughout their assignment.

- Check-In Process
  - The supervisor and employee shall agree on a check-in schedule before the employee departs for the assignment.
  - For jobs with greater risk or at isolated locations, the supervisor may require more frequent check-ins.
  - The lone worker shall contact their designated contact at each scheduled interval to confirm their status.
  - If the employee finishes early or needs to leave the site for any reason, they shall notify the designated contact immediately.

- Check-Out
  - When the assignment is complete, the lone worker shall contact the designated contact to confirm they have left the site safely.
  - If the lone worker will be driving a company vehicle, this check-out call shall occur before departing the site.

71.6 Missed Check – Emergency Response

- If a lone worker fails to make a scheduled check-in, the designated contact shall take the following steps:
  - Attempt to reach the employee by phone immediately.
  - If there is no answer, try again within five minutes.
  - If the employee still cannot be reached, attempt contact through the employee's emergency contact.

- If contact cannot be established within 15 minutes of the missed check-in, call 911 and provide the employee's last known location and site address.
- Notify the Director of Safety immediately if emergency services are contacted.

71.7 Training

- All employees who may be assigned to work alone shall be trained on this program before their first lone work assignment. Training shall cover:
  - Communication device requirements and the check-in/check-out process.
  - How to reach the designated contact and what to do if contact cannot be made.
  - Emergency response steps if an incident occurs while working alone.

72. PROGRAM REVIEW

- The Director of EHS will periodically review LPC's Safety Program for compliance with all applicable regulatory standards.

73. GLOSSARY OF TERMS

Absorption	The movement of a chemical substance into the body.
Acid	A corrosive compound containing a hydrogen ion, thus characterized by a pH value of less than 7. Acids neutralize alkaline substances (bases), forming a salt and water.
Acute Exposure	A severe, usually crucial, and often dangerous exposure in which relatively rapid changes are occurring.
Alkali	A corrosive compound containing a hydrogen ion, thus characterized by a pH value of more than 7. Alkalis are also known as bases or caustics. Alkalis neutralize acids, forming salt and water.
ANISI	American National Standard Institute.
Base	Refer to Alkali.
Bonding	Metal to metal contact between two containers, usually by wire, to prevent generation of static electrical sparks. Used in conjunction with grounding.
Carcinogenic	A chemical that is a potential cancer causing agent as determined by laboratory experimentation.
Caustic	Refer to Alkali.
Chemical	Any element, compound, or mixture of elements and or compounds.
Chronic Exposure	A persistent, prolonged, repeated action to a chemical. Chronic effects usually result from long-term exposure to allow concentration of a compound and are generally a long duration.
Combustible Liquid	A liquid having a flash point between 100° F and 200° F.
Compound	A substance composed of two or more elements joined according to the laws of chemical combinations. Each compound has its own characteristic properties different from those of its constituent elements.
Corrosive	An acid or base (alkali). Corrosives cause refers to gases that are kept in a liquid state through a combination of high pressure and or very low temperature.
Dermatitis	Inflammation of the skin. If the inflammation is due to direct skin contact with an irritating substance and occurs only at the site of contact, the condition is called contact dermatitis. If the inflammation is a systemic reaction, the condition is called sensitization dermatitis. Refer to Systemic.
Dust	Airborne solid particles in the 1 to 25 microns in size.
Elements	Solid liquid or gaseous matter, which cannot be further, decomposed into simpler substances by chemical means.
Flame Arrester	A metal screen or plate in a safety container that dissipates heat from any flames near a safety container thus is preventing the flame from igniting the vapor within the container. Also called a safety screen.
Flammable Limits	The minimum and maximum concentration of vapors, as a percentage of air, of a flammable substance that will support sustained burning. The minimum concentration is the lower flammable limit, the substances with vapor concentrations below the lower flammable limit or above the upper flammable limit will not ignite, even in the presence of oxygen and a heat source.
Flammable Liquids	A liquid with a flash point below 100° F. Refer to Combustible Liquids.
Flash Point	The lowest temperature at which a liquid gives off enough vapor to form a mixture that will burn in the presence of oxygen (air) and a heat (ignition) source.
Gas	A state of matter characterized by low density and viscosity; expands and contracts greatly in response to changes in temperature and pressure; diffuses easily into other gases; readily and uniformly distributes itself throughout any container. A gas will turn into a liquid or solid-state by increasing pressure and or decreasing temperature.
Grounding	A contact between a container and electrical ground, usually by wire, to prevent generation of static electric sparks. Used in conjunction with bonding.
Ignition Temperature	The minimum temperature required to ignite a flammable substance in air. Auto ignition temperature is the minimum temperature at which a substance will ignite spontaneously, with no ignition source present.

Ingestion	The process of taking substances into the body through the mouth, as with food, drink, or medicine. Ingestion exposure to chemicals occurs primarily through absorption in the stomach.
Inhalation Exposure	Exposure to a chemical that occurs by breathing in air and gas in the atmosphere. Inhalation exposure occurs primarily through absorption in the lungs.
Injection Exposure	Exposure to a chemical that takes place through skin penetration, through punctures (as with needles or broken glass) or cuts in the skin.
Irritant	A primary irritant is one that has been found to produce an irritation effect at the area of contact. Although they affect everyone, they do not produce the same degree of irritation.
Liquid	A state of matter in which the substance has a definite volume and takes the shape of its container; when not contained they flow in accordance with the laws of gravity. With increased temperature and or decreased pressure, liquids will turn into gases (i.e., evaporated) with decreased temperature and or increased pressure they will turn into solids (freeze).
OSHA	Occupational Health and Safety Administration.
Oxidizer	A compound that is capable of giving off oxygen in a chemical reaction; also called an oxidizing agent. The chemically opposite materials are reducers or reducing agents, which take on oxygen readily.
pH	A means of expressing the degree of acidity or alkalinity of a solution. The pH scale goes from 0 - 14, with acids the lower end of bases at the higher end. A neutral solution (e.g. water) has a pH of 7.
Ppm	A unit of measure to specify the concentration of airborne contaminants.
Reactivity	The capabilities of a compound to change chemical forms or undergo a reaction upon heating, cooling, or mixing with another chemical(s).
Routes of Exposure	The way in which exposure to chemical hazards takes place. The five routes of exposure are inhalation, ingestion, skin contact, injection and contact with the eyes.
Safety Data Sheet (SDS)	A form prepared by the manufacturer or supplier of a chemical substance after completing a hazard assessment for their product.
Threshold Limit Value (TLV)	An exposure level under which most people can work over an 8 hour. Day after day, with no harmful effects. The American Conference of Governments Industrial Hygienist (ACGIH) annually publishes a table of TLVs for most common substances.
Toxic Substance	A material that can produce injury or illness, if exposed to it.
Toxicity	The degree of injury or illness caused by a poisonous material.
Ug/m3	Micrograms per cubic meter.
Water Solubility	The degree to which a substance is soluble in water.
WISHA	Washington Industrial Safety and Health Act.