American Services Industries, Inc. (ASI)
(Respectively, the "Company")

SAFETY MANUAL

&

INJURY & ILLNESS PREVENTION PROGRAM

2351 Sunset Blvd, Suite 170-502
Rocklin, CA 95765
877-488-9329

4/2022 Revised

Table of Contents

Policy Statement on Safety

The safety and health of each Company employee is of primary importance to us. As a company, we are committed to maintaining a safe and healthful working environment. Management will provide all necessary safeguards, programs, and equipment required to reduce the potential for accidents and injuries.

To achieve this goal, we have developed and implemented a comprehensive Safety Manual and Injury and Illness Prevention Program (IIPP). This program is designed to prevent workplace accidents, injuries, and illnesses. A complete copy of the program is maintained at our corporate office, currently at 970 Reserve Dr., Ste. 180, Roseville, CA 95678. A copy is also maintained at each large project site. You may ask to review it at any time. A copy of relevant portions of the program, that are applicable to your job, will also be provided to you. You may also contact one of our Company Administrators, or General Manager, Dennis Graham, at 877-488-9329, if you have any questions or concerns.

It is the intent of the Company to comply with all laws relating to occupational safety and health. To accomplish this, we require the active participation and assistance of all employees. The policies and procedures contained in the following manual are mandatory. You should also be constantly aware of conditions in all work areas that can produce injuries or illness. No employee is required to work at a job that he or she knows is not safe. Never hesitate to inform your foreman or supervisor of any potentially hazardous situation or condition that is beyond your ability or authority to correct immediately. No employee will be discriminated against for reporting safety concerns to management.

It is the responsibility of each employee to support the company safety program and to perform in a manner that assures his or her own personal safety and the safety of others, including customers, visitors and other trades. To be successful in our endeavor, all employees on every level must adopt proper attitudes towards injury and illness prevention. We must also cooperate in all safety and health matters, not only between management and employees, but also between each employee and his or her respective coworkers. Only through such and effort can any safety program be successful. Our objective is a safety and health program that will reduce the total number of injuries and illnesses to and absolute minimum. Our ultimate goal is zero accidents.

_____

Dennis Graham
President

Duties and Responsibilities for Safety

A successful Safety and Injury and Illness Prevention Program can only be achieved and maintained when there is active interest, participation, and accountability at all levels of the organization. To ensure this, the company, delegates the following safety duties by job title. Please keep in mind that this is not an all inclusive list. In some cases employees will need to perform safety duties outside their regular responsibilities to prevent accidents.

Executive Management must plan, organize, and administer the program by establishing policy, setting goals and objectives, assigning responsibility, motivating subordinates, and monitoring results. The Company will support and maintain an ongoing Safety and Injury and Illness Prevention Program through the following:

1. Providing clear understanding and direction to all management and union employees regarding the importance of safety through the development, implementation, monitoring and revision of policy and procedures.

2. Providing financial support for the Injury and Illness Prevention Program through the provision of adequate funds for the purchase of necessary safety materials, safety equipment, proper personal protective equipment, adequate time for employee safety training, and maintenance of tools and equipment.

3. Overseeing development, implementation, and maintenance of the IIPP and other required safety programs.

4. Maintaining a company commitment to accident prevention by expecting safe conduct on the part of all managers, superintendants, foremen, and employees.

5. Holding all levels of management and employees accountable for accident prevention and safety.

6. Reviewing all accident investigations to determine corrective action.

Technicians, Project Managers, and Estimators are in a position to anticipate hazards and help prevent safety problems before they occur. They will support our Safety and Injury and Illness Prevention Program through the following:

1. Anticipating job hazards prior to the commencement of work at any site.

2. Ensuring the provision of adequate safety equipment for all jobs.

3. Communicating expected safety problems or unique hazards to the foreman, superintendant, and managers.

4. Providing for necessary equipment and safety precautions in all bids.

5. Requiring all subcontractors to comply with applicable local, state, and federal safety regulations.

6. Clarifying safety responsibilities from the contract documents. Assuring that all individuals and subcontractors follow rules and fulfill their job responsibilities.

Field Supervisors play a key role in the prevention of accidents on the job. They have direct contact with the Field Representative and trades and know the safety requirements for various jobs. Safety responsibilities for Field Supervisors include:

1. Holding Field Representative accountable for safety.
2. Enforcing safe work practices among all Field Representatives.
3. Correcting all unsafe acts and conditions which could cause accidents.
4. Verifying corrective action has been taken regarding safety hazards and accident investigations.
5. Conducting periodic documented inspections of the job sites to identify and correct unsafe actions and conditions which could cause accidents.
6. Investigating all injuries and accidents to determine their cause and potential corrective action.
7. Acting as a leader in company safety policy and setting a good example by following safety rules.
8. Assisting the Field Representative in dealing with safety issues created by other contractors on the job site.
9. Becoming familiar with local, state, and federal safety regulations. The Company Administrator is available for assistance.
10. Assuring that toolbox meetings are held with all Field Representatives, and the proceedings are recorded on the company form. A copy shall be sent to the office.

Managers/Field Supervisors have the greatest influence on motivating employees to work safely and should control unsafe acts or conditions. They have the most daily contact with the employees and have direct control over the job site. Managers/Field Representatives will:

1. Train all new and existing employees in proper safety procedures and the hazards of the job.
2. Instruct all employees, under their supervision, in safe work practices and job safety requirements.
3. Hold tailgate safety meetings with employees.
4. Ensure employee proficiency when assigning work requiring specific knowledge, special operations or equipment.
5. Ascertain that all machinery, equipment, and tools are maintained in safe working condition and operate properly.
6. Enforce all safety rules in the Code of Safe Practices and ensure safe work procedures.
7. Conduct daily inspections of the work area for unsafe actions or conditions.

8. Correct unsafe acts and conditions which could cause accidents.

9. Communicate with all employees about safety and accident prevention activities.

10. Enforce the wearing of personal protective equipment on the job. This will depend on the circumstance and may include: back support belts, cut resistant gloves, respirators, etc.

11. Correct the cause of any accident as soon as possible.

12. Act as a leader in company safety policy and set a good example by following all safety rules.

13. Ascertain that proper first aid and fire fighting equipment is maintained and used when conditions warrant its use.

14. Maintain good housekeeping conditions at all times.

15. Investigate all injuries and accidents to determine their cause and potential corrective action.

16. Ascertain that all injuries involving our employees that require medical attention are properly treated and promptly reported to the office.

17. Locating the nearest hospital or medical facility and posting emergency numbers near all phones.

The Company Administrators are Safety Officers to act as safety resource for the company and is responsible for maintaining program records. They will also be our primary persons to deal with outside agencies regarding the safety program and its contents. Additional duties include:

1. Coordination of all loss prevention activities as a representative of management. Acting as a consultant to management in the implementation and administration of the Safety Program.

2. Develop and implement loss prevention policies and procedures designed to insure compliance with the applicable rules and regulations of all federal, state, and local agencies.

3. Review all accident reports to determine cause and preventability.

4. Conduct periodic reviews of the program and job sites to evaluate performance, discuss problems and help solve them.

5. Consult with representatives of our insurance companies in order that their loss control services will support the Safety Program.

6. Review Workers' Compensation Claims. Help supply the insurance carrier with information about injured employees in order to keep loss reserves as low as possible.

Every Employee is responsible for working safely, both for self-protection and for protection of fellow workers. Employees must also support all company safety efforts. Specific employee safety responsibilities include:

1. If you are unsure how to do any task safely, ask your Supervisor.
2. Read and abide by all requirements of the Safety Manual and Injury and Illness Prevention Program (IIPP).
3. Know and follow the Code of Safe Practices and all company safety policies and rules.
4. Wear all required personal protective equipment.
5. Report all accidents and injuries, no matter how minor, to your supervisor immediately.
6. Do not operate any equipment you have not been trained and authorized to use.
7. Report any safety hazards or defective equipment immediately to your supervisor.
8. Do not remove, tamper with or defeat any guard, safety device or interlock.
9. Never use any equipment with inoperative or missing guards, safety devices or interlocks.
10. never possess, or be under the influence of, alcohol or controlled substances while on the premises.
11. Never engage in horseplay or fighting.
12. Participate in, and actively support, the safety program.

Employee Safety Training

California law requires that employees be trained in the safe methods of performing their job. The Company is committed to instructing all employees in safe and healthful work practices. Awareness of potential hazards, as well as knowledge of how to control them, is critical to maintaining a safe and healthful work environment and preventing injuries. To achieve this goal, we will provide training to each employee on general safety issues and safety procedures specific to that employee's work assignment.

Every new employee will be given instruction by their supervisor in the general safety requirements of their job. A copy our Code of Safe Practices shall also be provided to each employee. Field, Tailgate, or toolbox safety meetings will be conducted at least every 10 working days. Monthly Safety meetings will also be conducted with office management. Training will be documented on the forms provided.

Managers, superintendants and foremen will be trained at least twice per year on various accident prevention topics.

Training provides the following benefits:

Makes employees aware of job hazards
Teaches employees to perform jobs safely
Promotes two way communication
Encourages safety suggestions
Creates interest in the safety program
Fulfills Cal/OSHA requirements

Employee training will be provided at the following times:

1. All new employees will receive a safety orientation their first day on the job.

2. All new employees will be given a copy of the Code of Safe Practices and required to read and sign for it.

3. All field employees will receive training at tailgate or toolbox safety meetings.

4. All employees given a new job assignment for which training has not been previously provided will be trained before beginning the new assignment.

5. Whenever new substances, processes, procedures or equipment which represent a new hazard are introduced into the workplace.

6. Whenever the Company is made aware of a new or previously unrecognized hazard.

7. Whenever management believes that additional training is necessary.

8. After all serious accidents.
9. When employees are not following safe work rules or procedures.

Training topics will include, but not be limited to:

Employee's safety responsibility
General safety rules
Code of Sage Practices
Safe job procedures
Use of hazardous materials
Use of equipment
Emergency procedures
Safe lifting and material handling practices
Use of boom and scissor lifts
Use of fall protection
Contents of safety program

Documentation of Training

Training will be documented on one of the following three forms.

- **New Employee Safety Orientation**
- **Employee Safety Contact Form**
- **Tailgate Safety Meeting Report**

The following training method should be used. Actual demonstrations of the proper way to perform a task are very helpful in most cases.

- **Tell them** how to do the job safely
- **Show them** how to do the job safely
- **Have them tell you** how to do the job safely
- **Have them show you** how to do the job safely
- **Follow up** to ensure they are still performing the job safely

Safety Communication

This section establishes procedures designed to develop and maintain employee involvement and interest in the Safety Manual and IIPP. These activities will also ensure effective communication between management and employees on safety related issues which is of prime importance to the Company. The following are some of the safety communication methods that may be used:

1. Tailgate or toolbox safety meetings with employees that encourage participation and open, two-way communication.

2. New employee safety orientation and provision of the Code of Safe Practices.

3. Provision and maintenance of employee bulleting boards discussing safety issues, accidents, and general safety suggestions.

4. Written communications from management or the Safety Coordinator, including memos, postings, payroll stuffers, and newsletters.

5. Anonymous safety suggestion program.

Employees will be kept advised of highlights and changes relating to the safety program. The Foreman shall relay changes and improvements regarding the safety program to employees, as appropriate. Employees will be involved in future developments and safety activities, by requesting their opinions and comments, as necessary.

All employee-initiated safety related suggestions shall be properly answered, either verbally or in writing, by the appropriate level of management. Unresolved issues shall be relayed to the President.

All employees are encouraged to bring any safety concerns they may have to the attention of management. The Company will not discriminate against any employee for raising safety issues or concerns.

The Company also has a system of anonymous notification whereby employees who wish to inform the company of workplace hazards without identifying themselves may do so by phoning or sending written notification to the following address:

Pacific Air Conditioning & Heating, Inc.
Attn: Dennis Graham, General Manager
970 Reserve Dr., Ste. 180
Roseville, CA 95678

Enforcement of Safety Policies

The compliance of all employees with the Company's Safety Manual and IIPP is mandatory and shall be considered a condition of employment.

The following programs will be utilized to ensure employee compliance with the safety program and all safety rules.

Training programs
Retraining
Optional safety incentive programs
Disciplinary action

Training Programs

The importance of safe work practices and the consequences of failing to abide by safety rules will be covered in the New Employee Safety Orientation and at tailgate and toolbox safety meetings. This will help ensure that all employees understand and abide by the Company safety policies.

Retraining

Employees that are observed performing unsafe acts or not following proper procedures or rules will be retrained by their foreman or supervisor. A Safety Contact Report may be completed by the supervisor to document the training. If multiple employees are involved, additional safety meetings will be held.

Safety Incentive Programs

Although strict adherence to safety policies and procedures is required of all employees, the company may choose to periodically provide recognition of safety-conscious employees and job sites without accidents through a safety incentive program.

Disciplinary Actions

The failure of an employee to adhere to safety policies and procedures established by the Company can have a serious impact on everyone concerned. An unsafe act can threaten not only the health and well being of the employee committing the unsafe act but can also affect the safety of his/her coworkers and customers. Accordingly, any employee who violates any of the company's safety policies will be subject to disciplinary action.

Note: Failure to promptly report any on-the-job accident or injury, on the same day as occurrence, is considered a serious violation of the Company's Code of Safe Practices. Any employee who fails to immediately report a work-related accident or injury, no matter how minor shall be subject to disciplinary action.

Employees will be disciplined for infractions of safety rules and unsafe work practices that are observed, not just those that result in an injury. Often when an injury occurs, the accident investigation will reveal that the injury was caused because the employee violated an established safety rule and/or safe work practice(s). In any disciplinary action, the Supervisor should be cautious that discipline is given to the employee for safety violations, and not simply because the employee was injured on the job or filed a Workers' Compensation claim.

Violations of safety rules and the Code of Safe Practices are to be considered equal to violations of other company policy. Discipline for safety violations will be administered in a manner that is consistent with the Company's system of progressive discipline. If, after training, violations occur, disciplinary action will be taken as follows:

1. Oral warning. Document it, including date and facts on the "Safety Contact Report" form. Add any pertinent witness statements. Restate the policy and correct practice(s).
2. Written warning. Retrain as to correct procedure/practice.
3. Written warning with suspension.
4. Termination.

As in all disciplinary actions, each situation is to be carefully evaluated and investigated. The particular step taken in the disciplinary process will depend on the severity of the violation, employee history, and regard to safety. Managers and supervisors should consult with the office if there is any question about whether or not disciplinary action is justified. Employees may be terminated immediately for willful or extremely serious violations. Union employees are entitled to the grievance process specified by their contract.

Note: You must be consistent in the enforcement of all safety rules.

Hazard Identification and Evaluation

To assist in the identification and correction of hazards, the Company has developed the following procedures. These procedures are representative only and are not exhaustive of all the measures and methods that will be implemented to guard against injury from recognized and potential hazards in the workplace. As new hazards are identified or improved work procedures developed, they will be promptly incorporated into our Safety Manual. The following methods will be utilized to identify hazards in the workplace:

Loss analysis of accident trends
Accident investigation
Employee observation
Employee suggestions
Regulatory requirements for our industry
Outside agencies such as the fire department and insurance carriers
Periodic safety inspections

Loss Analysis

Periodic loss analysis will be conducted by the Company Administrator. These will help identify areas of concern and potential job hazards. The results of these analysis's will be communicated to management, supervision, and employees through safety meetings and other appropriate means.

Accident Investigations

All accidents and injuries will be investigated in accordance with the guidelines contained in this program. Accident investigations will focus on all casual factors and corrective action including the identification and correction of hazards which may have contributed to the accident.

Employee Observation

Supervisors and Managers shall be continually observing employees for unsafe actions; and taking corrective action as necessary.

Employee Suggestions

Employees are encouraged to report any hazard they observe to their foreman or supervisor. No employee of the Company is to ever be disciplined or discharged for reporting any workplace hazard or unsafe condition. However, employees who do NOT report potential hazards or unsafe conditions that they are aware of, will be subject to disciplinary action.

Regulatory Requirements

All industries are subject to government regulations relating to safety. Many of these regulations are specific to our type of business. Copies of pertinent regulations can be obtained from the Safety Coordinator.

Outside Agencies

Several organizations will assist us in identifying hazards in our workplace. These include safety officers from other contractors, insurance carrier safety and health consultants, private industry consultants, the fire department, and Cal/OSHA Consultation.

Periodic Safety Inspections

Periodic safety inspections ensure that physical and mechanical hazards are under control and identify situations that may become potentially hazardous. Inspections shall include a review of the work habits of employees in all work areas. These inspections will be conducted by the foreman, superintendant, safety coordinator, or other designated individual.

Periodic safety inspections will be conducted:

Before any work commences at the site by the foreman or superintendant.
Daily by the foreman on all sites.
When new substances, process, procedures or equipment are used.
When new or previously unrecognized hazards are identified.
Periodically by the superintendant at various job sites.
Periodically by the safety coordinator at various job sites.

These inspections will focus on both unsafe employee actions as well as unsafe conditions. The following is a partial list of items to be checked:

The proper use of fall protection.
The proper use, condition, maintenance and grounding of all electrically operated equipment.
The proper use, condition, and maintenance of safeguards for all power-drive equipment.
Compliance with the Code of Safe Practices.
Trenches and excavations.
Scaffolds.
Housekeeping and personal protective equipment.
Hazardous materials.
Proper material storage.
Provision of first aid equipment and emergency medical services.

Any and all hazards identified will be corrected as soon as practical in accordance with the Company hazard correction policy.

If imminent of life threatening hazards are identified, which cannot be immediately corrected, all employees must be removed from the area, except those with special training required to correct the hazard, who will be provided necessary safeguards.

Documentation of Inspections

Safety inspections will be documented to include the following:

Date on which the inspection was performed.
The name and title of person who performed the inspection.
Any hazardous conditions noted or discovered and the steps or procedures taken to correct them.
Signature of the person who performed the inspection.

One copy of the completed form should be sent to the office. All reports shall be kept on file for a minimum of two (2) years.

Hazard Correction

The following procedures will be used to evaluate, prioritize and correct identified safety hazards. Hazards will be corrected in order of priority: the most serious hazards will be corrected first. If it is necessary to involve other contractors to correct hazards on a job site, they will be properly notified by the foreman, superintendant, project manager or other designated individual.

Hazard Evaluation

Factors which will be considered when evaluating hazards include:

Potential severity – The potential for serious injury, illness, or fatality.
Likelihood of exposure – The probability of the employee coming into contract with the hazard.
Frequency of exposure – How often employees come into contact with the hazard.
Number of employees exposed.
Possible corrective actions – What can be done to minimize or eliminate the hazard.
Time necessary to correct – The time necessary to minimize or eliminate the hazard.

Techniques for Correcting Hazards

1. Engineering Controls: Could include machine guarding, ventilation, noise reduction at the source, and provision of material handling equipment. These are the first and preferred methods of control.

2. Administrative Controls: The next most desirable method would include rotation of employees or limiting exposure time.

3. Personal Protective Equipment: Includes back support belts, hearing protection, respirators, and safety glasses. These are often the least effective controls for hazards and should be relied upon only when other controls are impractical.

Documentation of Corrective Action

All corrective action taken to mitigate hazards should be documented. Depending on the circumstances, one of the following forms should be used:

Safety Contact Report
Safety Meeting Report
Memo or Letter
Safety Inspection Form

All hazards noted on safety inspections will be rechecked on each subsequent inspection and notations made as to their status.

Accident Investigation

All work-related accidents will be investigated by the foreman, superintendant, project manager or other designated individual in a timely manner. This includes minor incidents and "near accidents", as well as serious injuries. An accident is defined as any unexpected occurrence which results in injury to personnel, damage to equipment, facilities, or material, or interruption of normal operations.

Responsibility for Accident Investigation

Immediately upon being notified of an accident, the foreman, superintendant, project manager or other designated individual shall conduct an investigation. The purpose of the investigation is to determine the cause of the accident and corrective action to prevent future reoccurrence; not to fix blame or find fault. An unbiased approach is necessary in order to obtain objective findings.

The Purpose of Accident Investigations

To prevent or decrease the likelihood of similar accidents.
To identify and correct unsafe work practices and physical hazards. Accidents are often caused by a combination of these two factors.
To identify training needs. This makes training more effective by focusing on factors that are most likely to cause accidents.

What Types of Incidents Do We Investigate

Fatalities
Serious Injuries
Minor Injuries
Property Damage
Near Misses

Procedures for Investigation of Accidents

Immediately upon being notified of an accident the foreman, superintendant, project manager or other designated individual will:

1. Visit the accident scene, as soon as possible, while facts and evidence are still fresh and before witnesses forget important details and to make sure hazardous conditions to which other employees or customers could be exposed are corrected or have been removed.

2. Provide for needed first aid or medical services for the injured employee(s).

3. If possible, interview the injured worker at the scene of the accident and verbally "walk" him or her through a re-enactment. All interviews should be conducted as privately as possible. Interview all witnesses individually and talk with anyone who has knowledge of the accident, even if they did not actually witness it.

4. Report the accident to the office at 800-366-1141. Accidents will be reported by the office to the insurance carrier within 24 hours. All serious accidents will be reported to the carrier as soon as possible.
5. Consider taking signed statements in cases where facts are unclear or there is an element of controversy.
6. Thoroughly investigate the accident to identify all accident causes and contributing factors. Document details graphically. Use sketches, diagrams, and photos as needed. Take measurements when appropriate.
7. All accidents involving death, disfigurement, amputation, loss of consciousness or hospitalization for more that 24 hours must be reported to Cal/OSHA immediately.
8. Focus on causes and hazards. Develop an analysis of what happened, how it happened, and how it could have been prevented. Determine what caused the accident itself, not just the injury.
9. Every investigation must also include an action plan. How can such accidents be prevented in the future?
10. In the even a third party or defective product contributed to the accident, save any evidence as it could be critical to the recovery of claim costs.

Accurate & Prompt Investigations

Ensures information is available.
Causes can be quickly corrected.
Helps identify all contributing factors.
Reflects management concern.
Reduces chance of reoccurrence.

Investigation Tips

Avoid placing blame.
Document with photos and diagrams, if needed.
Be objective, get the facts.
Reconstruct the event.
Use open-ended questions.

Questions to Ask

When investigating accidents, open-ended questions such as who?, what?, when?, where?, why?, and how? Will provide more information than closed-ended questions such as “Were you wearing gloves?”

Examples include:

How did it happen?
Why did it happen?
How could it have been prevented?
Who was involved?
Who witnessed the incident?
Where were the witnesses at the time of the incident?
What was the injured worker doing?
What was the employee working on?
When did it happen?
When was the accident reported?
Where did it happen?
Why was the employee assigned to do the job?

The single, most important question that must be answered as the result of any investigation is:

“What do you recommend be don (or have you done) to prevent this type of incident from reoccurring?”

Once the Accident Investigation is Completed

Take or recommend corrective action
Document corrective action
Management and safety coordinator will review the results of all investigations
Consider safety program modifications
Information obtained through accident investigations can be used to update and improve our current program

Program Records

Company Administrators will ensure the maintenance of all Safety Manual and IIPP records, for the listed periods, including:

1. New Employee Safety Orientation Forms	length of employment
2. Code of Safe Practices Receipt	length of employement
3. Disciplinary actions for safety	1 year
4. Safety inspections	2 years
5. Tailgate or toolbox meeting reports	2 years
6. Safety Contact Reports	2 years
7. Accident investigations	5 years
8. Cal/OSHA log of injuries	5 years
9. Inventory of Hazardous Materials	ongoing
10. Employee exposure or medical records	ongoing

Records are available for review at 970 Reserve Dr., Ste. 180, Roseville, CA 95678. Phone: 800-366-1141.

Emergency Medical Services and First Aid

The Company will ensure the availability of emergency medical services for its employees at all times. We will also ensure the availability of a suitable number of appropriately trained persons to render first aid. Where more than one employer is involved in a construction project on a given site, we may agree to work with other contractors to ensure employee access to emergency medical services for the combined work force. Each crew will have at least one individual trained in rendering first aid. The Company Administrator will maintain a list of trained individuals and take steps to provide training for those that deserve it.

First-Aid Kits

Every Field Vehicle or job site shall have access to at least one first-aid kit in a weatherproof container and must be ensured one exists by the employee prior to work. The firs-aid kit must be inspected regularly to ensure that it is well stocked, in sanitary condition, and any used items are promptly replaced and shall be maintained by the Field Employee. The contents of the first-aid kit shall be arranged to be quickly found and remain sanitary. Firs-aid dressings shall be sterile and in individually sealed packages. The following minimum first-aid supplies shall be kept:

Type of Supply Required by Number of Employees

Dressings in adequate quantities consisting of:	1-5	6-15	16-200	200+
Adhesive dressings	X	X	X	X
Adhesive tape rolls, 1-inch wide	X	X	X	X
Eye dressing packet	X	X	X	X
1-inch guaze bandage roll or compress		X	X	X
2-inch gauze bandage roll or compress	X	X	X	X
4-inch gauze bandage roll or compress		X	X	X
Sterile gauze pads, 2-inch square	X	X	X	X
Sterile gauze pads, 4-inch square	X	X	X	X
Sterile surgical pads suitable for pressure dressings			X	X
Triangular bandages	X	X	X	X
Safety pins	X	X	X	X
Tweezers and scissors	X	X	X	X
Cotton-tipped applicators *			X	X
Forceps *			X	X
Emesis basin *			X	X
Flashlight *			X	X
Magnifying glass *			X	X
Portable oxygen and its breathing equipment *				X
Tongue depressors *				X
Appropriate record forms *	X	X	X	X
First-aid textbook, manual or equivalent *	X	X	X	X

*To be readily available but not necessarily within the first-aid kit.

Drugs, antiseptics, eye irrigation solutions, inhalants, medicines, or proprietary preparations shall not be included in Company first-aid kits unless specifically approved, in writing, by an employer-authorized, licensed physician. Other supplies and equipment, if provided, shall be in accordance with the documented recommendations of an employer-authorized licensed physician upon consideration of the extent and type of emergency care to be given based upon the anticipated incidence and nature of injuries and illnesses and availability of transportation to medical care.

First Aid

The designated first aid person on each site will be available at all times to render appropriate first aid for injuries and illnesses. Proper equipment for the prompt transportation of the injured or ill person to a physician or hospital where emergency care is provided, or an effective communication system for contacting hospitals or other emergency medical facilities, physicians, ambulance and fire services, shall also be provided. The telephone numbers of the following emergency services in the area shall be posted near the job telephone, or otherwise made available to the employees where no job site telephone exists:

1. A company authorized physician or medical clinic, and at least one alternate if available.
2. Hospitals.
3. Ambulance services.
4. Fire-protection services.

Prior to the commencement of work at any site, the foreman or superintendant shall locate the nearest preferred medical facility and establish that transportation or communication methods are available in the event of an employee injury.

Each employee shall be informed of the procedures to follow in case of injury or illness through our new employee orientation program, Code of Safe Practices, and tailgate safety meetings.

Where the eyes or body of any person may be exposed to injurious or corrosive materials, suitable facilities for drenching the body or flushing the eyes with clean water shall be conspicuously and readily available.

At least one basket or equally appropriate litter equipped with straps and two blankets, or other similar warm covering, shall be provided for each building or structure five or more floors or 49 feet or more either above or below ground level.

Accident Procedures

These procedures are to be followed in the event of an employee injury in the course of employment.

1. **For severe accidents call 9-1-1 and request the Paramedics.**
2. **Employees must report all work related injuries to their Supervisor immediately. Even if they do not feel that it requires medical attention.** Failure to do so may result in a delay of Workers' Compensation benefits and disciplinary action.
3. The Supervisor, employee, and first aid person, should determine whether or not outside medical attention is needed. When uncertainty exists on the part of any individual, the employee should be sent for professional medical care.
4. If medical attention is not desired or the employee refuses treatment, you must still fill out a "Company Accident Report" in case complications arise later.
5. In all cases, if the employee can not transport themselves for any reason, transportation should be provided.
6. In the event of a serious accident involving hospitalization for more than 24 hours, amputation, permanent disfigurement, loss of consciousness or death, phone contact should be made with the office at 800-366-1141. Contact must also be made with the nearest Cal/OSHA office.

Hazardous Materials and Chemicals
Hazard Communication Program

Introduction

It is the policy of the Company that the first consideration of work shall be the protection of the safety and health of all employees. We have developed this Hazard Communication Program to ensure that all employees receive adequate information about the possible hazards which may result from the various materials used in our operations. This Hazard Communication Program will be monitored by the Company Administrator who will be responsible for ensuring that all facets of the program are carried out, and that the program is effective.

Our program consists of the following elements:

1. Hazardous material inventory.
2. Collection and maintenance of Material Safety Data Sheets.
3. Container labeling.
4. Employee training.

The following items are not required to be included in the program and are therefore omitted:

1. Foods, drugs, cosmetics, or tobacco.
2. Untreated wood products.
3. Hazardous waste.
4. Consumer products packaged for sale to and use by the general public, provided that our exposure is not significantly greater than typical consumer exposure.

Hazardous Material Inventory

The Company Administrator maintains a list of all hazardous materials used in our operations. This list contains the name of the product, they type of product (solvent, adhesive, etc.) and the name and address of the manufacturer.

Material Safety Data Sheets (MSDS)

Copies of MSDS for all hazardous substances to which our employees may be exposed will be kept in binder in the office at 970 Reserve Dr., Ste. 180, Roseville, CA 95678. These MSDS are available to all employees, at all times, upon request. Copies of the most commonly used products will also be kept by the Supervisor at the job site, or in their vehicles.

The Company Administrator will be responsible for reviewing incoming MSDS for new and significant health/safety information. They will ensure that any new information is passed on to the affected employees.

The Company Administrator will also review all incoming MSDS for completeness. If an MSDS is missing or obviously incomplete, a new MSDS will be requested from the manufacturer. Cal/OSHA will be notified if a complete MSDS is not received and the manufacturer will not supply one.

New materials will not be introduced into the shop or field until MSDS has been received. The purchasing department will make it an ongoing part of their function to obtain MSDS for all new materials when they are first ordered.

Container Labeling

No container of hazardous substances will be used unless the container is correctly labeled and the label is legible.

All chemicals in cans, bags, drums, pails, etc., will be checked by the receiving department to ensure the manufacturer's label is intact, is legible, and has not been damaged in any manner during shipment. Any containers found to have damaged labels will be held until a new label has been installed. New labels will be obtained from the manufacturer.

The label must contain:

The chemical name of the contents.
The appropriate hazard warnings.
The name and address of the manufacturer.

All secondary containers will be labeled as to their contents with a reference to the original label.

Employee Information and Training

All employees will be provided information and training on the following items through the Company safety training program and prior to starting work with hazardous substances:

1. An overview of the requirements of the Hazard Communication Standard, including their rights under this regulation.
2. Information regarding the use of hazardous substances in their specific work areas.
3. The location and availability of the written Hazard Communication Program. The program will be available from the Supervisor and Company Administrator.
4. They physical and health hazards of the hazardous substances in use.
5. Methods and observation techniques used to determine the presence or release of hazardous substances in the work are.
6. The controls, work practices and personal protective equipment which are available for protection against possible exposure.
7. Emergency and first aid procedures to follow if employees are exposed to hazardous substances.
8. How to read labels and material safety data sheets to obtain the appropriate hazard information.

Hazardous Non-routine Tasks

Infrequently, employees may be required to perform hazardous non-routine tasks. Prior to starting this work, each involved employee will be given information by his/her supervisor about hazards to which they may be exposed during such activity.

This information will include:

The specific hazards.
Protective/Safety measures which must be utilized.
The measures the company has taken to lessen the hazards, including special ventilation, respirators, the presence of another employee, emergency procedures, etc.

Informing Contractors

To ensure that other contractors are not exposed to our hazardous materials and to ensure the safety of the contractor's employees, it will be the responsibility of the Supervisor to provide the contractors the following information:

The hazardous substances under our control that they may be exposed to while at the site.
The precautions the contractor's employees must take to lessen the possibility of exposure.

We will obtain from outside contractors the name of any hazardous substances the contractor's employees may be using at a job site or bringing into our facility. The contractor must also supply a copy of the material safety data sheet relevant to these materials.

Employee Rights Under The Hazard Communication Standard

At any time, an employee has the right to:

Access the MSDS folder, and the Hazard Communication Program.
Receive a copy of any environmental sampling data collected in the workplace.
See their employment medical records upon request.

Hazard Communication Employee Training Handbook

It is important that all of our employees understand the information given about hazardous materials. If you have any questions regarding this, please ask your foreman or the Company Administrator at 800-933-9501.

This material has been prepared to assist our employees in better understanding the hazardous materials which they commonly work with.

Chemicals can enter the body in a number of ways, including inhalation, skin contact or ingestion. The hazard of any substance is dependent on other variables such as age, sex, and health of the employee as well as the concentration and duration of exposure. In other words, the same amount of a chemical may produce very different effects on two different people.

Chemicals are controlled in the workplace in such a manner so as to keep exposures below a level that may produce a reaction in very sensitive people. These levels are set by the government in the interest of minimizing harmful health effects of chemicals in the workplace. The Occupational Safety and Health Administration (OSHA) has established specific legally enforced permissible exposure limits (PEL) for hazardous substances in the workplace. The PEL indicates the concentration of airborne contaminants to which nearly all workers may be exposed to for eight hours a day, forty hours a week, over a working lifetime of 30 years, without adverse health effects.

This handbook briefly outlines the hazardous materials you may encounter in you work area. To simplify this task, we have broken down the chemicals used into special categories including:

1. Solvents
2. Adhesives
3. Paints & dyes
4. Lubricants
5. Compressed Gases

In each category, the general characteristics of the material are presented along with the potential health effects of both short-term and long-term overexposure. The use of personal protective equipment and material handling procedures under normal conditions are also included.

Additional information on the materials you may be exposed to can be found in the product's Material Safety Data Sheets (MSDS). A complete folder of MSDS is available to you at all times in the office. Your foreman also has copies of data sheets on commonly used items.

At any time, and employee has the right to:

- Access the MSDS folder, and the Hazard Communication Program.
- Receive a copy of any chemical sampling data collected in the workplace.
- See their employment medical records upon request.

Personal protective equipment acts as a barrier to the routes of entry which a chemical may take into your body. As a barrier to chemicals that can be inhaled, there are a variety of respirators which may be used. The respirators either filters out particles react with chemicals to neutralize them, or provide fresh, filtered air. There are two important things to remember about using respirators. The first is that a respirator only works when you wear it and use it properly. Second, and equally important, is that you must use the proper respirator for the specific hazard. Respirators designed for one type of chemical will not work for another. One last note about respirators is that no one is allowed to use any respirator without proper training. It is against the law to use a respirator without formal training in its proper use.

As a barrier to skin, we have gloves, face masks, protective clothing, and head protection. A combination of these items may be necessary to provide the proper level of protection in your area.

As a barrier to the eyes, a variety of eye protection may be used. Goggles are recommended when pouring or handling chemicals which may splash the eyes. They are also recommended while spraying adhesives and paints. Protect your eyes, your vision is priceless and irreplaceable.

There is no real protection against swallowing materials except good work practices. Always label any container to prevent accidental drinking. Always thoroughly wash your hands with soap and water before eating, drinking or smoking. Keep any food and cigarettes away from the work area. Breads, fruits, and cigarettes can actually absorb chemicals from the air, to be inhaled or ingested later.

Prolonged exposure to excessive noise can cause permanent hearing damage. For those employees working in areas where excessive noise is generated, it is recommended that ear plugs or ear muffs be used on a regular basis.

General first aid practices should be followed in the event of exposure to hazardous materials.

EYES: Flush eyes for at least 15 minutes with water.

SKIN: Wash the affected area with soap and water. If clothing is involved, removed and launder before putting back on. If caustic materials are spilled, remove clothing immediately and wash off the body.

INGESTION: Do Not Induce Vomiting Unless the Label Indicates – transport the affected person to the medical clinic immediately for treatment or call 911. They will take the appropriate action.

INHALATION: Generally, removing the person to fresh air is adequate after short term exposure to most vapors. If breathing difficulty develops, dial 911 and be prepared to administer CPR.

The provisions set for the by the Federal Hazard Communication Program dictate that all containers of hazardous materials must be properly labeled. All containers of hazardous materials used must have, at a minimum, the original label provided by the manufacturer or a locally prepared label describing its contents and hazards involved.

1. Solvents

a. Halogenated Solvents

Characteristics: These products are usually clear, rapidly evaporating solvents containing chlorinates. They generally exhibit low flammability and have the consistency of water. They have a mild odor and are used in painting, stripping and other operations. Examples of chlorinated solvents are 1,1,1-Trichloroethane, perchloroethylene, methylene chloride, and Freon products.

Health Hazards: Most solvents are irritating to the eyes and upper respiratory tract. Excessive, repeated exposure to the skin may produce dermatitis and drying of the skin due to the de-fating properties of the solvents. Most are toxic and may be harmful or fatal if swallowed. Inhalation of excessive vapors may produce narcotic effects by depressing the central nervous system. Typical symptoms of overexposure include dizziness, nausea, and light-headedness in some individuals. Excessive repeated exposure to some solvents may produce chronic health effects on organs such as lungs, liver, kidney, and nervous system. Some solvents have been shown to produce cancer in laboratory animals. Compressed Freon products may produce "freeze burns" on the skin and eyes when released. Very high concentrations of vapors may be dangerous to life and health.

Personal Protective Equipment/Handling: Solvents should be handled with respect. Avoid any unnecessary exposure. Never wash hands in solvents. Wash with soap and water after using solvents. Avoid excessive skin contact. Use chemically resistant gloves if necessary. Avoid inhalation of vapors when possible. Use are-supplying respirators in areas of high concentration. Avoid contact with eyes. Use chemical goggles for protection. Provide ventilation when possible. Avoid contact with strong oxidizers (acids) and reactive metals (magnesium, aluminum powders).

b. Organic Solvents

Characteristics: Usually clear, rapidly evaporating petroleum or alcohol based solvents. These solvents are usually highly flammable and may or may not mix with water. They usually have an alcohol or oil-like odor and are used in a variety of degreasing, painting and stripping operations. Examples of organic solvents are toluene, xylene, methyl ethyl ketone (MEK), acetone, and alcohols.

Health Hazards: Organic solvents evaporate very quickly and pose a great fire hazard. Because of this rapid evaporation and the natural penetrating nature of solvents, these materials can enter the body very rapidly through inhalation into the respiratory tract, and absorption through the skin and eyes. Exposures of these types may, in some instances, lead to skin irritation, eye irritation, and respiratory irritation. Solvents eventually enter the blood stream, and in cases of overexposure, may produce a variety of effects including nausea, headache, and dizziness. In very high concentrations, they may pose immediate threat to life and health. Chronic, repeated overexposure to organic solvents has been documented to produce adverse effects on the heart, lungs, central nervous system, liver, blood, and skin. The products may be harmful or fatal if swallowed. Some solvents may produce allergic reactions in sensitive people.

Personal Protective Equipment/Handling:

It is important to minimize your exposure to solvents. For example, avoid skin contact by wearing non-pourous gloves. Cotton or leather gloves should never be used while working with solvents because they absorb the solvent and allow it to reach your skin. If you can't wear gloves in your particular job, find other ways to avoid contact with the solvents. For example, use tongs to hold parts while cleaning them with solvents. Never wash your hands in a solvent – use soap or a waterless hand cleaner. Barrier creams may provide additional protection. Use ventilation systems when possible and avoid breathing solvent vapors. If your job requires it, wear a respirator. Use air supplying respirators in areas of high concentrations. Protect your eyes with safety glasses or goggles. Avoid strong oxidizing agents. Ground and bond all containers when pouring or transferring chemicals.

Emergency/Special: In the event of eye contact flush eyes for 15 minutes with water. Avoid prolonged skin contact with any solvents. Wash skin with soap and water. Remove soaked clothing and wash before reuse. If ingested, seek medical help immediately, do NOT induce vomiting. If inhaled, move victim to fresh air and, if necessary, give artificial respiration. In the event of a spill, eliminate ignition sources, evacuate the area, and contact the fire department. Avoid drainage into water or sewage system.

2. Adhesives

Characteristics: Adhesives are typically made up of resins composed of two reaction components: 1) the curing agent (hardner, catalyst, accelerator, activator or setting agent) and 2) the resin. The cured resins are generally found in a paste form, and the uncured resins are viscous liquids or solids.

Health Hazards: Some of the liquid uncured resins are skin irritants, sensitizers, or both. Solvents are often the major component of the uncured resins. They are primary skin irritants as a result of their ability to dry and remove natural oils from the skin. They may enhance the sensitizing effects of the dermatitis producing components discussed above.

Personal Protective Equipment/Handling: Because of the varying effects of these products, it is important that personal protective equipment be used. Safety glasses should be worn at all times. Impervious gloves and clothing should be worn. Remove and wash soaked clothing before reuse. Adhesives should only be used in well ventilated areas. Air-purifying respirators may be necessary if ventilation is inadequate.

Emergency/Special: Keep all stored material away from heat and flames. Adequate ventilation should be provided if any of the liquid components spill. In the event of eye contact, flush with water for 15 minutes. If skin contact occurs, wash the affected area with soap and water. Do NOT induce vomiting if ingestion occurs. Seek medical attention immediately.

3. Paints & Dyes

a. Water Based Acrylics, Latex Paints

Characteristics: These products are available in a variety of colors for many uses including interior and exterior painting of equipment, vehicles and structures. They are usually nonflammable, but some may burn under extreme situations. They are all water soluble, and may contain some alcohol or ammonia solvents. They are pigmented with a variety of compounds, and usually have a thick, soupy consistency with a mild ammonia odor.

Health Hazards: Water based paints are generally considered non-hazardous. Some may contain solvents that may produce mild eye and/or nose irritation. Some of these products may produce limited skin irritations in extremely sensitive people. These products may be harmful if swallowed. Under normal working conditions, these products are generally considered safe for use.

Personal Protective Equipment/Handling: General ventilation should be sufficient, with exhaust ventilation nece4ssary in confined spaces. Goggles or similar means of eye protection should always be used in any painting process. Gloves and protective clothing are recommended for extremely sensitive individuals. Avoid unnecessary exposure or contact. Do not freeze these products. Wash hands/skin with soap and water after use. Store in cool, dry place.

Emergency/Special: In the event of eye contact, flush with water for 15 minutes. Consult with physician if irritation persists. If excessive inhalation occurs, remove victim to fresh air. In the event of ingestion, give water and contact physician immediately. Wash soaked clothes before reuse. Use only soap and water to wash skin.

b. Lacquers, Primers, Non-Water Based Paint

Characteristics: These products come in a variety of colors and are used in various coating applications including painting, primering, and lacquering. They may contain both organic and halogenated solvents, and most have pigments that contain heavy metals. Some of the solvents and pigments which may be contained include acetone, diisobutyl ketone, xylene, methylene chloride, lead, chromium, and zinc compounds. They are usually highly flammable.

Health Hazards: Because of the high concentration of solvents in these paints, the health hazards are much like those discussed in category 1a and 1b, Solvents. These products also contain heavy metal compounds such as lead, chromium, and zinc. These heavy metals may build up in the blood producing chronic effects such as lead poisoning, which is characterized by weakness, difficulties in concentrating, and sleep problems.

Personal Protective Equipment/Handling: These products should be handled with care. Gloves are recommended for skin sensitive individuals. Goggles or safety glasses should be worn at all times. Mechanical ventilation and respirators may be required depending on size of operation and type of paint. Refer to specific MSDS for information. Long sleeve shirts are recommended. Do not use thinners or other solvents to remove paints from hands. Use lava soap and water, followed by hand lotion to prevent drying of the skin. Remove and wash soaked clothing before reuse. Do not apply to hot surfaces. Avoid sparks or flames when using. Never smoke in areas where these paints are being applied. Avoid breathing vapors and paint mist. Ground and bond containers during transfers. Store cool, dry place, preferably in a flammable liquid storage cabinet.

Emergency/Special: In the event of eye contact, flush with water for 15 minutes. Wash affected skin areas with soap and water. In the event of ingestion, do NOT induce vomiting; contact a physician immediately. Inhalation exposure should be treated by removing victim to fresh air. Apply artificial respiration if necessary. In the event of a spill, eliminate ignition sources, evacuate area, and contact fire department. Avoid drainage into water or sewage systems.

4. Lubricants

a. Insoluble Oils and Greases

Characteristics: Commonly known as lubricating oils or greases, these oils are generally petroleum based hydrocarbon mixtures that contain no water. Appearance may range from clear light brown liquids to dark brown greases. Oils can be fire hazards because they are combustible. Examples of common oils and greases are multi weight motor oil, gear lubricating oils, and cutting oils used in some machining operations.

Health Hazards: Petroleum based oils and greases are generally of low toxicity. Oil mists and vapors can be generated from sawing and metal forming operations. Inhalation of these mists may cause mild irritation of the nose and throat. The mist may also irritate the eyes. Overexposure by inhalation, although rare, can cause headaches, nausea, or dizziness. The most common exposure to oils and greases is through the skin. Excessive or prolonged exposure of the skin to oils, especially used, dirty, or contaminated oils, may cause chronic skin conditions such as contact dermatitis. Ingestion of these substances may be harmful, depending on the purity of the oil, and the amount ingested.

Personal Protective Equipment/Handling: Under most circumstances, inhalation overexposure to oil products is not common. If no local exhaust ventilation is available in operations which generate oil mist, a respirator with an organic vapor/particulate cartridge should be utilized. There is no substitute for safe work practices and good personal hygiene. Any practical way to reduce time and frequency of skin exposure to oils is recommended. Mild waterless hand cleaners are helpful in removing oil. Never use solvents to clean the skin. This will only increase the risk of unusual skin disorders and/or dermatitis. Oil resistant protective gloves should be used whenever feasible, and skin cream should be applied after washing to prevent drying. Safety glasses or goggles should be worn to prevent oil from splashing into the eyes.

Emergency/Special: Lubricating oils, like any ot5her chemicals, should be handled with care. In the event of eye contact, flush with water for 15 minutes, then seek medical attention. In case of accidental ingestion, do not induce vomiting, give milk or water, and seek medical attention. Any areas of skin contact should be washed thoroughly with mild soap and lukewarm water or waterless hand cleaner to reduce the risk of skin disorders.

b. Aeorsol Spray Lubricants

Characteristics: Aerosol spray lubricants, unlike other oil based lubricants, generally contain a high percentage of halogenated solvents such as 1,1,1-trichloroethane. Examples of spray lubricants include gear oil and silicone spray.

Health Hazards: Refer to category 1A (Halogenated Solvents) for overall health hazards of aerosol spray lubricants.

Additional Information: Most of the aerosol sprays are usually extremely flammable because of the propellants used (butane, propane, etc.). Phosgene gas, an extremely toxic gas, may be generated as a decomposition product of combustion if the spray lubricants come in contact with a flame (e.g., lighted cigarette, or welding operations) or a very hot metal. Phosgene gas can cause severe irritation to the nose, throat and eyes, even at extremely low concentrations. Exposure to moderate concentrations can cause a delayed onset of pulmonary edema (fluid in the lungs) which may progress to pneumonia.

Personal Protective Equipment/Handling: All solvent-based materials should be used in well ventilated areas. Use a respirator if spraying moderate concentrations to avoid overexposure. Air-supplying respirators should be used if high concentrations are present. Avoid contact with the skin to reduce the risk of irritation and/or dermatitis.

Use chemically resistant gloves for prolonged or repeated contact. Always wear safety glasses or goggles to prevent eye contact with the aerosol spray.

Emergency/Special: In the event of eye contact, flush with water for 15 minutes. Wash skin with soap and water. If ingested, do not induce vomiting and seek immediate medical attention. In case of overexposure by inhalation, remove the person to fresh air, seek medical attention, apply artificial respiration if necessary. Containers should be stored in a clean, dry area. Avoid storing at temperatures above 80 degrees F to reduce the risk of the aerosol containers bursting or exploding.

5. Compressed Gases

Characteristics: These gases are typically stored in cylinders. The gases are frequently stored in a liquid state and are utilized in a variety of applications such as welding (acetylene), oxidation (oxygen), fuel delivery (propane, butane), cryogenics (liquid helium, oxygen, nitrogen).

Health Hazards: Depending on the specific gas contained within the cylinder, the associated hazards exhibited can be similar to those of the substances described in previous categories. For example, anhydrous ammonia gas falls within the corrosive/caustic hazard category. Asphyxiation is the primary hazard associated with compressed gases since they can displace oxygen if there is a sudden and quick release, particularly in confined work areas. Compressed gases, either in liquid or vapor form, are cryogenic and will cause severe frostbite and burns if allowed to contact the skin.

Personal Protective Equipment/Handling: Self-contained or airline breathing apparatus should be worn in oxygen-deficient atmospheres. General ventilation is usually adequate to maintain sufficient oxygen level. Avoid skin contact with liquid gases. Avoid smoking or other sources of ignition around oxidizers and fuel gases. Compressed gas cylinders should always be handled with extreme care as serious accidents may result from the misuse, abuse or mishandling of cylinders.

Emergency/Special: In the event of a gas leak, evacuate all personnel from the danger area. Shut off the leak if it does not pose a grave risk. Ventilate the area of the leak and move the leaking container to a well ventilated area. If inhalation overexposure occurs, remove victim to fresh air and give artificial respiration if necessary. If liquid contact skin, flood the affected area with warm water and seek medical attention.

Hazardous Materials and Chemicals

1. Read all warning labels and Material Safety Data Sheets (MSDS) before using any chemicals. MSDS contain personal protective equipment and safety information and are available from your foreman.

2. Hazardous materials shall be handled in accordance with the MSDS and label. If protective equipment is required, use it.

3. Eye protection must be worn when working with hazardous materials or chemicals.

4. Mixing of chemicals is prohibited at all times unless required by the label. Before you mix, review all MSDS.

5. Always wash your hands thoroughly after handling chemicals and before eating or smoking, even if you were wearing protective gloves.

6. Never use solvents for hand cleaning. Use the nontoxic hand cleaners provided.

7. Store all hazardous materials properly in suitable containers that are properly labeled.

8. Use chemicals only in well ventilated areas.

9. When using secondary containers, ensure that they are labeled as to their contents and hazards.

10. Do not disturb any asbestos. STOP work and tell your foreman. If you are not sure, STOP and ask.

11. Do not cut or weld stainless steel or galvanized metal without respiratory protection. These items create toxic fumes.

12. Work with lead, asbestos, cadmium and other toxic compounds require special precautions. Do not attempt to perform this work without special equipment and training.

Heat Illness Prevention Program

California Employers with any outdoor places of employment must comply with the Heat Illness Prevention Standard T8 COR 3395. These procedures have been created to assist in crafting heat illness prevention procedures, and to reduce the risk of work related heat illnesses among their employees.

These procedures are not intended to supersede or replace the application of any other Title 8 regulation, particularly T8 3203 Injury and Illness Prevention Program (IIPP). Title 8 CCR 3203 requires an employer to establish, implement, and maintain an effective IIPP. The measures listed here are integrated into the Employer's Injury and Illness Prevention Program.

Please Note: These procedures provide the minimal steps applicable to most outdoor work settings and are essential to reducing the incidence of heat related illnesses. In working environments with a higher risk for heat illness (e.g., during a heat wave, or other severe working or environmental conditions), it is the employees and the Company's duty to exercise greater caution and additional protective measures beyond what is listed in this document.

To effectively establish the Company procedures, the employee should carefully review the key elements listed in this program, as examples, then select and ensure you use the procedures are used as applicable to your workplace.

Furthermore, to successfully tailor these procedures to your work activities, evaluate and consider the individual conditions present at your site (such as, but not limited to) : (1) size of the crew, (2) the length of the work-shift, (3) the ambient temperature (which can be taken either with the aid of a simple thermometer or by monitoring the weather) and (4) the presence of personal protective equipment or additional sources of heat. Again, these sample procedures do not include every workplace scenario, so it is crucial that you evaluate and take into account conditions found in your individual workplace that are likely to cause a heat illness.

1. The Company Administrator along with the designated person that has been assigned the applicable task(s) employee, supervisor, foreman, safety coordinator, crew leader.
2. Provide specific details required to carry out the task and ensure that the task is accomplished successfully (e.g. how many water containers/shade structures, of what size, distance to placement, frequency of water-level replenishment/weather-tracking/water breaks/reminders, etc.). [For additional information, see the Enforcement Q & A: http://www.dir.ca.gov/DOSH/heatillnessQA.html]
3. Specify how these procedures will be communicated to your employees and in particular to the persons assigned these responsibilities (e.g. via training, meeting), and how it will be ascertained that these company instructions and procedures are followed.

Sample Procedures for Provision of Water include but are not limited to the following:

1. The employee will bring sufficient drinking water containers (of 5 to 10 gallons each) to the site, so that at least 2 quarts per employee are available at the start of the shift. These containers shall be maintained and available on the vehicle.
2. The employee will bring sufficient paper cone rims or bags of disposable cups and the necessary cup dispensers to ensure that enough disposable cups are made available for each worker and are kept clean until used.

3. As part of the Company Effective Replenishment Procedures, the employee will check the water level of all containers every 30 minutes and more frequently when the temperature exceeds 90 degrees F. When the water level within a container drops below 50%, water containers will be refilled with cool water. To accomplish this task, the employee will carry 1 additional water container (i.e. 5 gallon bottles) to replace water as needed.
4. When the temperature exceeds 90 degrees, the employee will carry ice in separate containers, so that when necessary, it will be added to the drinking water to keep it cool.
5. The employee will check the work site and place the water as close as possible to the workers (i.e. no more than 10 feet from the workers). If field terrain prevents the water from being placed as close as possible to the workers, the employee will bring bottled from being placed as close as possible to the workers, the employee will bring bottled water or individual containers (in addition to disposable cups and water containers), so that workers can have drinking water readily accessible.
6. The employee will ensure that the water containers are relocated to follow along as the crew moves, so drinking water will be readily accessible.
7. The employee will be responsible for cleaning the water containers and ensuring that they are kept in sanitary condition (all necessary cleaning supplies are provided by the company).
8. The company will reimburse the supervisors for any cost incurred for them to fill up their water containers as needed on a daily basis, or to purchase necessary disposable cups or cleaning supplies. The employee will be given a per diem "x" per week for the purchase of water and/or drinking water supplies, when requested, and receip0ts are subsequently later printed.
9. The employee or Field Supervisor will determine point out daily the location of the water coolers to the workers and remind them to drink water frequently. When the temperature exceeds or is expected to exceed and remind them to drink water frequently. When the temperature exceeds or is expected to exceed 90 degrees F, the Field Supervisor will hold a brief 'tailgate' meeting each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness.
10. The employee of Field Supervisor will use audible devices (such as whistles or air horns) to remind employees to drink water.
11. When the temperature equals or exceeds 95 degrees F or during a heat wave, the employee will increase the number of water breaks, and will remind workers throughout the work shift to drink water.
12. During employee training, the importance of frequent drinking of water will be stressed.

Sample Procedures for Access to Shade include but are not limited to the following:

1. Each employee will bring their own shade structure to the site, to accommodate at least 25% of the employees on the shift and either chairs, benches, sheets, towels or any other items to allow employees to sit and rest without contacting the bare ground. However, chairs, benches, etc. are not required for acceptable sources of shade such as trees.
2. The employee will ensure that their shade structures are opened and placed as close as practical to the workers, when the temperature equals or exceeds 85 degrees F. When the temperature is below 85 degrees F, the shade structures will be brought to the site, but will be opened and set in place upon worker(s) request. Note: The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.
3. The employee will determine and point out the daily location of the shade structures to the workers as well as allow and encourage employees to take a 5 minute cool-down rest in the shade, when they feel the need to do so to protect themselves from overheating.

4. The employee will ensure that the shade structures are relocated to follow along with the crew and double-check that they are as close as practical to the employees, so that access to shade is provided at all times.
5. In situations where trees or other vegetation are used to provide shade (such as in orchards), the employee will evaluate the thickness and shape of the shaded area (given the changing angles of the sun during the entire shift), before assuming that sufficient shadow is being cast to protect employees.
6. In situations where it is not safe to provide shade (example winds of more than 40 mph), the employee will document how this determination was made, and what steps will be taken to provide shade upon request.
7. For non-agricultural employers, in situations where it is not safe or feasible to provide shade, the employer will document how this determination was made, and what steps will be taken to provide shade upon request or other alternative cooling measures with equivalent protection.

Sample Procedures for Monitoring the Weather include but are not limited to:

1. 2 weeks in advance (or with as many days in advance as possible), the Employer, Farm Labor Contractor or Superintendent and Employee will go on the internet (www.nws.nooa.gov), call the National Weather Service Phone Numbers (see CA numbers attached) or check the Weather Channel TV Network to view the extended weather forecast in order to plan in advance the work schedule, know whether a heat wave is expected and if additional schedule modifications will be necessary. This type of advance planning should take place all summer long.

California Dial-A-Forest

Eureka 707-443-7062	Sacramento 916-979-3051
Hanford 559-587-8047	San Diego 858-297-2107 (#1)
Los Angeles 805-988-69610 (#1)	San Francisco 831-656-1725 (#1)

2. Prior to each workday, the employee will review the forecasted temperature and humidity for the worksite and compare against the National Weather service Heat Index to evaluate the risk level for heat illness, for instance whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses such as heat stroke. It is important to keep in mind that the temperature at which these warnings occur must be lowered as much as 15 degrees if the workers under consideration are in direct sunlight.
3. Prior to each workday, the employee will be responsible for monitoring the weather (using www.new.nooa.gov or with the aid of a simple thermometer) at the worksite. This critical weather information will be taken into consideration, to determine when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).
4. The employee will be responsible for using a thermometer at the jobsite and checking the temperature every “X” hours to monitor for sudden increases in temperature to ensure that once the temperature exceeds 85 degrees F, the shade structures are opened and accessible to the workers and to make certain that once the temperature equals or exceeds 95 degrees F additional preventive measures such as the High Heat Procedures are implemented.

Handling a Heat Wave:

1. During a heat wave or heat spike (e.g., a sudden increase in daytime temperature of 9 degrees or more), the work day will be cut short (example 12 PM), will be rescheduled (example conducted at night or during cooler hours) or if possible cease for the day.
2. If schedule modifications are not possible and workers have to work during a heat wave, the employee will request and hold a tailgate meeting to reinforce heat illness prevention with emergency response procedures and review the weather forecast with the workers. In addition, the employee will institute alternative preventive measures such as provide workers with an increase number of water and rest breaks every 30 minutes supervise workers to ensure that they do stop work and take these breaks, and observe closely all workers for signs and symptoms of heat illness, prior to the commencement of work.
3. During a heat wave or heat spike (e.g., a sudden increase a daytime temperature of 9 degrees or more), and the start of the workday, the employee will request and hold a tailgate meeting with the workers to review the company heat illness prevention procedures, the weather forecast and emergency response, prior to commencement of work.
4. The employees will each secure a "buddy" to be on the lookout for signs and symptoms of heat illness and ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.

Sample High Heat Procedures include but are not limited to: [High Heat Procedures are additional preventive measures that this company will use when the temperature equals or exceeds 95 degrees F]:

1. The employee will ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the worksite can contact a supervisor when necessary. If the Supervisor is unable to be near the workers to observe them or communicate with them, then an electronic devic3e, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.
2. The employee will observe fellow employees for alertness and signs and symptoms of heat illness.
3. The employee will remind fellow employees throughout the work shift to drink plenty of water.
4. The employee will closely supervise a new employee, or assign a "buddy" or more experienced coworker for the first 14 days of the employee's employment by the employer, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for 4 or more hours per day.

Sample Procedures for Acclimatization include but are not limited to:

Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by sudden environmental changes. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee's body hasn't yet adjusted.

Inadequate acclimatization can imperil anyone exposed to conditions of heat and physical stress significantly more intense than what they are used to. Employers are responsible for the working conditions of their employees, and they must act effectively when conditions result in sudden exposure to heat their employees are not used to.

1. Employees will monitor the weather and in particular be on the lookout for sudden heat waves(s), or increases in temperatures to which employees haven't been exposed to for several weeks or longer.
2. During a heat wave or heat spike (e.g., a sudden increase in daytime temperature of 9 degrees or more), the work day will be cut short (example 12 PM), will be rescheduled (example conducted at night or during cooler hours) or if possible cease for the day.
3. During the hot summer months, the work shift will start earlier in the day or later in the evening.
4. For new employees, the employee will try to find ways to lessen the intensity of the employees work during a two-week break-in period (such as scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early-morning or evening)). Steps taken to lessen the intensity of the workload for new employees will be documented.
5. The employee will be extra-diligent to stay alert to the presence of heat related symptoms.
6. The employee will assign other employees as a "buddy" or experienced coworker to watch each other closely for discomfort or symptoms of heat illness.
7. During a heat wave, the employee will observe all employees closely (or maintain frequent communication via phone or radio) and be on the lookout for possible symptoms of heat illness.
8. Training for employees and supervisors will include the importance of acclimatization, how it is developed and how these company procedures address it.

<u>Sample Procedures for Emergency Respone include but are not limited to:</u>

1. Prior to assigning a crew to a particular worksite, the employee and the foreman must possess a map along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads) of the site, to avoid a delay of emergency medical services prior to proceeding to the workplace.
2. Prior to assigning a crew to a particular worksite, the employee will ensure that a qualified, appropriately trained and equipped person will be available at the site to render first aid if necessary.
3. Prior to the start of the shift, the employee will determine if a language barrier is present at the site and take steps (such as assigning the responsibility to call emergency medical services to the foreman or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.
4. All foremen and supervisors will carry cell phones or other means of communication, to ensure that emergency medical services can be called and check that these are functional at the worksite prior to each shift.
5. When an employee is showing symptoms of possible heat illness, they will take immediate steps to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness).
6. At remote locations such as rural farms, lots or undeveloped areas, the employee will designate a fellow employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated employee(s) shall be given reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.
7. During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.
8. Training for employees and supervisors will include every detail of these written emergency procedures.

Handling A Sick Employee:

1. When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. Do not leave a sick worker alone in the shade, as he or she can take a turn for the worse!

2. When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor is available at the site, call emergency service providers.

3. Call emergency service providers immediately if an employee displays signs or symptoms of heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), does not look OK or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, initiate first aid (cool the worker: place in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim). Do not let a sick worker leave the site, as they can get lost or die(when not being transported by ambulance and treatment has not been started by paramedics) before reaching hospital!

4. If an employee does not look OK and displays signs or symptoms of severe heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face) and the worksite is located more than 20 minutes away from a hospital, call emergency service providers, communicate the signs and symptoms of the victim and request Air Ambulance.

Sample Procedures for Employee and Supervisory Training include but are not limited to:

1. Field Supervisor will ensure that all supervisors are trained prior to being assigned to supervise other workers. Training will include this company's written procedures and what steps supervisors will follow when employees' exhibit symptoms consist with heat illness.
2. Employee will ensure they have been trained prior to working outside. Training will include the company's written prevention procedures.
3. Employee will ensure they have been trained on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking workers, how clear and precise directions to the site will be provided as well as stress the need to make visual contact with emergency responders at the nearest road or landmark to direct them to their worksite.
4. When the temperature exceeds 75 degrees F, the employee will hold a short 'tailgate' meetings to review the weather report, reinforce heat illness prevention with all workers and provide reminders to drink water frequently, to be on the lookout for signs and symptoms of heat illness and inform them that shade can be made available upon request.
5. The employee will assign fellow employees as a "buddy" or experienced coworker to ensure that they understood the training and follow company procedures.

Fall Protection

Falls are the leading cause of fatal injuries in the construction industry. The Company has the following requirements for fall protection at all of our job sites and work areas.

Fall Protection is Required

When working where there is a hazard of falling more than 7 ½ feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12, or other sloped surfaces steeper than 40 degrees not otherwise adequately protected. Fall protection is also required when working in boom lifts.

Fall Protection Types

One of the following four types of fall protection systems will be used when our employees are exposed to fall hazards in excess of 7 ½ feet:

1. Standard guardrails, cables or floor hole covers
2. Personal fall arrest system
3. Positioning devices
4. Fall restraint system

Standard Guardrails, Safety Cables, or Covers

These are the easiest and most cost effective methods of providing fall protection and have a very high success rate. Standard guardrails, safety cables, floor hole and sky light covers are our preferred means of fall protection on job sites. The following rules will be followed when using them:

1. Fall protection, such as standard railings or a safety harness and lanyard, shall be used at all times, when working 7 ½ feet or more above the level below.

2. Floor and wall openings, unfinished balconies, elevator shafts and similar areas must be railed, covered or barricade to prevent falls.

3. Never remove fall protection rails, covers, or barricades without permission from your Foreman and special precautions. Always replace these items when finished with your task.

4. All safety harnesses shall be the full body type with a shock absorbing lanyard attached to a substantial anchorage capable of supporting twice the maximum load. Lanyards shall be attached at the wearer's upper back. Body belts are not to be worn as fall protection.

5. Read and obey all manufacturers' instructions relating to your fall arrest system (safety harness and lanyard).

6. Inspect all components of your harness and lanyard prior to each use and after a fall. Defective equipment is not to be used. Lanyards must be destroyed after a fall and never reused.

7. Safety harnesses and lanyards should limit free fall distance to less than 4 feet and prevent contact with any level or objects below you.

8. Never use any part of a fall arrest system, such as a harness or lanyard, to hoist materials or for any other purpose.

9. Safety harnesses and shock absorbing lanyards are required to be worn at all times while in boom lifts.

10. Railings shall be constructed of wood, or in an equally substantial manner from other materials, and shall consist of a top rail not less than 42 inches or more than 45 inches in height measured from the upper surface of the top rail to the floor, platform, runway, or ramp level and a mid rail. The mid rail shall be halfway between the top rail and the floor, platform, runway, or ramp. "Selected lumber" free from damage that affects its strength, shall be used.

11. Wooden posts shall be not less than 2 inches by 4 inches in cross section, spaced at 8 foot or closer intervals.

12. Wooden top railings shall be smooth and of 2 inch by 4 inch or larger material. Double, 1 inch by 4 inch members may be used for this purpose, provided that one member is fastened in a flat position on top of the posts and the other fastened in an edge-up position to the inside of the posts and the side of the top member. Mid rails shall be of at least 1 inch by 6 inch material.

13. The rails shall be placed on the side of the post which will afford the greatest support and protection.

14. All guardrails, including their connections and anchorage, shall be capable of withstanding a load of 13 pounds per linear foot applied either horizontally or vertically downward at the top rail.

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

16. Floor, roof and skylight openings shall be guarded by a standard railing and toe boards or cover. Covering shall be capable of safely supporting the greater of the weight of a 200 pound person or the weight of worker(s) and material(s) placed thereon.

17. Coverings shall be secured in place to prevent accidental removal or displacement, and shall bear a pressure sensitized, painted, or stenciled sign with legible letters not less than one inch high, stating: "Opening – Do Not Remove." Markings of chalk or keel shall not be used.

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

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

20. Wall openings, from which there is a drop of more than 4 feet, and the bottom of the opening is less than 3 feet above the working surface, shall be guarded with either a standard rail or intermediate rail or both.

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

22. Wall opening protection barriers shall be of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a load of at least 200 pounds applied in any direction (except upward).

Personal Fall Arrest Systems

Personal fall arrest systems consist of a full body harness and a shock absorbing lanyard attached to suitable anchorage. They are also an effective means of preventing fall accidents. The system does not actually stop you from falling, but catches you and safely stops you from hitting the level below. Fall arrest systems will be our preferred means of protection when standard guardrails, safety cables, or covers are not practical. The following rules, in addition to the manufacturer's requirements and OSHA regulations, will be observed:

1. Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body harnesses shall be made from synthetic fibers except when they are used in conjunction with hot work where the lanyard may be exposed to damage from heat or flame.

2. Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used support or suspend platforms and capable of supporting at least 5,500 pounds 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.

3. The attachment point of the body belt shall be located in the center of the wearer's back. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.

4. Where practical, the anchor end of the lanyard shall be secured at a level not lower than the employee's waist, limiting the fall distance to a maximum of 4 feet.

5. Harnesses, lanyards, and other components shall be used only for employee protection as part of a personal fall arrest system and not to hoist materials.

6. Personal fall arrest systems and components subjected to impact loading shall be immediately removed from the service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.

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

8. 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.

9. Any lanyard, safety harness, or drop line subjected to in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding.

10. Personal fall arrest systems shall not be attached to guardrails, unless the guardrail is capable of safely supporting the load.

11. Each personal fall arrest system shall be inspected not less than twice annually by a competent person in accordance with the manufacturer's recommendations. The date of each inspection shall be documented.

12. Personal fall arrest systems will be rigged such that an employee can neither free fall more than 4 feet, nor contact any lower level.

13. Personal fall arrest systems will bring an employee to a complete stop. They will also limit maximum deceleration distance an employee travels to 3.5 feet and have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.

Positioning Device Systems

Positioning device systems are designed to allow employees to work with both hands free elevated locations. By their very nature, they provide some level of all protection. They are not as effective as railings or fall arrest systems. Positioning device systems may be used together with a fall arrest system for greater safety. Their use shall conform to the following provisions:

1. Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet.

2. Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.

3. Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist material.

4. The use of non-locking snap hooks is prohibited.

5. Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

Personal Fall Restraint

Fall restraint systems are designed to prevent the wearer from reaching the edge or danger area and thus prevent them from falling. Body belts or harnesses may be used for personal fall restraint.

1. Body belts shall be at least one and five-eighths (1 5/8) inches wide.

2. Anchorage points used for fall restraint shall be capable of supporting 4 times the intended load.

3. Restraint protection shall be rigged to allow the movement of employees only as far as the sides of the working level or working area.

Note: All safety belts, harnesses and lanyards placed in service or purchased on or before February 1, 1997, shall be labeled as meeting the requirements contained in ANSI A10.14-1975, Requirements for Safety Belts, Harnesses, Lanyards, Lifelines and Drop Lines for Construction and Industrial Use.

All personal fall arrest, personal fall restraint and positioning device systems purchased or placed in service after February 1, 1997, shall be labeled as meeting the requirements contained in ANSI A10.14-1991 American National and Everest Indemnity Standard for Construction and Demolition Use, or ANSI Z359.1-1992 American National and Everest Indemnity Standard Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components.

Use of Ladders

(a) Scope. This section is intended to prescribe rules and establish minimum requirements for the design, construction, selection, care, and use of all self-supporting and non-self-supporting portable ladders, in order to insure safety under normal conditions of usage. This section does not apply to ladder type step stools or other types of step stools except for the definition of "step stool (ladder type)" in subsection (b) and the design and construction requirements of subsection (c) (5).

(b)Definitions.

Extension Ladder. An extension ladder is a non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets so arranged as to permit length adjustment. Its size is designated by the sum of the lengths of the sections measured along the side rails.

Ladder. A ladder is an appliance usually consisting of two side rails joined at regular intervals by crosspieces called steps, rungs, or cleats, on which a person may step in ascending or descending.

Sectional Ladder. A sectional ladder is a non-self-supporting portable ladder, nonadjustable in length, consisting of two or more sections of ladder so constructed that the sections may be combined to function as a single ladder. Its size is designated by the overall length of the assembled sections.

Side-Rolling Ladder. A side-rolling ladder is a semi-fixed ladder, nonadjustable in length, supported by attachments to a guide rail, which is generally fastened to shelving, the plane of the ladder being also its plane of motion.

Single Ladder. A single ladder is a non-self-supporting portable ladder, nonadjustable in length, consisting of but one section. Its size is designated by the overall length of the side rail.

Special-Purpose Ladder. A special-purpose ladder is a portable ladder which represents either a modification of a combination of design or construction features in one of the general-purpose types of ladders previously defined, in order to adapt the ladder to special or specific uses.

Step Ladder. A step ladder is a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.

Step Stool (ladder type). A self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in length, with flat steps and without a pail shelf, designed so that the ladder top cap as well as all steps can be climbed on. The side rails may extend above the top-cap but such extension is not considered as part of the step stool length.

Trestle Ladder. A trestle ladder is a self-supporting portable ladder, nonadjustable in length,

consisting of two sections hinged at the top to form equal angles with the base. The size is designated by the length of the side rails measured along the front edge.

Trolley Ladder. A trolley ladder is a semi fixed ladder, nonadjustable in length, supported by attachments to an overhead track, the plane of the ladder being at right angles to the plane of motion.

(c) Design & Construction.

(1) Portable wood ladders placed in service after January 7, 2011 shall meet the design and construction requirements of ANSI A14.1-2007, American National Standard for Ladders-Wood Safety Requirements, which is hereby incorporated by reference. Portable wood ladders placed in service on or before January 7, 2011, shall meet the design and construction requirements of the ANSI A14.1 standard in effect at the time such ladders were placed in service.

Exception: Portable job-made cleat ladders that are designed and constructed in accordance with the requirements of Section 1676 of the Construction Safety Orders.

(2) Portable metal ladders placed in service after January 7, 2011, shall meet the design and construction requirements of ANSI A14.2-2007, American National Standard for Ladders-Portable Metal-Safety Requirements, which is hereby incorporated by reference. Portable metal ladders placed in service on or before January 7, 2011, shall meet the design and construction requirements of either the ANSI A14.2 standard or the ANSI A14.10 standard, American National Standard for Ladders-Portable Special Duty Ladders, in effect at the time such ladders were placed in service.

(3) Portable reinforced plastic ladders placed in service after January 7, 2011, shall meet the design and construction requirements of ANSI A14.5-2007, American National Standard for Ladders-Portable Reinforced Plastic-Safety Requirements, which is hereby incorporated by reference. Portable reinforced plastic ladders placed in service on or before January 7, 2011, shall meet the design and construction requirements of either the ANSI A14.5 standard or the ANSI A14.10 standard in effect at the time such ladders were placed in service.

(4) Portable special purpose ladders that are not covered by one of the ANSI A14 standards referenced in this section shall be designed and constructed in accordance with sound engineering principles and approved per Section 3206.

(5) Ladder type step stools shall be designed and constructed such that the rungs, cleats, and steps are not less than 8 inches apart, or more than 12 inches apart, as measured between center lines of the rungs, cleats, and steps.

(d)

(1) Ladders shall be selected and their use restricted to the purpose for which the ladder is designed.

(A) Scaffolds or other worker positioning equipment shall be used when work cannot be safely done from ladders.

(B) Portable ladders are generally designed for one-person use to meet the requirements of the person, the task, and the environment. When selecting a ladder for use, consideration shall be given to the ladder length or height required, the working load, the duty rating, worker position to the task to be performed, and the frequency of use to which the ladder will be subjected.

NOTE: Subsection (e) (16) (D) prohibits the use of ladders that exceed specified maximum lengths.

(2) Ladders shall be used according to the following duty classifications:

Duty Rating	Ladder Type	Working Load (Pounds)
Special Duty	IAA	375
Extra Heavy-Duty	IA	300
Heavy-Duty	I	250
Medium-Duty	II	225
Light-Duty	III	200

(3) Ladders used in connection with ladder jack scaffolds shall be Type I, IA, or IAA duty rated ladders and shall be installed and used in accordance with the Construction Safety Orders, Section 1648.

(4) Ladders used in connection with outdoor advertising structures shall be Type I, IA, or IAA duty rated and shall be used in accordance with Section 3413.

(e) Care, Use, Inspection and Maintenance of Ladders.

(1) Maintenance. Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play. Metal ladders shall not be exposed to acid or alkali materials that are capable of corroding the ladder and reducing the ladder's strength, unless employer obtains and follows the recommendations of the ladder manufacturer or a qualified person regarding exposure to corrosive materials.

(2) Inspection. Ladders shall be inspected by a qualified person for visible defects frequently and after any occurrence that could affect their safe use.

(3) Damaged Ladders. Ladders that have developed defects shall be withdrawn from service for repair or destruction; and tagged or marked as "Dangerous, Do Not Use" or with similar language. Ladders with broken or missing steps, rungs, cleats, safety feet, side rails, or other defects shall not be used.

(4) Cleaning. Ladders shall be free of oil, grease, or slippery materials.

(5) Surface Coatings.

Wood ladders shall not be painted with other than transparent material.

(6) Loading. Portable ladders shall not be overloaded when used.

(7) Footing Support. The ladder base section of surface supported ladders shall be placed on a secure and level footing. When necessary, ladder levelers shall be used to achieve equal rail support on uneven surfaces. Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height. Ladders shall not be used on ice, snow or slippery surfaces unless suitable means to prevent slippage have been employed.

(8) Top Support. The top of non-self-supporting ladders such as single extension ladders shall be placed with the two rails supported equally, unless a single support attachment is provided and used.

The top rest for portable rung and cleat ladders shall be reasonably rigid and shall have ample strength to support the applied load.

(9) Angle of Inclination. Non-self-supporting ladders such as single ladders and extension ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot ant the top support), The ladder shall be so placed as to prevent slipping, or it shall be tied, blocked, held, or otherwise secured to prevent slipping. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds unless designed for such use.

(10) Access to Elevated Work Areas. Except when portable ladders are used to gain access to fixed ladders (such as those on utility towers, billboards, and other structures where the bottom of the fixed ladder is elevated to limit access), when two or more separate ladders are used to reach an elevated work area, the ladders shall be offset with a platform or landing between the ladders.

(11) Access to Landings. When portable ladders are used for access to an upper landing surface, the side rails shall extend not less than 36 inches above the upper landing surface to which the ladder is used to gain access; or when such and extension is not possible, then the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grab-rail, shall be provided to assist employees in mounting and dismounting the ladder. In no case shall the extension be such that ladder deflection under a load would, by itself cause the ladder to slip off its support.

EXCEPTION No.1: A grasping device such as a grab-rail is not required where the employee is protected by personal fall protection system in accordance with Article 24 of the Construction Safety Orders, Article 36 of the High-Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders. Operations or conditions not specifically covered by Article 36 of the High-Voltage

Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders shall comply with the fall protection provisions of Article 24 of the Construction Safety Orders.

EXCEPTION No.2: The provisions of this subsection do not apply to emergency rescue and emergency rescue training operations where it is not practical to extend a portable ladder 36 inches or more above the landing surface.

(12) Fastening Together. Ladders shall not be tied or fastened together to provide longer sections unless the ladders are designed for such use and equipped with the necessary hardware fittings.

(13) Erection of Extension Ladders. Extension ladders shall always be erected to that the top section (fly section) is above the resting on the bottom section (base section) with the rung lucks engaged.

(14) Ladder Placement. Ladders shall not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any other work, unless protected by barricades or guards.

(15) Climbing and Working on Ladders.

(A) The employee shall climb or work with the body near the middle of the step or rung and shall not overreach from this position. When necessary to avoid overreaching, the employee shall descend and reposition the ladder. When it is not practical to work with the body near the middle of the step or rung, the ladder shall be secured to the top support, and the employee shall be protected by a personal fall protection system in accordance with Article 36 of the High-Voltage Electrical Safety Orders, Article 24 of the Construction Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders. Operations or conditions not specifically covered by Article 36 of the High-Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders shall comply with the fall protection provisions of Article 24 of the Construction Safety Orders.

(B) Employees shall be prohibited from carrying equipment or materials which prevent the safe use of ladders.

(C) When ascending or descending a ladder, the user shall face the ladder and maintain contact with the ladder at three-points at all times.

NOTE: Contact with the ladder at three points means two feet and one hand, or two hands and one foot which is safely supporting the user's weight.

(D) An employee shall not be permitted to stand and work on the top 3 rungs of a single or extension ladder unless there are members of the structure that provide a firm handhold or the employee is protected by a personal fall protection system in accordance Article 24 of the Construction Safety Orders, Article 36 of the High-Voltage Electrical Safety

Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders.

(E) Employees shall not stand on the topcap or the step below the topcap of a step ladder.

(F) Cross-bracing on the rear section of step ladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.

(G) Ladders shall not be moved, shifted, or extended while occupied, unless the ladder is designed and recommended for this purpose by the manufacturer.

(16) Prohibited Uses.

(A) Ladders shall not be used as a brace, skid, guy or gin pole, gang-way, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.

(B) Planks shall not be used on the top step or topcap of step ladders.

(C) Step ladders shall not be used as single ladders or in the partially closed position.

(D) Ladders that exceed the following maximum lengths shall not be used:

Ladder Type	Maximum Length (Feet)
Step Ladder	20
Two-section extension ladder (wood)	60
Two-section extension ladder (metal)	48
Three-section extension ladder (metal)	60
Two-section extension ladder (reinforced plastic)	72
Trestle ladder	20
Extension trestle ladder base section	20
Extension trestle ladder extension section	20
Painter's step ladder	12
Mason's ladder	40
Cleat ladder	30
Trolley ladder or side-rolling ladder	20
Single ladder	30

(E) Two section extension ladders shall not be used when the overlap between the sections is less that the following minimum overlap:

Ladder Size (Feet)	Minimum Overlap (Inches)
Up to and including 32	36
Over 32, up to and including 35	46
Over 36, up to and including 48	58
Over 48, up to and including 60	70

(17) Portable rung ladders with reinforced rails shall be used only with the metal reinforcement on the under side.

(18) Electrical Hazards. Non-conductive ladders shall be used in locations where the ladder or user may contact unprotected energized electrical conductors or equipment. Conductive ladders shall be legibly marked with signs reading "CAUTION-Do Not Use Around Electrical Equipment", or equivalent wording.

NOTE: Additional requirements for working in proximity to energized electrical equipment can be found in Article 37 of the Electrical Safety Orders.

(19) The area around the top and bottom of a ladder shall be kept clear.

(f) Employee Training. Before an employee uses a ladder, the employee must be familiar with or ask the Company Administrator for training in the safe use of ladders, unless the employer can demonstrate that the employee is already trained in ladder safety as required by this subsection. Supervisors of employees who routinely use ladders shall also be provided ladder safety training, unless the employer can demonstrate that the supervisor is already trained in ladder safety as required by this subsection. The training may be provided as part of the employer's Injury and Illness Prevention Program required by Section3203. The training shall address the following topics, unless the employer can demonstrate a topic is not applicable to the safe use of ladders in the employer's workplace.

(1) Importance of using ladders safely, including: frequency and severity of injuries related to falls from ladders.

(2) Selection, including: types of ladders, proper length, maximum working loads, and electrical hazards.

(3) Maintenance, inspection, and removal of damaged ladders from service.

(4) Erecting ladders, including: footing support, top support, securing, and angle of inclination.

(5) Climbing and working on ladders, including: user's position and points of contact with the ladder.

(6) Factors contributing to falls, including: haste, sudden movement, lack of attention, footwear, and user's physical condition.

(7) Prohibited uses, including: uses other than designed, climbing on cross bracing, maximum lengths, and minimum overlap of extension ladder sections.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Electrical Safety & Lock-out/Tag-out Program

Contact with electricity is the second leading cause of fatalities in the construction industry. The Company has developed the following procedures to protect our employees and reduce the risk of accidents. We will also conduct a periodic review of electrical safety, energy control procedures, and lock-out/tag-out, at least annually, to ensure that the procedure and the requirements of this section are being followed.

This procedure is binding upon all employees. All employees will be instructed in the significance of electrical safety, energy control procedures, and lock-out/tag-out. Each new employee shall be instructed by their Supervisor in the purpose and use of these procedures.

<u>All Equipment and Installations</u>

1. Only trained, qualified, and authorized employees will be allowed to make electrical repairs or work on electrical equipment or installations.

2. All electrical equipment and systems shall be treated as energized until tested or otherwise proven to be de-energized.

3. All energized equipment and installations will be de-energized prior to the commencement of any work. If the equipment or installation must be energized for test or other purposes, special precautions will be taken to protect against the hazards of electric shock.

4. All equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device bearing a lock.

5. Safety grounds shall always be used where there is a danger of shock from back feeding or other hazards.

6. Polyester clothing or other flammable types of clothing shall not be worn near electrical circuits. Cotton clothing is much less likely to ignite from arc blast. Employees working on live circuits shall be provided Nomex or equivalent fire resistant clothing.

7. Suitable eye protection must be worn at all times while working on electrical equipment.

8. Always exercise caution when energizing electrical equipment or installations. Take steps to protect employees from arc blast and exploding equipment in the event of a fault.

9. All power tools will be grounded or double insulated. Tools with defective cords or wiring shall not be used.

10. Suitable temporary barriers or barricades shall be installed when access to open enclosures containing exposed energized equipment is not under the control of an authorized person.

11. Metal jewelry should not be worn around energized circuits.

12. Extension and temporary power cords must be heavy duty and grounded. Frayed or defective cords shall not be used.

13. Suitable temporary barriers or barricades shall be installed when access to opened enclosures containing exposed energized equipment is not under the control of an authorized person.

14. Electrical installations must be protected from accidental contact by enclosures or tight fitting covers.

15. GFCI's are required on all power outlets.

16. Circuits shall not be overloaded with equipment or extension cords.

17. Metal measuring tapes, fish tapes, ropes or other metal devices are prohibited where they may contact energized parts of equipment or circuits.

Ground Fault Protection

To protect employees on construction sites from electric shock, Company will use ground-fault circuit interrupters on all 120-volt, AC, single-phase, 15- and 20- ampere receptacle outlets, which are not a part of the permanent wiring of the building or structure. Receptacles on a two-wire, single-phase portable or vehicle-mounted generator rated not more than 5 kw, where the circuit conductors of the generator are insulated from the generator frame and all their grounded surfaces, need not be protected with ground-fault circuit interrupters.

Feeders supplying 15- and 20- ampere receptacle branch circuits shall be permitted to be protected by a ground-fault circuit interrupter approved for the purpose in lieu of the above provisions.

Testing Equipment During Lock-out

In many maintenance and repair operations, machinery may need to be tested, and for that purpose energized, before additional maintenance work can be performed. This procedure must be followed:

1. Clear all personnel to safety.

2. Clear away tools and materials from equipment.

3. Remove lock-out devices and re-energize systems, following the established safe procedure.

4. Proceed with tryout or test.

5. Neutralize all energy sources once again, purge all systems, and lockout prior to continuing work.

Equipment design and performance limitations may dictate that effective alternative worker protection be provided when the established lock-out procedure is not feasible.

Energized Equipment or Systems

Work shall not be performed on exposed energized parts of equipment or systems until the following conditions are met:

1. Responsible supervision has determined that the work is to be performed while the equipment or systems are energized.

2. Involved personnel have received instructions on the work techniques and hazards involved in working on energized equipment and appropriate equipment to perform the job has been provided.

3. Suitable personal protective equipment has been provided and is used. Suitable insulated gloves shall be worn for voltages in excess of 300 volts, nominal.

4. Suitable eye protection, including face shield and safety glasses or goggles, has been provided and are used.

5. Fire resistant clothing such as Nomex suits are worn.

6. Where required, suitable barriers, barricades, tags, or signs are in place for personnel protection.

After the required work on an energized system or equipment has been completed, and authorized person shall be responsible for:

1. Removing from the work are any personnel and protective equipment.

2. Reinstalling all permanent barriers or covers.

De-energized Equipment or Systems

A qualified person shall be responsible for completing the following **before** working on de-energized electrical equipment or systems, unless the equipment is physically removed from the wiring system:

1. Notifying all involved personnel.

2. Locking the disconnecting means in the "open" position with the use of lockable devices, such as padlocks, combination locks, or disconnecting of the conductor(s) or other positive methods or procedures which will effectively prevent unexpected or inadvertent energizing of a designated circuit, equipment or appliance.

3. Tagging the disconnecting means with suitable accident prevention tags.

4. Effectively blocking the operation or dissipating the energy of all stored energy devices which present a hazard, such as capacitors or pneumatic, spring-loaded and like mechanisms. This may require the installation of safety grounds.

5. Testing the equipment to ensure it is de-energized.

Accident Prevention Tags

Suitable accident prevention tags shall be used to control a specific hazard. Such tags shall provide the following minimum information:

1. Reason for placing tag.

2. Name of person placing the tag and how that person may be contacted.

3. Date tag was placed.

Lock-out/Tag-out

Machinery or equipment capable of **movement** shall be stopped and the power source de-energized or disengaged, and locked out. If necessary, the moveable parts shall be mechanically blocked or secured to prevent inadvertent movement during cleaning, servicing, or adjusting operations unless the machinery or equipment must be capable of movement during this period in order to perform the specific task. If so, the hazard of movement shall be minimized.

Equipment or power driven machines equipped with lockable controls, or readily adaptable to lockable controls, shall be locked out or positively sealed in the "off" position during repair work and setting-up operations. In all cases, accident prevention signs and/or tags shall be placed on the controls of the equipment or machines during repair work.

The employee must ensure they have a sufficient number of accident prevention signs or tags and padlocks, seals, or other similarly effective means which may be required by any reasonably foreseeable repair. The following over all procedures must be adhered to:

1. All machinery and electrical equipment shall be locked out and tagged prior to repair, cleaning, or adjustment unless power is necessary to perform the work. If so, other precautions, specified by your foreman, will be taken.

2. Use your own lock and key. No one else should have a key for your lock. Destroy all duplicate keys.

3. Maintain control of your key at all times to prevent unauthorized use.

4. Never remove another employee's lock or energize tagged equipment.

5. If multiple employees are working on the same equipment, each employee should install their own lock.

6. Notify all affected employees that a lock-out/tag-out is required and the reasons for it.

7. If the equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).

8. Operate the switch, valve or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, etc.) is disconnected or isolated from the equipment.

9. Stored energy, such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, or water pressure, etc. must also be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.

10. Lock-out all energy isolation devices with an individual lock.

11. After ensuring that no employees are exposed and as a check of having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. **Caution: Return operating control to neutral position after the test.**

12. The equipment is now locked-out. Install red lock-out tag on operating controls.

13. After repair is complete and the equipment is ready for testing or normal operation, check the equipment to see that all cover plates and safety devices have been reinstalled.

14. When the equipment is clear, remove all locks and tags. The energy isolating devices may be operated to restore energy to the equipment.

Procedure Involving More Than One Person

If more than one individual is required to lock out equipment, each shall place his/her own personal lock on the energy isolating device(s). One designated individual of a work crew or a supervisor, with the knowledge of the crew, may lock out equipment for the whole crew. In such cases, it may be the responsibility of the individual to carry out all steps of the lock-out procedure and inform the crew when it is safe to work on the equipment. Additionally, the designated individual shall not remove a crew lock until it has been verified that all individuals are clear.

Restoring Equipment to Service

1. Remove all non-essential items.

2. See that all equipment components are operationally intact, including guards and safety devices. Repair or replace defective guards before removing lock-outs.

3. Remove each lock-out device using the correct removal sequence.

4. Make a visual check before restoring energy to ensure that everyone is physically clear of the equipment.

Fleet & Driving Safety

Motor vehicle accidents are the third leading cause of fatalities in the construction industry. The Company has established the following guidelines and procedures for our drivers and vehicles to protect the safety of individuals operating any motor vehicle on company business. Protecting our employee drivers, their passengers, and the public is of the highest priority. The commitment of management and employees is critical to the success of this program. Clear communication of, and strict adherence to, the program's guidelines and procedures are essential.

Our primary goal is to maintain a high level of safety awareness and foster responsible driving behavior. Driver safety awareness and responsible driving behavior will significantly decrease the frequency of motor vehicle accidents and reduce the severity of personal injuries and property damage.

Drivers must follow the requirements outlined in this program. Violations of this program may result in disciplinary action up to, and including, suspension of driving privileges or dismissal.

Our program consists of the following elements:

Driver selection
Driver training
Vehicle use policy
Vehicle inspection & preventive maintenance
Accident investigation

<u>Driver Selection</u>

Only company authorized and assigned employees are allowed to drive company vehicles at any time> Do not let anyone else drive your company vehicle. Prior to being authorized and assigned, the Company will check the following items. Drivers must have:

A valid un-restricted drivers license.
A current MVR driving record with no more than 2 points and no serious or major violations.

The Company will also check driving records of all employees authorized to drive on company business on an annual basis.

Employees that do not meet these requirements are not authorized or allowed to drive company vehicles or drive their own vehicle on company business.

Driver Training

All employees driving company vehicles, and personal vehicles on company business, will be given a copy of the Driving Safety Rules and Company Vehicle Use Policy and required to read and sign for them. Safe driving will also periodically covered at company safety meetings.

Motor vehicle accidents continue to be the leading cause of workplace death in the nation. In 1995 alone, 1,329 workers were killed on the job, in auto accidents. That's one employee death every 7 hours of every day.

Motor vehicle accidents are:

The leading cause of death at work.
The leading cause of death for people age 15-24.
The second most common cause of death for people age 25-44.
The third most common cause of death for people age 45-64.
The fifth most common cause of death for all ages behind heart disease, cancer, stroke, and lung disease.

*Source: 1995 statistics from the National and Everest Indemnity Institute of Occupational Safety and Health (NIOSH) and the Bureau of Labor Statistics (BLS).

Fortunately, auto accidents are often preventable. By driving defensively and using good judgment, you can significantly reduce your chances of being hurt or killed in a motor vehicle. The following defensive driving tips are designed to help you avoid accidents and injuries from your fleet operations.

These rules are mandatory for all employees driving Company vehicles.

1. Personal and off duty use of Company vehicles is prohibited.

2. Only authorized employees may drive the Company vehicles. No other family members may drive company vehicles.

3. Non-employee passengers are not permitted in Company vehicles at any time unless they are business related.

4. Seat belts must be worn in Company vehicles at all times.

5. No employee is permitted to drive Company vehicles while impaired by alcohol, illegal or prescription drugs, or over the counter medications.

6. All accidents involving Company vehicles must be reported to the office immediately.

7. Employees with two or more preventable accidents in a three year period, or that obtain three points on their driving record, will subject to a loss of their driving privileges or have their driving privileges restricted.

8. The single biggest thing you can do to save your life is wear your seat belt. Hundreds of studies over the years have proven, without a doubt, that seat belts save lives. This is true even in crashes involving fire and water submersion. Properly worn seat belts actually absorb crash forces which, otherwise, would be transferred to your body. If the seat belts in your vehicle are inoperative or defective, have them repaired or replaced immediately. You should wear the lap belt low across you hips and have the shoulder strap directly across your chest. You also need to keep the belt tight. There should not be more than and inch between your body and the belt at any point.

9. Get the big picture while driving. Keep your eyes aimed high and try to anticipate hazards and other drivers' mistakes. You should be looking well ahead of where you are. You should also always leave yourself an out in case the other driver does the unexpected.

10. Maintain a safe following distance at all times. Approximately 1/3 of all auto accidents are rear end collisions. You should be at least two seconds behind the vehicle in front of you to allow yourself sufficient time to stop. Do not tailgate. Following distances should be increased for larger vehicles or if in slippery or rainy conditions.

11. Avoid passing on two lane roads. Head on collisions are the most common cause of fatalities. You should also turn on your headlights while driving on two lane roads. This helps oncoming traffic see and avoid you. Never pass another vehicle on blind turns or hills.

12. You must be sober and alert at all times while driving. The use of drugs or alcohol while driving, or prior to driving, significantly increases your chances of having an accident. It should be at least eight hours from the time you take a drink until operating a vehicle. You should also avoid the use of prescription or over the counter medicines that make you drowsy.

13. Inspect the vehicle for mechanical defects prior to each trip. Test your brakes as soon as you start out to insure they are properly operating. Worn tires can make your vehicle difficult to control or stop.

14. Avoid dialing the phone, reading maps, or other distracting activities while driving. These actions take your eyes off the road and often cause you to swerve. Pull over into a safe parking area before making that call.

15. Never drive faster than road conditions warrant. Slow down when road conditions are poor (rain, fog, night) and never exceed posted speed limits.

16. Always signal when changing lanes or turning.

17. Use caution when passing any stopped vehicle, especially near intersections or cross walks.

18. Aggressive driving has become a significant problem in the past few years. Just don't do it. Avoid tailgating, rapid lane changes, speeding, and hand gestures to bad drivers. You never know, they may be armed. If you are being tailgated, change lanes and let them pass. It's really not worth getting killed over.

19. Intersection collisions are also a significant problem. These are often caused by someone running the red light. You should always be under control when approaching an intersection and be prepared to stop if the light changes.

20. Slow down and look for trains at all railroad crossings. Even with modern signals and gates, hundreds of cars are hit by trains each year at grade crossings.

21. Use your low beams while driving in fog and slow down. If you can't see, pull over into a safe parking area and wait for better visibility. Do not stop in the traffic lanes. You will almost certainly be hit by another vehicle if you do.

22. Always walk behind the vehicle before backing. This will insure that there are no people or objects behind you that you cannot see from the driver's seat. You should also make sure that all loads are properly secured to prevent them from moving. Numerous accidents are caused by objects that have fallen off company vehicles.

23. Always signal well in advance when changing lanes or turning, and make sure to check your blind spot for other vehicles. Also, avoid driving in someone else's blind spot. If they can't see you, they don't know you are there.

24. Yield the right of way until you are sure the other driver is going to stop. Just because you have the legal right of way doesn't mean you should always take it. Always yield the right of way to emergency vehicles.

Defensive drivers:

Expect the unexpected
Anticipate bad driving by others
Look ahead for hazards
Always leave themselves an out
Always drive under control
Obey the rules of the road

<u>Vehicle Inspection & Preventive Maintenance</u>

All Company vehicles must be inspected by the driver prior to each use. Mechanical defects will be repaired immediately. The Company Administrator and Supervisor will periodically spot check company vehicles to determine their condition.

Vehicle inspections will include:

Lights
Turn signals
Emergency flashers
Tires
Horn
Brakes
Fluids
Windshield condition and wiper condition
Mirrors

All vehicles will also be maintained in accordance with the manufacturers' recommendations. It is the responsibility of the individual assigned the vehicle to ensure proper maintenance and repairs are performed. If your vehicle is not safe, do not drive.

Accident Investigation

All accidents in Company vehicles will be investigated by the Supervisor and Company Administrator. Where possible, witnesses' statements will be obtained and photos used to document the scene of the accident and the damage. Police reports will also be obtained whenever possible. The following guidelines will be used to help determine preventability.

Auto Accident Preventability Guide

This guide will assist in determining whether our driver could have prevented the accident. An accident is preventable if the driver could have done something to avoid it. Drivers are expected to drive defensively. Which driver was primarily at fault, who received a traffic citation, or whether a claim was paid has no bearing on preventability. If there was anything our driver could have done to avoid the collision, then the accident was preventable.

An accident was non-preventable when the vehicle was legally and properly parked, or when properly stopped because of a highway patrol officer, a signal, stop sign, or traffic condition. When judging accident preventability, here are some general questions to consider:

1. Does the investigation indicate that the driver considers the rights of others, or is there evidence of poor driving habits which need to be changed?

2. Does the investigation indicate driver awareness? Such phrases as "I did not see," "I didn't think," "I didn't expect," or "I thought" are signals indicating there probably was a lack of awareness, and the accident was preventable. An aware driver should think, expect, and see hazardous situations in time to avoid collisions.

3. Was the driver under any physical stresses which could have been contributory? Did the accident happen near the end of a long day or long drive? Did overeating contribute to fatigue? Did the driver get prior sufficient sleep? Is the driver's vision faulty? Was the driver feeling ill?

4. Was the vehicle defective without the driver's knowledge? Was a pre-trip inspection done, and would it have discovered the defect? A car which pulls to the left or right when the driver applies the brakes, faulty windshield wipers, and similar items are excuses, and a driver using them is trying to evade responsibility. Sudden brake failure, loss of steering, or a blowout might be defects beyond the driver's ability to predict. However, pre-trip inspections and regularly scheduled maintenance should prevent most of these problems. If either of these are the cause of the accident, then the accident was probably preventable by the driver.

5. Could the driver have exercised better judgment by taking an alternate route through less congested areas to reduce the hazardous situations encountered?

6. Could the driver have done anything to avoid the accident?

7. Was the driver's speed safe for conditions?

8. Did the driver obey all traffic signals?

9. Was the driver under control?

Intersection Collisions

Failure of our driver to yield the right-of-way, regardless of who has the right of way, as indicated by stop signs or lights, is preventable. The only exception to this is when the driver is properly proceeding through an intersection protected by lights or stop signs and the driver's vehicle is struck in the extreme rear side of the vehicle. Regardless of stop signs, stop lights, or right-of-way, a defensive driver recognizes that the right-of-way belongs to anyone who assumes it and should yield accordingly.

Questions to consider:

1. Did the driver approach the intersection at a speed safe for conditions?
2. Was the driver prepared to stop before entering the intersection?
3. At a blind corner, did the driver pull out slowly, ready to apply the brakes?
4. Did the driver look both ways before proceeding through the intersection?

Sideswipes

Sideswipes are often preventable. Defensive drivers do not get into a position where they can be forced into another vehicle or another vehicle can be forced into them. Defensive drivers continuously check for escape routes to avoid sideswipes. For a two lane road, this means a driver should pass another vehicle only when absolutely certain that he or she can safely complete the pass. A driver should also be ready to slow down and let a passing vehicle that has failed to judge safe passing distance back into the lane. A driver should make no sudden moves that may force another vehicle to swerve. If a driver sideswipes a stationary object while taking evasive action to avoid striking another car or a pedestrian, such and accident may not be preventable. However, you should consider what the driver could have done or failed to do immediately preceding the evasive action to be in the position of no other options.

A driver is also expected to anticipate the actions of an oncoming vehicle. Sideswiping an oncoming vehicle is often preventable. Again, evasive action, including leaving the roadway, may be necessary if an oncoming vehicle crosses into the driver's lane. Drivers are expected to allow merging vehicles to merge smoothly with them, and to merge smoothly on controlled access highways. Drivers are expected to be able to gauge distances properly when leaving a parking place and enter traffic smoothly.

Questions to consider:

1. Did the driver look to front and rear for approaching and overtaking traffic immediately before starting to pull away from the curb?
2. Did the driver signal before pulling away from the curb?
3. Did the driver look back rather than depend only upon rear-view mirrors?
4. Did the driver start into traffic only when this action would not require traffic to change its speed or direction in order to avoid his or her vehicle?

Head-on Collisions

A head-on collision with a vehicle traveling in the wrong lane may be preventable if the driver could have pulled off the road or taken other evasive action to prevent a collision. However, the driver should never drive into the other lane to avoid the oncoming vehicle. If the driver swerved off the road to avoid a head-on collision, the accident is non-preventable. The driver in this case made a good defensive driving decision, taking the lesser of two evils.

Many skidding conditions are caused by rain, freezing rain, fog, and snow, which all increase the hazard of travel. Oily road film, which builds up during a period of good weather, causes an especially treacherous condition during the first minutes of a rainfall. Loss traction can be anticipated, and these accidents usually are preventable. Driving too fast for conditions is the most common reason why these types of accidents are preventable.

Questions to consider:

1. Was the driver operating at a safe speed considering weather and road conditions?

2. During inclement weather, was the driver keeping at least twice the safe following distance used for dry pavement?

3. Were all actions gradual?

4. Was the driver anticipating ice on bridges, in gutters, ruts, and near the curb?

5. Was the driver alert for water, ice or snow in shaded areas, loose gravel, sand, ruts, etc.

If a driver goes off the road or strikes another vehicle because of skidding, the accident is preventable.

Pedestrian Accidents

All types of pedestrian accidents, including collisions with pedestrians coming from between parked cars, are usually considered preventable. There are few instances where the action of pedestrians is so unreasonable that the operator could not be expected to anticipate such an occurrence.

Questions to consider:

1. Did the driver go through congested areas expecting that pedestrians would step in front of the vehicle?
2. Was the driver prepared to stop?
3. Did the driver keep as much clearance between his or her vehicle and parked vehicles, as safety permitted?
4. Did the driver stop when other vehicles has stopped to allow pedestrian to cross?
5. Did the driver wait for the green light or stop for the caution light?
6. Was the driver aware of children and prepared to stop if one ran into the street?
7. Did the driver give all pedestrians the right-of-way?
8. Did the driver stop for a school bus which was stopped and properly signaling that passengers were loading or unloading?

Backing Accidents

Backing a vehicle into another vehicle, and overhead obstruction, or a stationary object are normally preventable. The fact that someone was directing the driver in backing does not relieve the driver of the responsibility to back safely.

Questions to consider:

1. Was it necessary to back?
2. Did the driver plan ahead so that he or she could have pulled forward out of the parking space instead of backing?
3. Was it necessary to drive into the narrow street, dead-end alley, or driveway from which he or she backed?
4. If the driver could not see where he or she was backing: Did the driver try to get someone to guide him or her?
5. Did the driver look all around the vehicle before backing? Did the driver back immediately after looking?
6. Did the driver use the horn while backing? Were the back-up lights working?
7. Did the driver look to the rear without relying totally on the rear-view mirror?
8. If the distance was long, did the driver stop, get out, and look around occasionally?
9. Did the driver back slowly?
10. Did the driver judge clearances accurately?

Parking Accidents

Doors on our driver's parked vehicle that are damaged when opened on the traffic side are considered preventable accidents. The driver is responsible to see that the traffic side is clear of traffic, before any doors on that side are opened.

In most cases, if our driver, while driving, strikes a parked vehicle's opening door it is considered preventable. Usually our driver can see from a sufficient distance that the parked vehicle is occupied, and should therefore, be prepared to stop, should move closer to the center line or change lanes.

It is a driver's responsibility to park the vehicle so that it will remain stationary. A runaway type accident is preventable and blaming such a collision on a defective parking brakes or other holding devices are inadequate excuses. A good pre-trip inspection, and maintenance program will eliminate most opportunities for this type of accident being the result of mechanical failure.

Accidents occurring when vehicles are properly and legally parked are considered non-preventable. Accidents occurring while the vehicle was double parked or in a "No Parking" zone are preventable.

Questions to consider:

1. Was the vehicle parked on the proper side of the road?
2. Was it necessary to park there or was there a safer, only slightly less convenient place nearby?
3. Did the driver have to park on the traveled part of the highway, on the curve, or on the hill?
4. When required, did the driver warn traffic by emergency warning devices?
5. Did the driver park parallel to the curb?
6. Was it necessary to park so close to an alley or directly across from a driveway?

Collision With Obstructions

Obstructions can be avoided if the driver knows the height and width of the vehicle, pays attention to posted clearances, and takes the time to properly judge clearances.

Cargo Accidents

The accident should be considered preventable if the investigation shows a mechanical defect of which the driver was aware of, a defect the driver should have found by inspecting the vehicle, or the driver caused the accident by rough and abusive handling. It is a driver's responsibility to secure cargo properly to prevent shifting, loss, or damage. Cargo should be safely stowed to prevent flying objects that can strike or distract the driver.

Trenching and Excavation

Our construction activities occasionally require our employees to work in trenches and excavations. Each year in California, four construction workers die in trench cave-ins. To prevent this from occurring, the following precautions are mandatory when the Company employees work in trenches or excavations that are 5 feet deep or greater. They are also required in trenches less than 5 feet deep if the soil appears unstable. These precautions apply even if we did not dig the trench.

General Precautions

1. All trenching and excavation activities will be conducted in accordance with Cal/OSHA regulations.

2. All trenching and excavation work or entry will be supervised by a competent person with the skills, training, and experience to recognize hazards and implement corrective action.

3. All trenches and excavations 5 feet deep or greater will be protected from cave-ins by sloping, shoring, or benching.

4. No employee is permitted to work in any trench or excavation that is not safe. Work will stop until the hazard is corrected.

5. All trenches and excavations will be inspected prior to the start of work and at least daily by the competent person.

6. Suitable access and egress will be maintained at all times.

7. All excavations and trenches 5 feet deep or greater must be shored, sloped, or benched to protect workers from the hazards of moving earth. All trenching must be done in accordance with Cal/OSHA regulations.

8. Always locate underground utilities before digging. Also contact regional notification centers in advance.

9. Do not work under loads handled by lifting or digging equipment.

10. Ladders shall be provided for access to trenches and excavations 4 feet deep or greater. Use them.

11. Keep all spoils 2 feet from the edge.

12. Barricade trenches or use caution tape to warn others of their presence.

13. Inspect all trenches and excavations daily, before work, to look for signs of shifting earth.

14. Do not jump over trenches, use wood planks or sheeting.

Prior to Digging

1. A trenching and excavation permit will be obtained from Cal/OSHA.
2. The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation.
3. All Regional Notification Centers in the area involved and all known owners of underground facilities in the area who are not members of a Notification Center shall be advised of the proposed work at least 2 working days prior to the start of any digging or excavation work.
   EXCEPTION: Emergency repair work to underground facilities.

While Digging

1. When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.

2. Contact with live electrical lines and gas mains can cause death or serious injury. Extra care should be taken in these areas. If you are unsure, ask your foreman, supervisors, or contact the Company Administrator at 800-366-1141.

3. While the excavation is open, underground installations shall be protected, supported, or removed as necessary to safeguard employees.

4. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

5. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

6. Sidewalks, pavements and appurtenant structures shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.

7. No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.

8. Adequate barriers or physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and other similar operations, temporary wells, pits, shafts, etc., shall be back filled.

Open Trenches and Excavations

1. Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rain storm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.

2. Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

3. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet or more in depth so as to require no more than 25 feet of lateral travel for employees.

4. Where employees or equipment are required or permitted to cross over excavations over 6 feet and wider than 30 inches, walkways or bridges with standard guardrails shall be provided.

5. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

6. Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection.

7. Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

8. Where oxygen deficiency (atmospheres containing less than 19.5 % oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmosphere in the excavation shall be tested before employees enter excavations greater than 4 feet in depth.

9. Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5% oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation.

10. Adequate precautions shall be taken, such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of a flammable gas in excess of 20% of the lower flammable limit of the gas.

11. When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.

12. Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use.

13. Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.

14. If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation.

15. If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person.

Confined Space Operations

Occasionally in our work, we may encounter confined spaces. This is particularly true of our service department. Confined space work required special safety precautions to ensure that employees are not overcome by dangerous air contaminants or oxygen deficiency. In some cases, there may be fire or explosion hazards in confined spaces that do not exist in open areas. Many workers have been killed or seriously injured in confined spaces. To avoid this, the Company employees must adhere to the following rules. This section prescribes **minimum** standards for preventing employee exposure to dangerous air contamination and/or oxygen deficiency in confined spaces. In some cases, extra precautions may be necessary. As always, if you are unsure, ask for assistance.

Definitions

A **confined space** has the following properties:

1. Existing ventilation is insufficient to remove dangerous air contamination and/or oxygen deficiency which may exist or develop.

2. Ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s).

3. The area is not designed for continuous human occupancy.

Dangerous air contamination means an atmosphere presenting a threat of causing death, injury, acute illness, or disablement due to the presence of flammable and/or explosive, toxic, or otherwise injurious or incapacitating substances.

Dangerous air contamination due to the **flammability** of a gas or vapor is defined as an atmosphere containing the gas or vapor at a concentration greater than 20% of its lower explosive (lower flammable) limit.

Dangerous air contamination due to a **combustible particulate** is defined as a concentration greater than 20% of the minimum explosive concentration of the particulate.

Dangerous air contamination due to the **toxicity** of a substance is defined as the atmospheric concentration immediately hazardous to life or health. This definition of dangerous air contamination due to the toxicity of a substance does not preclude the requirement to control harmful exposures to toxic substances at concentrations less than those immediately hazardous to life or health.

Oxygen deficiency. An atmosphere containing oxygen at a concentration of less than 19.5% by volume.

Oxygen rich. An atmosphere containing oxygen at a concentration of more thatn 22% by volume. This creates additional fire hazards.

Typical Confined Spaces:

Vaults
Pits
Tubs
Vats
Ducts
Boilers
Silos
Sewers
Compartments

Prior to Confined Space Entry:

1. Written, understandable operating and rescue procedures shall be developed and shall be provided to affected employees. The operating procedures shall include provision for the surveillance of the surrounding area to avoid hazards such as drifting vapors from tanks, piping and sewers.

2. All employees, including standby persons if needed, will be trained in the operating and rescue procedures, including instructions as to the hazards they may encounter.

3. Any lines, pipes or hoses which may convey flammable, injurious, or incapacitating substances into the space shall be disconnected, blinded, or blocked off by other positive means to prevent the development of dangerous air contamination and/or oxygen deficiency within the space. The disconnection or blind shall be so located or done in such a manner that inadvertent reconnection of the line or removal of the blind are effectively prevented.

4. The space shall be emptied, flushed, or otherwise purged of flammable, injurious or incapacitating substances to the extent feasible.

5. The air shall be tested with an appropriate device or method to determine whether dangerous air contamination and/or and oxygen deficiency exists and a written record of such testing results shall be made and kept at the work site for the duration of the work. Affected employees and/or their representative shall be afforded an opportunity to review and record the testing results.

6. Where interconnected spaces are blinded off as a unit, each space shall be tested and the results recorded. The most hazardous condition found shall govern the entry procedures to be followed.

Confined Spaces Where Dangerous Air Contamination Cannot be Removed by Ventilation

It is the policy of the Company to only work in a confined space if it can be made safe by the means listed above. We will not work in confined spaces where there is an ongoing hazard of air contamination or oxygen deficiency. These operations require extra measures and precautions beyond our immediate ability to perform. If such work does become necessary, a separate program will be developed.

Confined Space Entry if Tests Show No Hazard

If dangerous air contamination and/or oxygen deficiency does not exist within the space, as demonstrated by tests performed in accordance with the pre-entry procedures, entry into and work within the space may proceed subject to the following provisions:

1. Air testing, in accordance with the pre-entry procedures, shall be conducted with sufficient frequency to ensure that the development of dangerous air contamination and/or oxygen deficiency does not occur during the performance of any operation.

2. Work stops, employees exit, and additional precautions are taken if dangerous air contamination and/or oxygen deficiency does develop.

Confined Space Entry if Tests Show Hazards are Present or are Likely to Develop

Where the existence of dangerous air contamination and/or oxygen deficiency is demonstrated by tests performed in accordance with the pre-entry procedures or if the development of dangerous air contamination and/or an oxygen deficiency is imminent, the following requirements shall also apply:

1. Existing ventilation shall be augmented by appropriate means.

2. When additional ventilation has removed dangerous air contamination and/or oxygen deficiency as demonstrated by additional testing conducted (and recorded), entry into and work within the space may proceed.

3. No source of ignition shall be introduced until the implementation of appropriate provisions of this section have ensured that dangerous air contamination due to flammable and/or explosive substances does not exist.

4. Whenever oxygen-consuming equipment such as salamanders, plumbers' torches or furnaces, and the like, are to be used, measures shall be taken to ensure adequate combustion air and exhaust gas venting.

5. To the extent feasible, provision shall be made to permit ready entry and exit.

6. Where it is not feasible to provide for ready exit from spaces equipped with automatic fire suppression systems employing harmful design concentrations of toxic or oxygen-displacing gases, or total foam flooding, such systems shall be deactivated. Where it is not practical or safe to deactivate such systems, the use of respiratory protective equipment, such as SCBA, shall apply during entry into and work within such spaces.

Respiratory Protection

Occasionally our work may necessitate the use of respirators to protect against air contaminants. Due to the limitations of respirators and their uncomfortable nature, the Company will make every effort to provide other means of protection, such as local exhaust ventilation, or substitution of less hazardous material, prior to requiring employees to wear them.

When it is clearly impractical to remove harmful dusts, fumes, mists, vapors, or gases at their source, or where emergency protection against occasional and/or relatively brief exposure is needed, Company will provide, and the employee exposed to such hazard shall use, approved respiratory equipment.

Whenever respirators are required to be used to control harmful exposures, only respiratory equipment approved for that purpose shall be used and such equipment shall be approved by the National and Everst Indemnity Institute for Occupational Safety and Health (NIOSH). Only parts approved for the specific respirator system shall be used for replacement.

General Respiratory Protection Guidelines:

1. Atmospheric contamination will be prevented wherever feasible through engineering controls such as enclosure of confinement of the operation, general and local exhaust ventilation, or substitution of less toxic materials. When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be use.

2. The Company shall identify and evaluate the respiratory hazard(s) in the workplace; this evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Where we cannot identify or reasonably estimate the employee exposure, the atmosphere shall be considered to be immediately dangerous to life or health (IDLH).

3. Respirators shall be provided when such equipment is necessary to protect the health of the employee.

4. Only NIOSH-certified respirators shall be used. The respirator shall be used in compliance with the conditions of its certification.

5. The company will provide respirators that are applicable and suitable for the purpose intended. We shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.

6. Respirators shall be selected from a sufficient number of respirator models, and sizes, to that the respirator is acceptable to, and correctly fits, the user.

7. The Company Administrator shall act as the Program Administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

8. The Company will provide respirators, training, and medical evaluations at no cost to the employee.

9. The Company will provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. We may discontinue and employee's medical evaluations when the employee is no longer required to use a respirator.

10. The Company will ensure that employees using a tight-fitting facepiece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT).

11. The Company will establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres.

12. We shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The Foreman or Supervisor shall ensure that respirators are cleaned and disinfected.

13. All filters, cartridges, and canisters used in the workplace must be legibly labeled and color coded with the NIOSH approval label that must not be removed.

14. Training and information will be provided to employees who are required to use respirators. The training will be comprehensive, understandable, and reoccur annually or more often if necessary.

15. The Company Administrator shall conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult with employees to ensure that they are using the respirators properly.

16. Written information regarding medical evaluations, fit testing, and the respirator program shall be retrained indefinitely. This information will facilitate employee involvement in the respirator program, assist us in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

17. Where respirator use is not required by a particular standard or hazard, the Company may provide respirators at the request of employees or permit employees to use their own respirators, if we determine that such respirator use will not in itself create a hazard. If voluntary respirator use is permissible, we shall provide the respirator users with the information contained in Appendix D of section 5144 8CCR. ("Information for Employees Using Respirators When Not Required Under the Standard).

Respirator Selection Requirement

The proper respirator for the job and hazard shall be selected. This selection will be made in accordance with Cal/OSHA or ANSI Z88.2-1980 standards. The correct respirator shall be specified for each job. The individual issuing them shall be adequately instructed to insure that the correct respirator is used.

The manufacturers' recommendations and literature will also be reviewed to determine if the respirator provides protection against the expected contaminants. For instance, dust masks do not provide protection against gasses or vapors.

The Company Administrator or another qualified individual shall review and approve all breathing air compressors and installations for compliance with appropriate OSHA regulations and safety procedures prior to use.

Respirators for IDLH atmospheres.

We shall provide the following respirators for employee use in IDLH atmospheres:

* A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
* A Combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
* Respirators provided only for escape from IDLH atmospheres shall NIOSH-certified for escape from the atmosphere i
* All oxygen-deficient atmospheres shall be considered IDLH.

Respirators for atmospheres that are not IDLH

The Company shall provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. The respirator selected shall be appropriate for the chemical state and physical form of the containment.

For protection against gases and vapors

***** An atmosphere-supplying respirator, or
* An air-purifying respirator, provided that the respirator is equipped with and end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or if there is no ESLI appropriate for conditions in the workplace, we will implement a change schedule for canisters and cartridges that are based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

For protection against particulates

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

Medical Evaluation Procedures

1. Employees shall not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work while using the required respiratory equipment.

2. The Company shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations.

3. The medical evaluation shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deem necessary to make a final determination.

4. Medical questionnaires and examinations shall be administered confidentially during the employee's normal working hour or at a time and place convenient to the employee.

5. The employee shall have an opportunity to discuss the examination results with the PLHCP.

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

    - The type and weight of the respirator to be used by the employee;
    - The duration and frequency of respirator use (including use for rescue and escape);
    - The expected physical work effort;
    - Additional protective clothing and equipment to be worn; and
    - Temperature and humidity extremes that may be encountered.

7. The Company shall provide the PLHCP with a copy of this written respiratory protection program and a copy of the OSHA regulations if they do not already have them.

8. In determining the employee's ability to use a respirator, the Company shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

    - Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
    - The need, if any, for follow-up medical evaluations; and
    - A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

9. If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, the Company shall provide a PAPR if the PLHCP's medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then we are no longer required to provide a PAPR.

10. The Company shall provide additional medical evaluations that comply with the requirements of this section if:

    - An employee reports medical signs or symptoms that are related to ability to use a respirator;
    - A PLHCP, supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated.
    - Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
    - A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Fit Testing

1. The Company shall ensure that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.

2. We shall conduct an additional fit test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

3. If after passing a QLFT or QNFT, the employee subsequently notifies the program administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator facepiece and to be retested.

4. The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol.

Usage Rules

1. The Company shall not permit respirators with tight-fitting facepieces to be worn by employees who have:

    - Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or
    - Any condition that interferes with the face-to-facepiece seal or valve function.

2. If an employee wears corrective glasses or goggles or other personal protective equipment, we shall ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

3. For all tight-fitting respirators, we shall ensure that employees perform a user seal check each time they put on the respirator.

4. Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, we shall reevaluate the continued effectiveness of the respirator.

5. Respiratory equipment shall not be passed on from one person to another until it has been cleaned and sanitized. Respirators individually assigned should be marked to indicate to whom it was assigned. This mark shall not affect the respirator performance in any way. The date of issuance should be recorded.

6. When not in use, respirators shall be stored to protect against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals. Plastic zip lock bags are suitable for storage.

7. The Company shall ensure that employees leave the respirator use are:

    - To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or
    - If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or
    - To replace the respirator or the filter, cartridge, or canister elements.

8. If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of facepiece, we will replace or repair the respirator before allowing the employee to return to the work area.

9. For all IDLH atmospheres, the Company shall ensure that:

    - One employee or, when needed, more than one employee is located outside the IDLH atmosphere;
    - Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;

- The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;
- The supervisor or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;
- The supervisor or designee authorized to do so by (Company Name), once notified, provides necessary assistance appropriate to the situation;
- Employee(s) located outside the IDLH atmospheres are equipped with pressure demand or other positive pressure SCBA's, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or equivalent means for rescue where retrieval equipment is not required.

Maintenance, Inspection and Care of Respirators

1. The employer shall ensure that respirators are cleaned and disinfected using procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness to OSHA regulations. The respirators shall be cleaned and disinfected at the following intervals:

    - Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition;
    - Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals;
    - Respirators maintained for emergency use shall be cleaned and disinfected after each use; and
    - Respirators used in fit testing and training shall be cleaned and disinfected after each use.

2. All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

3. Emergency respirators shall be:

    - Kept accessible to the work area;
    - Stored in compartments or in covers that are clearly marked as containing emergency respirators; and
    - Stored in accordance with any applicable manufacturer instructions.

4. All respirators used in routine situations shall be inspected before each use and during cleaning;

5. All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and

6. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

7. The Company shall ensure that respirator inspections include the following:

    - A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
    - A check of elastomeric parts for pliability and signs of deterioration.

8. In addition to the requirements above, self-contained breathing apparatus shall be inspected monthly.

9. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. The employer shall determine that the regulator and warning devices function properly.

10. For respirators maintained for emergency use, the Company shall:

    - Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and serial number or other means of identifying the inspected respirator; and
    - Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.

11. Repairs. The Company shall ensure that respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

    - Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
    - Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
    - Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or technician trained by the manufacturer.

Training

1. The Company shall ensure that each employee required to use a respirator can demonstrate knowledge of at least the following:

    - Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
    - What the limitations and capabilities of the respirator are;
    - How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
    - How to inspect, put on and remove, use, and check the seals of the respirator;
    - What the procedures are for maintenance and storage of the respirator;
    - How to recognize medial signs and symptoms that my limit or prevent the effective use of respirators; and

2. The training shall be conducted in a manner that is understandable to the employee.

3. The training shall be provided prior to requiring the employee to use a respirator in the workplace.

4. Retraining shall be administered abnnually, and when the following situations occur:

    - Changes in the workplace or the type of respirator render previous training obsolete;
    - Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
    - Any other situation arises in which retraining appears necessary to ensure safe respirator use.

5. The basic advirosy information on respirators, as presented in Appendix D of Section 5144 of the California Code of Regulations (8CCR-5144), shall be provided to employees who wear respirators when such use is not required by this section or by the employer.

Program Evaluation

1. The Company Administrator shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be affective.

2. The Company Administrator shall regularly consult employees required to use respirators to assess the employee's views on program effectiveness and to identify any problems. Any problems that are not identified during this assessment shall be corrected. Factors to be assessed include, but not limited to:

    - Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);
    - Appropriate respirator selection for the hazards to which the employee is exposed;
    - Proper respirator use under the workplace conditions the employee encounters; and
    - Proper respirator maintenance.

Recordkeeping

1. Records of medical evaluations must be retained and made available in accordance with section 3204 (8CCR-3204).
2. The Company shall establish a record of the qualitative and quantitative fit tests administered to an employee including:

    - The name or identification of the employee tested;
    - Type of fit test performed;
    - Specific make, model, style, and size of respirator tested;
    - Date of test; and
    - The pass/fail results for QLDT's or the fit factor and strip chart recording or other recording of the test results for QNFT's.
    - Fit test records shall be retained for respirator users until the next fit test is administered.

3. Program records shall be made available upon request to affected employees and to the Chief of the Division of Occupational Safety and Health or designee for examination and copying.

Procedures for Cleaning Respirators

1. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard and replace any defective parts. Reassemble facepiece.

2. Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.

3. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. They should be hand-dried with a clean linen-free cloth.

4. When the cleaner used does not contain a disinfecting agent, respirator components should be tested, and/or immersed for two minutes in one of the following:

    - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C (110 deg. F); or,
    - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 deg. C (110 deg. F); or,
    - Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

5. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

Appendix D to Section 5144
Mandatory Information for Employees Using Respirators When Not Required

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard. You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National and Everest Indemnity Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Forklifts

Each year about 100 workers are killed and almost 95,000 injured in industrial truck accidents across the country. To properly protect our employees from such accidents, the Company has adopted the following Forklift Safety Program.

General

The Company will ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely, as demonstrated by the successful completion of the training and evaluation specified below.

Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the Company shall ensure that the employee has successfully completed a training program.

Training Program Implementation

Trainees may operate a powered industrial truck only:

- under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
- where such operation does not endanger the trainee or other employees.

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercise performed by the trainee), and evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

Note: This section does not require that the training be given by any particular individual or organization. The trainer must only be able to demonstrate that they have appropriate knowledge, training and experience to train others and evaluate their competence.

Training Program Content

Powered industrial truck operators shall receive initial training in the following topics.

- Operating instructions, warnings, and precautions for the types of the truck the operator will be authorized to operate;
- Differences between the truck and the automobile;
- Truck controls and instrumentation: where they are located, what they do, and how they work;
- Engine or motor operation;
- Steering and maneuvering;
- Visibility (including restrictions due to loading);

- Fork and attachment adaptation, operation, and use limitations;
- Vehicle capacity;
- Vehicle stability;
- Any vehicle inspection and maintenance that the operator will be required to perform;
- Refueling and/or charging and recharging of batteries;
- Operating limitations;
- Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.
- Workplace=related topics:
- Surface conditions where the vehicle will be operated;
- Composition of loads to be carried and load stability;
- Load manipulation, stacking, and unstacking;
- Pedestrian traffic in areas where the vehicle will be operated;
- Narrow aisles and other restricted places where the vehicle will be operated;
- Hazardous locations where the vehicle will be operated;
- Ramps and other sloped surfaces that could affect the vehicle's stability;
- Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation;
- The requirements of this section.

Refresher Training and Evaluation

Refresher training, including an evaluation of the effectiveness of that training, shall be conducted to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely.

Refresher training in relevant topics shall be provided to the operator when:

- The operator has been observed to operate the vehicle in and unsafe manner;
- The operator has been involved in and accident or near-miss incident;
- The operator has received an evaluation that reveals that the operator is not operating the truck safely;
- The operator is assigned to drive a different type of truck; or
- A condition in the workplace changes in a manner that could affect safe operation of the truck.

An evaluation of each powered industrial truck operator's performance shall be conducted at least once very three years.

Avoidance of Duplicative Training

If an operator has previously received training in a topic specified above, and such training is appropriate to the truck and working conditions encountered, additional training in that topic not required if the operator has been evaluated and found competent to operate the truck safely.

Note: This section reduces the training requirement for previously trained operators provided we can demonstrate that the operator knows the material. Since some of the required training is unique to the area where the lift will be operated, we must still cover these areas even if the employee was previously trained.

Certification

The Company shall certify that each operator has been trained and evaluated as required by this paragraph (1). The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

Scaffolds

1. Scaffolds are to be erected, dismantled, altered or repaired by the scaffold contractor ONLY.

2. Inspect scaffolds prior to use and report any damage immediately to your foreman. No not use damaged scaffolds.

3. You are not permitted to ride on rolling scaffolds being moved.

4. At least 2 people are required to move rolling towers. Secure or remove all tools and materials before moving.

5. Always use guard railings on all scaffolds regardless of height.

6. Use only high quality planking on scaffolds and be sure the planks are secure to prevent shifting.

7. Always apply caster brakes and use outriggers when scaffolds are stationary.

8. Do not use planks or guard rails as temporary means of obtaining greater height.

9. Be aware of the objects below you; move or cover sharp objects in case you fall. Cap or bend all rebar.

Cranes and Rigging

1. No employee is permitted to ride on loads, hooks, or slings of any crane, hoist or derrick.

2. Do not work or stand under any suspended load. Crane operators shall avoid swinging loads over people.

3. Inspect all slings and chains prior to use. Do not use defective slings, chains, or rigging.

Welding and Cutting

1. Make sure your welding equipment is installed properly and grounded and in good working condition.

2. Always wear protective clothing suitable for the welding or cutting to be done.

3. Always wear proper eye protection when welding, brazing, soldering or flame cutting. Once you remove your welding helmet, put on safety glasses

4. Keep your work area clean and free of hazards. Make sure that no flammable, volatile or explosive materials are in or near the work area.

5. Handle all compressed gas cylinders with extreme care. Keep caps on when not in use. Make sure that all compressed gas cylinders are secured to the equipment carriage, wall or other structural supports. When compressed gas cylinders are empty close the valve, install the cap and return to correct bottle storage area.

6. Store compressed gas cylinders in a safe place with good ventilation. Acetylene cylinders and oxygen cylinders should be kept at least 20 feet apart.

7. Do not weld or cut in confined spaces without special precautions and your foreman's authorization.

8. Do not weld on containers that have held combustibles or flammable materials.

9. Use mechanical exhaust ventilation at the point of welding when welding lead, cadmium, chromium, manganese, brass, bronze, zinc, or galvanized metals. These metals are highly toxic and their fumes should not be breathed.

10. Make sure all electrical connections are tight and insulated. Do not use cables with frayed, cracked or bare spots in the insulation.

11. When the electrode holder or cutting torch is not in use, hang it on the brackets provided. Never let it touch a compressed gas cylinder.

12. Dispose of electrode and wire stubs in proper containers since stubs and rods on the floor are a safety hazard.

13. Use weld curtains to shield others from the light rays produced by your welding.

14. Make sure all compressed gas connections are tight and check for leaks. Do not use hoses with frayed or cracked spots.

15. Keep your leads orderly and out of walkways. Suspend them whenever possible.

16. DO NOT WELD if leads or machine are in or near water.

17. Make sure a portable fire extinguisher is nearby.

18. Keep your work area clean and free of hazards. When flaming cutting, sparks can travel 30-40 feet. Do not allow flame cut sparks to hit hoses, regulators or cylinders.

19. Use oxygen and acetylene or other fuel gases with the appropriate torches and tips only for the purpose intended.

20. Never use acetylene at a pressure in excess of 15 lbs. per square inch. Higher pressure can cause and explosion.

21. Never use oil, grease, or any other material on any apparatus or thread fitting in the oxyacetylene or oxyfuel gas system. Oil and grease in contact with oxygen will cause spontaneous combustion.

22. Always use the correct sequence and technique for assembling and lighting the torch. Always use the correct sequence and technique for shutting off a torch.

23. Check valves must be used on all compressed gas cylinders to prevent back flow of the gas.

During an Emergency

In the event of an emergency such as earthquake or fire, all employees are expected to evacuate the premises immediately. The Company Administrator or General Manager may assign some employees the task of shutting off the gas or electricity, if needed. At no time will any employee be expected to jeopardize their own safety to do this.

Employees will be notified of emergencies through one of the following:

- Fire alarm
- Intercom
- Emergency horn
- Direct voice communication

After the emergency evacuation has been completed, a head count will be taken to ensure everyone is out of the building.

If necessary, the Company Administrator or General Manager may assign some employees to rescue trapped employees.

Safety Program For Emergency Action & Fire Prevention

EMPLOYEE EMERGENCY AND FIRE PREVENTION PLANS

Emergencies will occur. The effect of the emergency must be controlled by means of a proper pre-emergency plan. In order to respond to this need, our company has developed the following plan which all employees are expected to follow in preventing or responding to emergency situations that we reasonably expect in our workplace.

EMERGENCY ACTION PLAN

A. SCOPE AND APPLICATION. As required by OSHA the following Emergency Action Plan has been developed to ensure employee safety from fire or other emergencies.

B. ELEMENTS

1. Emergency Escape Procedures. Escape route assignments are posted throughout the facility. A layout of the facility clearly marked with escape routes is posted in each department. A copy of the layout is attached to this policy.

If the alarm sounds or if a supervisor orders the evacuation of the building, remain calm, walk to the nearest exit and leave the building immediately. After leaving the building, proceed to the front of the building. Do not leave the area. Do not return into the building. Follow your supervisor's instructions.

In addition to the escape routes, the locations of fire extinguisher and safety stations are indicated by color coded labels. Fire extinguisher locations are indicated by yellow labels. Safety stations are indicated by green labels.

2. Employees Who Remain to Operate Critical Plant Operations Prior to Evacuation. As there are no plant processes which would require continued operation during an emergency, all employees are expected to leave the plant immediately when an evacuation order is announced. No provisions are made for employees who remain within the plant to perform rescue, medical or fire duties.

3. Accounting of All Employees After an Emergency Evacuation. Within the first 15 minutes of each shift, the supervisor is responsible for taking attendance of the workers. The attendance sheet should remain with the supervisor at all times. In the event of an evacuation, all employees are instructed to leave the plant, proceed to the front of the building and meet across the street. The daily attendance sheets will be used to account for the workers. In the event that a worker is absent, the supervisor may at his own discretion, sweep the area for the missing employee. Employees must not leave the area until instructed to do so by the supervisor.

4. Rescue and Medical Duties for Employees. Employees are not expected to perform any rescue or medical duties. Therefore, there are no provisions for training employees in these tasks. Municipal emergency medical and fire facilities are used for emergency medical treatment. Emergency phone numbers are posted at each production area phone. At no time should an employee be directed to perform emergency duties which may endanger his/her life.

5. Preferred Means of Reporting Fires and Other Emergencies. The preferred means of reporting fires and other emergencies is by phone. Emergency phone numbers are posted at each production area phone. In the case of telephone failure, the authorities should be notified in person.

6. Persons to Contact for Further Information. Company Administrator – Sheila Cordovano. General Manager – Dennis Graham

C. ALARM SYSTEM

1. Employee Notification of an Emergency. Notification of an emergency or of an evacuation is communicated to the employees via the plant intercom system. Directions for the use of the intercom system are as follows:

*
*See Sheila
*
*

2. Fire Brigade. We do not support a company fire brigade. Employees are not expected to fight fires, clean up major chemical spills or participate in rescue procedures.

D. EVACUATION FOR VARIOUS EMERGENCIES

1. Emergency Action Plan for Fire or Chemical Release. In the event of a fire or a chemical emergency, our policy is to immediately evacuate all employees from the section of the building directly affected. Additional evacuation of the building, whether partial or complete, is left to the discretion of the plant manager or the shift supervisor.

Evacuated employees must report to the outside front parking area. The supervisor must take attendance to account for all personnel involved.

2. Emergency Action Plan for Electrical Outage. In the event of an electrical outage, emergency lighting should illuminate the plant. All employees should report to the lunch room. All employees should remain in the lunch room unless the plant manager or supervisor issues new instructions.

E. TRAINING OF PERSONNEL

In order to ensure the safe and orderly emergency evacuation of employees, a sufficient number of personnel should be trained to assist in emergency procedures. The following personnel should be trained in the emergency procedure: Company Administrator and General Manager.

1. Periodic Review of Emergency Plans with Employees. A review of the emergency plans must be completed when the plan is first developed; whenever the employee's responsibilities or designated actions under the plan change; and whenever the plan is revised.

2. Review of Emergency Plans with Employees. A review of the emergency plans must be complete with each new employee prior to the employee beginning his/her duties within the

plant. The supervisor is responsible for performing the review with new employees, both production and office. Under no circumstances should a new employee be allowed to begin work without safety and evacuation training. A copy of the Emergency Plans will be located at 970 Reserve Dr. Ste. 180, Roseville, CA 95678 with the intent that it will be available to all workers who wish to review it.

FIRE PREVENTION PLAN

A. SCOPE AND APPLICATION. As required by OSHA the following Fire Prevention Plan has been developed to prevent or minimize the possibility of a fire emergency.

B. ELEMENTS

1. Major Workplace Fire Hazards. The following is a list of a potential fire hazard within the office and their proper handling and storage procedures.

Fire extinguishers are located throughout the facility. In addition, the building is equipped with a sprinkler system. The alarm for the sprinkler system is connected with the fire department.

2. Personnel Responsible for Maintenance of Fire and Emergency Equipment. Company Administrator.

3. Personnel Responsible for Control of Fuel Source Hazards. Fuels are not used within the plant for production processes. The plant heating units are natural gas fired and are inspected by an outside service.

C. HOUSEKEEPING

General housekeeping is an everyday duty. Plant cleanliness is stressed to all employees, whether in the office of on the production floor. There are several workers from the maintenance department who have as part of their duties, the responsibility for maintaining and cleaning equipment. In addition, the foremen of the various departments are responsible for their respective areas. Trash, scrap, and waste are removed during each shift. Each worker is expected to take the last five or ten minutes of the shift to clean up his/her area. Waste receptacles are located throughout the plant.

D. TRAINING

1. Employee Training for Fire Hazards of the Materials and Processes. Employees are to be trained semi-annually. Training sessions are to be held in the fall and the spring. The fire safety training sessions will coincide with a review of material safety procedures and the material safety data sheets. Within a period of two weeks following the training sessions, a fire drill will be scheduled. The fire drill will be unannounced to the workers prior to its occurrence.

2. New Employee Training for Fire Hazards of the Materials and Processes. New employee training of fire hazards of the materials and processes must be completed with each new employee prior to the employee beginning his/her duties with in the plant. The supervisor is

responsible for performing the review with the new employee. Under no circumstances should a new employee be allowed to begin work without training for fire hazards of the materials and processes. A copy of the Fire Prevention Plan will be assigned to the first and second shift foremen with the intent that it will be available to all workers who wish to review it.

Fire Prevention at Construction Sites

The following procedures will be used to prevent fires on construction sites:

1. All accumulated combustible trash and debris will be removed as soon as practical.

2. Flammable liquids will only be stored and dispensed from UL approved safety containers designed for that purpose.

3. All rags soaked with flammable or combustible liquids will be properly stored in closed metal containers.

4. Appropriate precautions will be taken to prevent fires when torch cutting, welding or soldering.

5. Compressed gas cylinders containing flammable or explosive gasses will be properly stored in the upright position with their caps on and protected from heat or puncture. Fuel gas and oxygen shall be separated at least 20 feet when stored.

6. Smoking or open lights are prohibited within 50 feet of flammable liquid or gas storage and dispensing areas.

7. Flammable solvents will not be used for cleaning purposes.

8. A fire extinguisher, rated not less than 2A, shall be provided for each 3,000 square feet of the floor area, or fraction thereof. Where the floor area is less than 3,000 square feet, at least one extinguisher shall be provided.

9. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 75 feet.

10. At lease one fire extinguisher, rated not less than 2A, shall be provided on each floor. In multi-story buildings, at least one fire extinguisher shall be located adjacent to the stairway at each floor level.

11. A fire extinguisher, rated not less than 10B, shall be provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids or 5 lbs. of flammable gas are being used on the job site. This requirement does not apply to the integral fuel tanks of motor vehicles.

12. Portable fire extinguishers shall be inspected monthly, or at more frequent intervals by the employer, and serviced at least annually by a person licensed or registered by the State Fire Marshal. NOTE: Inspection is a "quick check" that an extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable. This is done by seeing that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious or

physical damage or condition to prevent operation.

13. Suitable fire control devices, such as portable fire extinguishers, shall be available at locations where flammable or combustible liquids are stored.

14. At least one portable fire extinguisher, having a rating of not less than 20B units, shall be located outside of, but not more than 10 feet from, the door opening into any room used for flammable liquid storage.

15. At least one portable fire extinguisher, having a rating of not less than 20B units, shall be located not less than 25 feet, nor more than 75 feet, from any flammable liquid storage area located outside.

Emergency Personnel Names and Phone Numbers

DESIGNATED RESPONSIBLE OFFICIAL. Highest Ranking Manager at Corporate Job Site, such as General Manager, Operations Manager, or Company Administrator.

Name: General Manager – Dennis Graham Phone: (877)933-9501

EMERGENCY COORDINATOR:

Name: General Manager – Dennis Graham — Phone: (877) 933-9501
Operations Manager – Ron Brierley

AREA/FLOOR MONITORS (If applicable):

Area/Floor: Office	Name: Company Administrator – Sheila Cordovano	Phone: (877)933-9501
Area/Floor: Service	Name: Operations Manager – Ron Brierley	Phone: (877)933-9501

ASSISTANTS TO PHYSICALLY CHALLENGED (If applicable):

Name: Operations Manager – Ron Brierley — Phone: (877)933-9501
Name: General Manager – Dennis Graham — Phone: (877)933-9501

Emergency Phone Numbers

FIRE DEPARTMENT: (916) 774-5800	OR	9-1-1
PARAMEDICS:		9-1-1
AMBULANCE: (866) 604-8307 Angel Medflight Worldwide Air Ambulance	OR	9-1-1
POLICE: (916) 774-5090	OR	9-1-1
FEDERAL PROTECTIVE SERVICE:	(202) 282-8000	
SECURITY: KMR/SCS Datalink	Central Station	888-610-4366

BUILDING MANAGER: Val Thomas
Galilee Commercial Real Estate (916) 784-9807 cell: (916) 257-3448

Utility Company Emergency Contacts

ELECTRIC: City of Roseville
Outage Hotline: 916-774-5428

WATER:	City of Roseville Outage Hotline:	916-774-5750
GAS:	N/A	
TELEPHONE:	Surewest	916-786-6161

Guidance for Determining the Emergency Level

EVENT	SITUATION	EMERGENCY LEVEL
Spillways	Principal spillway severly blocked with debris or structurally damaged.	1
	Principal spillway leaking with muddy flows.	1
	Principal spillway blocked with debris and pool is rapidly rising.	2
Flooding	National Weather Service issues a flood warning for the area.	2
	The reservoir elevation reaches the predetermined notification trigger elevation of "x" inches below dam crest.	3
	Spillway flow is flooding roads and people downstream.	3
	Flood flows are overtopping the dam.	3
Seepage	New seepage areas in or near the dam.	1
	Boils observed downstream of dam.	1
	Boils observed downstream of dam with cloudy discharge.	2
	New seepage areas with cloudy discharge or increasing flow rate.	2
	Cloudy flow and one or more of the following (with constant reservoir level): Accelerating rate of flow, Expanding flow at exit point, or Buildup of soils.	3
Sinkholes	Observation of new sinkhole in reservoir area or on embankment.	2
	Rapidly enlarging sinkhole.	3
Embankment Cracking	New cracks in the embankment greater than ½ inch wide and greater than 2 feet deep, Without seepage.	1
	Cracks in the embankment with seepage emerging.	2
Embankment Movement	Visual movement/slippage of the embankment slope.	1
	Sudden or rapidly proceeding slides of the embankment slopes.	2
Instruments	Instrumentation readings beyond predetermined values.	1
Earthquake	Measurable earthquake felt or reported within 50 miles of the dam.	1
	Earthquake resulting in visible damage to the dam or appurtenances.	2
	Earthquake resulting in uncontrolled release of water from the dam.	3
Security Threat	Verified bomb threat that, if carried out, could result in damage to the dam.	2
	Detonated bomb that has resulted in damage to the dam or appurtenances.	3
Sabotage/Vandalism	Damage to the dam or appurtenances with no impacts to the functioning of the dam.	1
	Modification to the dam or appurtenances with no impacts to the functioning of the dam.	1
	Damage to the dam or appurtenances that has resulted in seepage flow.	2
	Damage to the dam or appurtenances that has resulted in uncontrolled water.	3

- Emergency Level 1: Non-emergency, unusual event, slowly developing.
- Emergency Level 2: Potential dam failure situation, rapidly developing.
- Emergency Level 3: Urgent; dam failure appears to be imminent or is in progress.

Appendix B
The S.A.F.E. Procedure

These instructions consist of a four-step procedure that this facility recommends that employees follow during a fire. This procedure should be memorized by all employees. Experience has demonstrated that the best response to a plant fire is first, to sound the alarm, then let others know there is a fire, then to combat the fire if possible, and finally, to evacuate if necessary. The plan works best when expressed as an easily recalled acronym such as S.A.F.E.

S – Sound the Alarm: Either sound it yourself or call out to someone else to sound it. This allows the fire department to be on its way while other activities are being performed.

A – Alert Others: Quickly tell others in the area of the fire. Do this in a calm, firm manner. DO NOT CAUSE A PANIC! Secure the area for the fire department. Close all doors and windows to prevent the spread of smoke and flames. Call security and/or the fire department to give them verification and location of the fire.

F – Fight the Fire: Do this only in the case of a manageable fire, one which you have the training and experience to fight, for example, a fire in a waste basket. If possible two employees should fight the fire together using two fire extinguishers. If you have any doubt about your ability to fight the fire, then do not attempt to combat it.

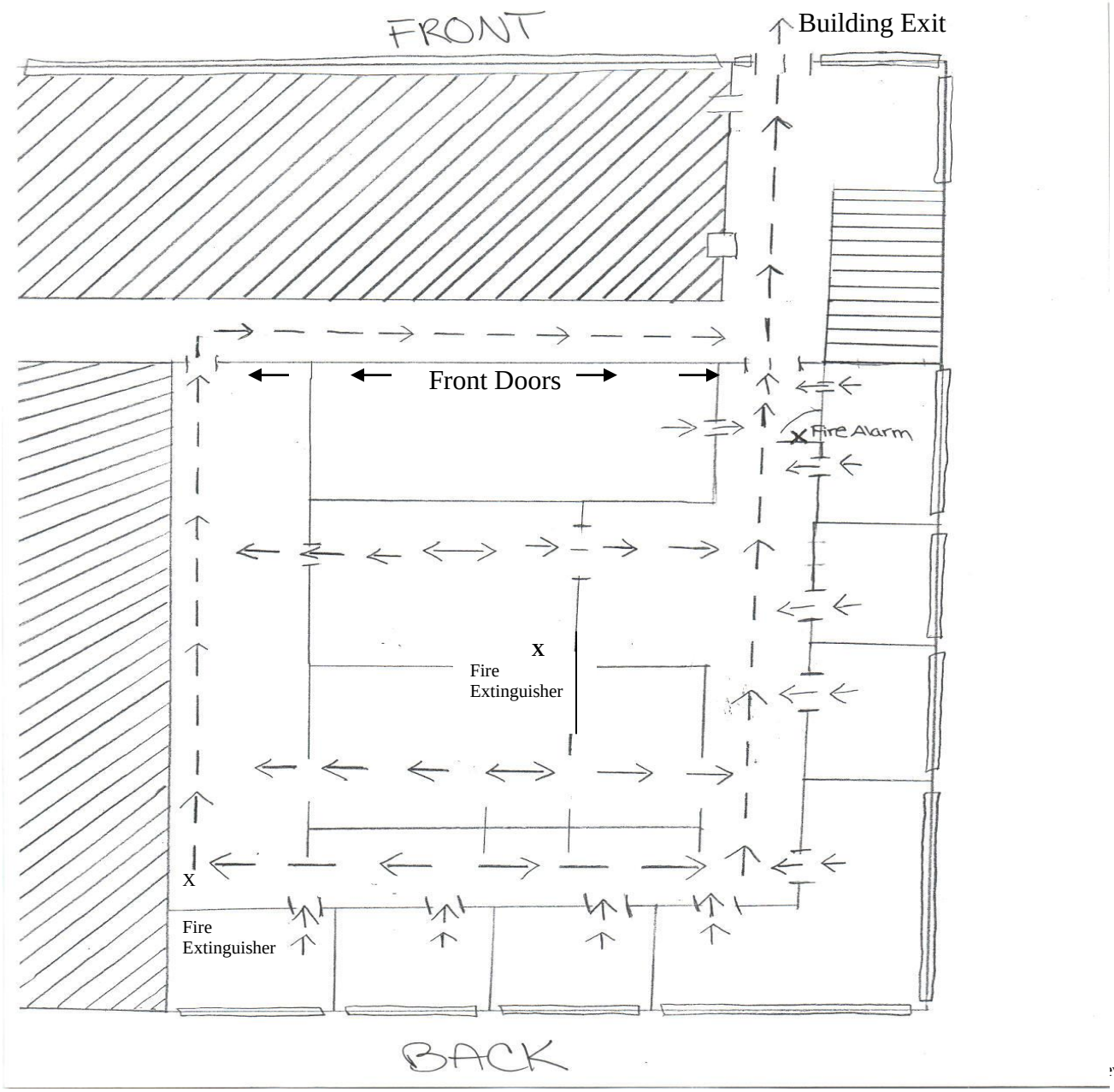
E – Evacuate the Area: If necessary.

Evacuation Routes

Evacuation route maps have been posted in each work area. The following information is marked on evacuation maps:

1. Emergency Exits – Posted
2. Primary & Secondary Evacuation Routes
3. Locations of Fire Extinguishers
4. Fire Alarm Pull Stations' Locations
5. Assembly Points

970 Reserve Dr., Ste. 180, Roseville,CA 95677



Office Safety

Office accidents can and do happen. To prevent them, the Company has developed the following rules for our office staff. We will also endeavor to include office employees in periodic safety meetings. If at any time, you feel there is a safety hazard, or you have any safety concerns, please do not hesitate to notify the Company Administrator.

1. Report all accidents and injuries, no matter how minor, to your supervisor immediately.
2. Correct or report any safety hazards that you observe.
3. Clean up any spilled material that may present a slipping hazard.
4. Do not stretch any cords across aisles that may present a tripping hazard.
5. No one is allowed to climb on shelves or stand on chairs; you must use a step stool or ladder.
6. Keep all legs of the chair on the floor. Do not tilt chairs too far back.
7. No one shall be in the possession of, or under the influence of, alcohol or controlled substances while on the premises.
8. No horseplay will be tolerated.
9. Close file drawers when not in use.
10. Do not open more than one file drawer at a time. This could cause the cabinet to tip.
11. Do not store heavy objects above your head which could fall on you in an earthquake.
12. Do not store flammable or combustible materials near heaters or other heat sources.
13. If you are unsure how to do any task safely, ask your supervisor.
14. Do not operate any equipment you are not trained and authorized to use.
15. Always follow safe lifting procedures when lifting any object and get help for heavy loads.

    - Bend your knees, not your back
    - Keep the load close to body.
    - Keep your back straight.
    - Lift with your legs.
    - Do not lift and twist.

Ergonomics

Studies have shown over the years that poorly designed and arranged work areas, awkward work postures and repetitive motions can lead to a variety of injuries including carpal tunnel syndrome and tendonitis, which are often referred to as repetitive motion injuries (RMI's). As with cancer, hear disease, and many other ailments, there are risk factors that increase and individual's likelihood of developing RMI's. If the risk factors are reduced, so are the chances of being injured. While some of these risk factors, such as family history, cannot be controlled in the employment setting, many can. Including:

- The force used to perform a task,
- Posture while performing tasks,
- The number of repetitions performed in a given time period, and
- Mechanical stresses such as hard surfaces.

The Company has developed the following program designed to minimize RMI's. The program includes worksite evaluations, control of exposures that have caused RMI's and training of employees.

Worksite Evaluation and Exposure Reduction

Each job, process, or operation of identical work activity that has resulted in at least two RMI's or a representative number of such jobs, processes, or operations shall be evaluated for exposures that have caused RMI's. The Company may request assistance from outside consultants for this purpose.

Any exposures that have caused RMI's shall, in a timely manner, be corrected or if not capable of being corrected have the exposures minimized to the extent feasible. We shall consider engineering controls, such as work station redesign, adjustable fixtures or tool redesign, and administrative controls, such as job rotation, work pacing or work breaks.

Training

Affected employees shall be provided training that includes and explanation of:

- Company program;
- The exposures which have been associated with RMI's;
- The symptoms and consequences of injuries caused by repetitive motion;
- The importance of reporting symptoms and injuries to their supervisor; and
- Methods used to minimize RMI's.

This training may be conducted as part of the regular safety meetings.

The most significant RMI risk factor in office environments is poor body posture caused by improper workstation design or layout. In many cases employees are required to work in awkward positions for long periods of time. This greatly increases the likelihood of injury. Fortunately, this is often the easiest problem to correct. The goal is to perform work in neutral posture as much as possible. Neutral posture is best described as the most comfortable position and usually involves little or no twisting or deviation of the joints.

To apply the principle of neutral posture to the office setting we need to look at the five major components of office workstations. They are: the chair, the computer keyboard, the desk, the computer monitor, and the work product.

Chairs are often the most overlooked piece of office equipment, yet they are the single most important item from an ergonomic standpoint. A poor chair that lacks adjustments and support makes it almost impossible to work comfortably and in neutral posture. Good office chairs are fully adjustable including:

- Chair height.
- Height of the back rest.
- The position forward or back of the backrest.
- The position forward or back of the seat pan.
- The angle (tilt) of the seat pan.
- If arm rests are provided, they should be height and width adjustable.

In many cases, fully adjustable chairs are provided for employees, but they never adjust them. Make sure you understand all of the adjustments your chair has and how to use them. When in doubt, read the owner's manual or ask. A properly adjusted chair should allow the user to rest their feet comfortably on the floor without putting pressure on their lower thighs. Their knees should be approximately the same height as their hips, or slightly higher, and they should be able to sit back against the back rest which is positioned for low back support. If your feet don't rest comfortable on the floor the chair is too high. If the chair cannot be lowered any further, a foot rest should be used. Whether arm rests are provided depends on the type of work station and personal preference. If they are provided, they should be height adjustable to allow the arms to rest comfortably on them without excessive shoulder drop. Arm rests should also be well padded to reduce pressure on the lower arms.

Once the chair is properly adjusted, the next step is to position the keyboard to minimize bend in you wrists. In order to accomplish this, it is often necessary to have a position and height adjustable keyboard tray attached to the underside of the desk. These should not be confused with keyboard drawers which can not be adjusted for height or position. If you do not use a tray, the only way to adjust the keyboard height is by moving the desk which is difficult at best, and sometimes impossible. Using a tray also frees up work space on the desk where the keyboard once sat.

The height of the keyboard should be set so that there is approximately a 90 degree angle between the upper and lower arms. There should also be a straight line from the elbow out through your fingers. If your fingers hang down too much or bend up, creating a "V" between your hand and forearm, you place extra stress on your wrist. Many people find it comfortable to use padded wrist rests in front of the keyboard. This often helps minimize wrist deflection. The keyboard tray should also be adjusted so that you do not have to reach forward too far to type. Your elbows should be close to your side and back by your spine, not out in front of you. Do not extend the small legs on the bottom of the keyboard tray. This increases the wrist angle unnecessarily. Many keyboard trays now also have extensions for your mouse. This places everything you need within easy reach.

After you have adjusted the chair and keyboard tray, try using your desk. You should be able to comfortably write and use your other office equipment such as the calculator and phone. Some of these items may need to be moved closer to you. Your legs should also fit easily under the desk. Often, stored items such as boxes, block this and should be removed. The standard desk height is fine for most people. If you are exceptionally tall or short, however, adjusting the desk up or down and inch, if possible, may be helpful.

Now you are ready to position your monitor. It should be directly in front of you. Monitors that are off to one side cause you to turn your neck which can lead to injury. The top of the screen should be at about eye level. If the screen is too low your neck will ache from constantly looking down. Monitors can easily be raised by putting old phone books or reams of copy paper under them. You may also use a special adjustable monitor holder to free up desk space. Tilt the screen so that the top is closer to you than the bottom. This will reduce glare from overhead lights. If you can't get away from outside light, use a glare screen to improve contrast and reduce eye strain that can cause headaches. Also know how to adjust the screen contrast and brightness controls and keep the screen clean and free of dust and fingerprints.

The work product should be kept within easy reach. Heavy notebooks or binders that you use often should be placed near you. If you use the phone a lot, consider using a headset to reduce neck strain and free up your hands for other tasks. Copy holders can be very helpful if you are entering data or typing from paper. Set them up so they are as close to the screen as possible to reduce neck motion.

The risk factors of force, repetition, and mechanical stress are also controllable in an office environment. Force can be reduced by using automatic staplers and date stamps. If heavy files, boxes, or other items must be moved, use carts and dollies. When filing, use two hands to hold the larger files and keep heavy items stored between knee and shoulder height to reduce strain on your back and arms.

Repetition is controllable through the use of task management. Break up the work as much as possible throughout the day. If possible, do not spend more than two hours at a time typing or entering data. Intersperse other tasks such as filing to use other muscle groups. You should take ten minute breaks every two hours if you are doing repetitive tasks.

Mechanical stress occurs when you rest parts of your body against hard or sharp objects. This cuts off blood flow and presses on nerves, which can lead to numbness and tingling. Sharp edges can be padded or cushioned where needed to reduce this.

Code of Safe Practices

General Safety Rules

1. All persons shall follow this Code of Safe Practices and render every possible aid to safe operations.

2. Failure to abide by the Code of Safe Practices may result in disciplinary action up to and including termination.

3. Immediately report any unsafe conditions, accidents, injuries or illness to your foreman or superintendent.

4. If you are unsure of the safe method to do your job, STOP and ask your supervisor. Ignorance is no excuse for a safety violation.

5. No one shall be knowingly permitted to work while the employee's ability or alertness is impaired by fatigue, illness, prescription or over the counter drugs. Employees who are suspected of being under the influence of illegal or intoxicating substances, impaired by fatigue or an illness, shall be prohibited from working.

6. Never work while under the influence of an illegal or intoxicating substance, fatigued or ill.

7. Anyone known to be under the influence of any drugs or intoxicating substances which impair the employee's ability to safely perform the assigned duties shall not be allowed on the job.

8. Horseplay, scuffling, fighting and other acts which tend to have an adverse influence on the safety or well-being of the employees are prohibited.

9. Work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.

10. Keep your work area clean, free of debris, electrical cords and other hazards.

11. Immediately clean up spilled liquids.

12. Always notify all other individuals in your area who might be endangered by the work you are doing.

13. Do not operate equipment that you are not familiar with. Do not attempt to use such equipment until you are fully trained and authorized.

14. You are responsible for ensuring all safety guards are operable and in place. If they are not, STOP working and tell your supervisor.

15. Never bring firearms, weapons, illegal drugs or alcoholic beverages on company or customer property or the job site.

16. A red tag system identifies equipment that is NOT to be operated, energized or used. All tag-out or lock-out notices and procedures must be observed and obeyed.

17. Do not block exits, fire doors, aisles, fire extinguishers, first aid kits, emergency equipment, electrical panels, or traffic lanes.

18. Do not leave tools, materials, or other objects on the floor which might cause others to trip and fall.

19. Do not run on the job site or in the shop or office area.

20. Do not distract others while working. If conversation is necessary, make sure eye contact is made prior to communicating.

21. Employees shall not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined that it is safe to enter.

22. Employees shall ensure that all guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly to the foreman or superintendent.

23. Materials, tools, or other objects shall not be thrown from buildings or structures until proper precautions are taken to protect others from the falling objects.

24. Employees shall cleanse thoroughly after handling hazardous substances, and follow special instructions from authorized sources.

25. Gasoline or other flammable liquids shall not be used for cleaning purposes.

26. No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists, and authority for the work is obtained from the foreman or superintendant.

27. Any damage to scaffolds, false work, or other supporting structures shall be immediately reported to the foreman and repaired before use.

c/o Pacific Air Conditioning & Heating, Inc.
970 Reserve Dr., Ste. 180
Roseville, CA 95678
Phone: 877-933-9501

MPN (Medical Provider Network) Implementation Notice

Unless you predesignate a physician or medical group, your new work injuries arising on or after your work commencement will be treated by providers in the State Fund Medical Provider Network. If you have an existing injury, you should continue treatment with your primary treating physician. If you sustain a new work injury, treatment for this injury should be obtained through the State Fund Medical Provider Network. You may obtain more information about the MPN from the workers' compensation poster or from your employer.

Aviso de aplicación de red de proveedores MPN

A menos que usted designe previamente a un doctor o un grupo medico, las lesions que sufra en el trabajo en o después del tu trabajo orìgenes serán tratadas por profesionales de la red de proveedores medicos (Medical Provider Network) de State Fund. Si tiene una lesion existente, debe continuar su tratamiento con el medico primario que lo trata actualmente. Si sufre una lesion nueva, debe obtener tratamiento mediante la red de proveedores medicos de State Fund. Puede obtener más informacióacerca de la red de proveedores MPN del poster sobre compensación a los trabajadores o de su patron.

State Fund Provider Network
P.O. Box 8192
Pleasanton, CA 94588

To our policyholders:
California law requires employers to provide a form on which employees may indicate the name of their personal physician or personal chiropractor. The form must be provided to new hires either at the time the employee is hired or by the end of the first pay period. This form is available from your State Fund representative at no cost to you. Keep a supply on hand. Document personnel records, indicating when this form was provided and when it was returned to you.

Employee's Predesignation of Personal Physician Form

- In order for an employee to predesignate a personal physician, the employee must have health-care insurance for injuries and illnesses that are not work-related.
- The employee may use the predesignation of personal physician form to name a medical doctor or doctor of osteopathic medicine or the personal physician's integrated multispecialty medical group if all other requirements are met.
- The physician is not required to sign this form, but in lieu of a signature, other documentation of the physician's agreement is required.

For the employee:

If I am injured on the job, I wish to be treated by my personal physician or my personal physician's integrated multispecialty medical group, who meets all the following requirements: (1) is my regular physician; (2) is my primary care physician or integrated multispecialty medical group; (3) is licensed per Business & Professions Code; (4) has previously provided my treatment; (5) retains my records; (6) agrees to be my predesignated physician.

Or, I wish to be treated by my personal chiropractor or acupuncturist, who has treated me before and has my records. I understand my identification of a personal chiropractor or acupuncturist is allowed only if there is no medical provider network (MPN) applicable. If the MPN is not applicable, my personal chiropractor or acupuncturist may treat my injury during the first 30 days of the employer's medical control, but I must first be evaluated by my employer's physician before I may request a change to my personal chiropractor or acupuncturist.

Note: A chiropractor cannot be your treating physician after you have received 24 chiropractic visits. The term "chiropractic visit" means any chiropractic office visit, regardless of whether the services performed involve chiropractic manipulation or are limited to evaluation and management. Once you have received 24 chiropractic visits, if you still require medical treatment, you will have to select a new physician who is not a chiropractor.

EMPLOYEE'S INFORMATION:

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

NAME OF INSURANCE COMPANY FOR NON-OCCUPATIONAL INJURIES AND ILLNESSES:

YOUR DOCTOR'S INFORMATION:

NAME OF DOCTOR AND/OR NAME OF PERSONAL PHYSICIAN'S MULTISPECIALTY MEDICAL GROUP _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____

DOCTOR'S SIGNATURE _____

EMPLOYEE'S SIGNATURE _____ DATE _____

Customer Contact Center

Policy Services

888-STATEFUND
(888) 782-8338 toll-free

Workers' Compensation Claim Form (DWC 1) & Notice of Potential Eligibility
Formulario de Reclamo de Compensación de Trabajadores (DWC 1) y Notificación de Posible Elegibilidad

If you are injured or become ill, either physically or mentally, because of your job, including injuries resulting from a workplace crime, you may be entitled to workers' compensation benefits. Attached is the form for filing a workers' compensation claim with your employer. **You should read all of the information below.** Keep this sheet and all other papers for your records. You may be eligible for some or all of the benefits listed

Si Ud. se lesiona o se enferma, ya sea físicamente o mentalmente, debido a su trabajo, incluyendo lesiones que resulten de un crimen en el lugar de trabajo, es posible que Ud. tenga derecho a beneficios de compensación de trabajadores. Se adjunta el formulario para presentar un reclamo de compensación de trabajadores con su empleador. Ud. debe leer toda la información a continuación. Guarde esta hoja y todos los demás

Workers' Compensation Claim Form (DWC 1) & Notice of Potential Eligibility
Formulario de Reclamo de Compensación de Trabajadores (DWC 1) y Notificación de Posible Elegibilidad

be temporary or may be extended depending on the nature of your injury or illness.

Payment for Permanent Disability: If a doctor says your injury or illness results in a permanent disability, you may receive additional payments. The amount will depend on the type of injury, your age, occupation, and date of injury.

Supplemental Job Displacement Benefit (SJDB): If you were injured

por incapacidad temporal son dos tercios de su pago semanal promedio, con cantidades mínimas y máximas establecidas por las leyes estatales. Los pagos no se hacen durante los primeros tres días en que Ud. no trabaje, a menos que Ud. sea hospitalizado una noche o no pueda trabajar durante más de 14 días.

Regreso al Trabajo: Para ayudarle a regresar a trabajar lo antes posible, Ud. debe comunicarse de manera activa con el médico que le atienda, el administrador de reclamos y el empleador, con respecto a las clases de

State of California
Department of Industrial Relations
DIVISION OF WORKERS' COMPENSATION

WORKERS' COMPENSATION CLAIM FORM (DWC 1)

Employee: Complete the **"Employee"** section and give the form to your employer. Keep a copy and mark it **"Employee's Temporary Receipt"** until you receive the signed and dated copy from your employer. You may call the Division of Workers' Compensation and hear recorded information at **(800) 736-7401**. An explanation of workers' compensation benefits is included as the cover sheet of this form.

You should also have received a pamphlet from your employer de-

Estado de California
Departamento de Relaciones Industriales
DIVISION DE COMPENSACIÓN AL TRABAJADOR

PETITION DEL EMPLEADO PARA DE COMPENSACIÓN DEL TRABAJADOR (DWC 1)

Empleado: *Complete la sección* ***"Empleado"*** *y entregue la forma a su empleador. Quédese con la copia designada* ***"Recibo Temporal del Empleado"*** *hasta que Ud. reciba la copia firmada y fechada de su empleador. Ud. puede llamar a la Division de Compensación al Trabajador al* ***(800) 736-7401*** *para oir información gravada. En la hoja cubierta de esta forma esta la explicatión de los beneficios de compensación al trabajador.*

Ud. también debería haber recibido de su empleador un folleto describiendo los

State of California **EMPLOYER'S REPORT OF OCCUPATIONAL INJURY OR ILLNESS**	**STATE COMPENSATION INSURANCE FUND** 24-Hour Claims Reporting Center Telephone: (888) 222-3211 Fax (800) 371-5905	**OSHA Case No.** ☐ Fatality

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.	NOTICE: California law requires employers to report within **five days** of knowledge every occupational injury or illness which results in lost time beyond the date of the incident **OR** requires medical treatment beyond first aid. If an employee subsequently dies as a result of a previously reported injury or illness, the employer must file within **five days** of knowledge an amended report indicating death. In addition, every serious injury, illness, or death must be **reported immediately** by telephone or telegraph to the nearest office of the California Division of Occupational Safety and Health.

EMPLOYER			
1. FIRM NAME DIVISION		1a. Policy Number	**Please do not use this Column**
2. MAILING ADDRESS (Number and Street, City, Zip)		2a. Phone Number	Case Number
3. LOCATION, if different from Mailing Address (Number, Street, City and Zip)		3a. Location Code	Ownership
4. NATURE OF BUSINESS; e.g., Painting contractor, wholesale grocer, sawmill, hotel, etc.	4a. NUMBER OF EMPLOYEE ON	5. STATE UNEMPLOYMENT INSURANCE	Industry

Nu-Calgon

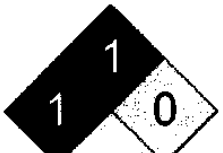
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name C-3s Refrigeration Oil (4303)
CAS # Mixture
Product use Oil
Manufacturer Nu-Calgon
2008 Altom Court
St. Louis, MO 63146 US
Phone: 314-469-7000 / 800-554-5499
Emergency Phone: 1-800-424-9300 (CHEMTREC)

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2

Health	/	1
Flammability		1
		0



5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Foam. Water spray. Dry chemical. Carbon dioxide.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective

Flash point	165.55 °C (330 °F)
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	< 0.001 mmHg @ 20°C
Vapor density	> 5
Specific gravity	0.9129
Octanol/water coefficient	Not available
Solubility (H2O)	Negligible
Auto-ignition temperature	343 °C (649.40 °F)
VOC (Weight %)	Not available
Viscosity	157.2 SUS @ 100°F
Percent volatile	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

Contaminated packaging Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US Federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No

Material Safety Data Sheet

Carbon Dioxide (Dry Ice)

Section 1. Chemical product and company identification

Product name	:	Carbon Dioxide (Dry Ice)
Supplier	:	AIRGAS INC., on behalf of its subsidiaries 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Synonym	:	carbonice ; dry ice 6
MSDS #	:	001091
Date of Preparation/Revision	:	**3/26/2013.**
In case of emergency	:	1-866-734-3438

Section 2. Hazards identification

Physical state	:	Solid. [WHITE SNOW-LIKE SOLID]
Emergency overview	:	WARNING! MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. May cause target organ damage, based on animal data.
Target organs	:	May cause damage to the following organs: cardiovascular system, upper respiratory tract, skin.

Potential acute health effects

Carbon Dioxide (Dry Ice)	
	TWA: 18000 mg/m³ 8 hour(s). TWA: 10000 ppm 8 hour(s).

Section 4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.
Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.

Products of combustion : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if

Carbon Dioxide (Dry Ice)

Section 8. Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name	Exposure limits
United States	
Carbon dioxide	**ACGIH TLV (United States, 1/2009)**

Carbon Dioxide (Dry Ice)

VOC : 0 % (w/w)

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Not considered to be reactive according to our database.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Carbon dioxide	LC50 Inhalation Gas.	Rat	470000 ppm	30 minutes

IDLH : 40000 ppm

Chronic effects on humans : May cause damage to the following organs: cardiovascular system, upper respiratory tract, skin.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Products of degradation : Products of degradation: carbon oxides (CO, CO_2).

Section 13. Disposal considerations

Carbon Dioxide (Dry Ice)						
						200 kg **Cargo aircraft** Quantity limitation: 200 kg
TDG Classification	UN1845	CARBON DIOXIDE, SOLID; OR DRY ICE	9	III		**Explosive Limit and Limited Quantity Index** 5 **Passenger Carrying Ship Index** 200 **Special provisions** 18
Mexico Classification	UN1845	CARBON DIOXIDE, SOLID OR DRY ICE	9	III		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 200 kg **Cargo aircraft** Quantity limitation: 200 kg

Carbon Dioxide (Dry Ice)

VOC : 0 % (w/w)

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Not considered to be reactive according to our database.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Carbon dioxide	LC50 Inhalation Gas.	Rat	470000 ppm	30 minutes

IDLH : 40000 ppm

Chronic effects on humans : May cause damage to the following organs: cardiovascular system, upper respiratory tract, skin.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Products of degradation : Products of degradation: carbon oxides (CO, CO_2).

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection

MATERIAL SAFETY DATA SHEET

Nu-Calgon

1. Product and Company Identification

Product Name	**Liquid Ice Machine Cleaner (4207)**
CAS #	Mixture
Product use	Cleaning scale from ice machines
Manufacturer	Nu-Calgon 2008 Altom Court St. Louis, MO 63146 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview	DANGER CAUSES EYE BURNS. CAUSES SKIN BURNS.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	Corrosive. Causes chemical burns. May cause blindness.
Skin	Corrosive. Causes chemical burns.
Inhalation	Inhalation of mist may cause respiratory tract irritation, coughing or headache. Very high exposures may cause difficulty breathing, congestion, tightness of chest and hemorrhage.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Target organs	Eyes. Respiratory system. Skin.
Chronic effects	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
Signs and symptoms	The product causes burns of eyes, skin and mucous membranes.
OSHA Regulatory Status	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	Components of this product have been identified as having potential environmental concerns.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Phosphoric acid	7664-38-2	60 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 20 minutes. Obtain medical attention immediately.
Skin contact	Immediately flush with cool water for 20 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Phosphoric acid	7664-38-2	Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Phosphoric acid	7664-38-2	5000 Lb final RQ; 2270 kg final RQ

U.S. - Massachusetts - Right To Know List

Phosphoric acid	7664-38-2	Present

U.S. - Minnesota - Hazardous Substance List

Phosphoric acid	7664-38-2	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Phosphoric acid	7664-38-2	sn 1516

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Phosphoric acid	7664-38-2	5000 Lb RQ (air); 100 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List

Phosphoric acid	7664-38-2	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Phosphoric acid	7664-38-2	Toxic; Flammable

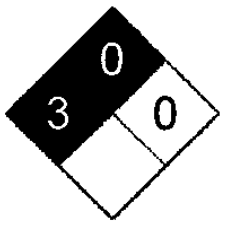
Inventory name

Country(s) or region	Inventory name	On Inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 01-Jun-2011

Effective date 15-Jul-2011

Expiry date 15-Jul-2014

Prepared by Nu-Calgon Technical Service (314) 469-7000

Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

Material Safety Data Sheet

Nitrogen

Section 1. Chemical product and company identification

Product name	:	Nitrogen
Supplier	:	AIRGAS INC., on behalf of its subsidiaries 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Product use	:	Synthetic/Analytical chemistry. Liquid – cryogenic coolant.
Synonym	:	nitrogen (dot); nitrogen gas; Nitrogen NF, LIN, Cryogenic Liquid Nitrogen, Liquid Nitrogen
MSDS #	:	001040
Date of Preparation/ Revision	:	**11/22/2013.**
In case of emergency	:	1-866-734-3438

Section 2. Hazards identification

Physical state	:	Gas. [NORMALLY A COLORLESS GAS: MAY BE A CLEAR COLORLESS LIQUID AT LOW TEMPERATURES. SOLD AS A COMPRESSED GAS OR LIQUID IN STEEL CYLINDERS.]
Emergency overview	:	WARNING! GAS: CONTENTS UNDER PRESURE. Do not puncture or incinerate container. Can cause rapid suffocation. May cause severe frostbite. LIQUID: Extremely cold liquid and gas under pressure. Can cause rapid suffocation. May cause severe frostbite. Do not puncture or incinerate container. May cause target organ damage, based on animal data. Contact with rapidly expanding gases or liquids can cause frostbite.
Target organs	:	May cause damage to the following organs: lungs.
Routes of entry	:	Inhalation

Potential acute health effects

Eyes	:	Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.
Skin	:	Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Nitrogen

See toxicological information (Section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Nitrogen	7727-37-9	100	Oxygen Depletion [Asphyxiant]

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : None expected.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.

Products of combustion : Decomposition products may include the following materials:
nitrogen oxides

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Handling : High pressure gas. Do not puncture or incinerate container. Use equipment rated for

Nitrogen

Storage : Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).
For additional information concerning storage and handling refer to Compressed Gas Association pamphlets P-1 Safe Handling of Compressed Gases in Containers and P-12 Safe Handling of Cryogenic Liquids available from the Compressed Gas Association, Inc.

Section 8. Exposure controls/personal protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

When working with cryogenic liquids, wear a full face shield.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

Nitrogen	Oxygen Depletion [Asphyxiant]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 28.02 g/mole

Molecular formula : N2

Boiling/condensation point : -195.79°C (-320.4°F)

Melting/freezing point : -210.01°C (-346°F)

Critical temperature : -146.9°C (-232.4°F)

Vapor density : 0.967 (Air = 1) Liquid Density@BP: 50.46 lb/ft3 (808.3 kg/m3)

Specific Volume (ft^3/lb) : 13.8889

Gas Density (lb/ft^3) : 0.072

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Nitrogen

Section 11. Toxicological information

Toxicity data

Chronic effects on humans : May cause damage to the following organs: lungs.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Environmental fate : Not available.

Environmental hazards : No known significant effects or critical hazards.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1066 UN1977	NITROGEN, COMPRESSED Nitrogen, refrigerated liquid	2.2	Not applicable (gas).		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg
TDG Classification	UN1066 UN1977	NITROGEN, COMPRESSED Nitrogen, refrigerated liquid	2.2	Not applicable (gas).		**Explosive Limit and Limited Quantity Index** 0.125

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Sodium hydroxide	1310-73-2	1 %

WHMIS status Controlled

WHMIS classification Class E - Corrosive Material

WHMIS labeling

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Sodium hydroxide	1310-73-2	1000 Lb final RQ; 454 kg final RQ

U.S. - CWA (Clean Water Act) - Hazardous Substances

Sodium hydroxide	1310-73-2	Present

CERCLA (Superfund) reportable quantity

Sodium hydroxide: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Hazardous substance

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Sodium hydroxide	1310-73-2	Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Sodium hydroxide	1310-73-2	1000 Lb final RQ; 454 kg final RQ

U.S. - Massachusetts - Right To Know List

Sodium hydroxide	1310-73-2	Present

U.S. - Minnesota - Hazardous Substance List

Sodium hydroxide	1310-73-2	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Sodium hydroxide	1310-73-2	sn 1706

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Sodium hydroxide	1310-73-2	1000 Lb RQ (air); 100 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List

Sodium hydroxide	1310-73-2	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Sodium hydroxide	1310-73-2	Toxic; Flammable

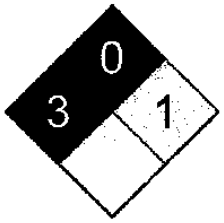
Inventory name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 02-Jun-2011

Effective date 15-Aug-2011

Expiry date 15-Aug-2014

Prepared by Nu-Calgon Technical Service (314) 469-7000

Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

MATERIAL SAFETY DATA SHEET

Nu-Calgon

1. Product and Company Identification

Product Name	**NU-BRITE (4291)**
CAS #	Mixture
Product use	Coil Cleaner / Degreaser
Manufacturer	Nu-Calgon 2008 Altom Court St. Louis, MO 63146 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview	DANGER CAUSES EYE BURNS. CAUSES SKIN BURNS.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	Causes chemical burns. May cause blindness.
Skin	Causes chemical burns. Harmful contact may not cause immediate pain.
Inhalation	May cause respiratory tract irritation or chemical burns.
Ingestion	Harmful if swallowed. Causes chemical burns to mouth, throat and stomach.
Target organs	Eyes. Respiratory system. Skin.
Chronic effects	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
Signs and symptoms	The product causes burns of eyes, skin and mucous membranes.
OSHA Regulatory Status	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	Components of this product have been identified as having potential environmental concerns.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Sodium hydroxide	1310-73-2	10 - 30
Alkyl polyglycoside	110615-47-9	1 - 5

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
Skin contact	Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical advice immediately.
Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Use of an impervious apron is recommended. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Dry chemical. Water spray. Carbon dioxide. Foam.

Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	No.
Sensitivity to static discharge	No.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

7. Handling and Storage

Handling	Do not get in eyes, on skin or on clothing. Use good industrial hygiene practices in handling this material. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid breathing vapors or mists of this product.
Storage	Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Alkyl polyglycoside	**ACGIH-TLV** Not established **OSHA-PEL** Not established
Sodium hydroxide	**ACGIH-TLV** Ceiling: 2 mg/m3 **OSHA-PEL** TWA: 2 mg/m3

Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	Wear chemical goggles.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code. Rubber apron recommended.
Respiratory protection	Avoid breathing mists or vapors. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Liquid.
Color	Blue
Form	Liquid

Odor	Characteristic, Mild
Odor threshold	Not available
Physical state	Liquid
pH	14 (Concentrate)
Melting point	Not available
Freezing point	32.00 °F (0 °C)
Boiling point	212.00 °F (100 °C)
Pour point	Not available
Evaporation rate	Not available
Flash point	None to boiling
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.242 ± 0.005
Octanol/water coefficient	Not available
Solubility (H2O)	Complete
VOC (Weight %)	Not available
Viscosity	Not available
Percent volatile	76

10. Stability and Reactivity

Reactivity	Reacts violently with acids. This product may react with oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Hazardous vapours may be produced when mixed with chlorinated detergents or sanitizers. Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	**LC50**
Alkyl polyglycoside	Not available
Sodium hydroxide	Not available

Component analysis - Oral LD50

Ingredient(s)	**LD50**
Alkyl polyglycoside	5000 mg/kg rat
Sodium hydroxide	Not available

Effects of acute exposure	
Eye	Causes chemical burns. May cause blindness.
Skin	Causes chemical burns. Harmful contact may not cause immediate pain.
Inhalation	May cause respiratory tract irritation or chemical burns.
Ingestion	Harmful if swallowed. Causes chemical burns to mouth, throat and stomach.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.

16. Other Information

LEGEND HMIS/NFPA	
Severe	4

Material Safety Data Sheet

R-404A

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None known.

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST

UNUSUAL FIRE AND EXPLOSION HAZARDS:

R-404A is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources.
Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

EYE PROTECTION:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH-approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH-approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable.
Do not mix with oxygen or air above atmospheric pressure. Any source of high temperature, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically active metals: potassium, calcium, powdered aluminum, magnesium and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:

Will not occur.

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded?	Not a hazardous waste.
If yes, the RCRA ID number is:	Not applicable.

OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. R-404A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT PROPER SHIPPING NAME:	Refrigerant gas R 404A
US DOT HAZARD CLASS:	2.2
US DOT PACKING GROUP:	Not applicable

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
No ingredients listed in this section		

ADDITIONAL REGULATORY INFORMATION:

R-404A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

WARNING: Contains Pentafluoroethane (HFC-125), 1,1,1-trifluoroethane, tetrafluoroethane, greenhouse gases which may contribute to global warming. **Do not vent** to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

EU – EINECS # 2065578 – HFC-125
2069965 – HFC-143a
223770 – HFC-134a

NATIONAL REFRIGERANTS™

Material Safety Data Sheet

R-22

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-22
DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

NATIONAL REFRIGERANTS

R-22

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section			

4. FIRST AID MEASURES

SKIN: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite, water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

INHALATION: Immediately remove to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention immediately. DO NOT give epinephrine (adrenaline).

INGESTION: Ingestion is unlikely because of the physical properties and is not expected to be hazardous. DO NOT induce vomiting unless instructed to do so by a physician.

NATIONAL REFRIGERANTS

R-22

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return until air has been tested and determined safe, including low-lying areas.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-22 should not be mixed with air above atmospheric pressure for leak testing or any other purpose. See Section 5: Unusual

NATIONAL REFRIGERANTS

R-22

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Chlorodifluoromethane	1000 ppm TWA (8hr)	1000 ppm TWA (8hr)	None

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Hydrogen Fluoride: ACGIH TLV = 3ppm ceiling

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor
PHYSICAL STATE:	Gas at ambient temperatures
MOLECULAR WEIGHT:	86.45
CHEMICAL FORMULA:	$CHClF_2$
ODOR:	Faint ethereal odor
SPECIFIC GRAVITY (water = 1.0):	1.21 @ 21.18C (70°F)

NATIONAL REFRIGERANTS™

R-22

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable.
Do not mix with oxygen or air above atmospheric pressure. Any source of high temperatures, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:

Will not occur.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

LC_{50} : 4 hr. (rat) - $\geq$ 300,000 ppm / Cardiac Sensitization threshold (dog) - 50,000 ppm

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Subchronic inhalation (rat) NOEL – 10,000 ppm
Not mutagenic in *in-vitro* or *in-vivo* tests
Not teratogenic

NATIONAL REFRIGERANTS

R-22

OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. R-22 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT PROPER SHIPPING NAME:	Chlorodifluoromethane
US DOT HAZARD CLASS:	2.2
US DOT PACKING GROUP:	Not applicable
US DOT ID NUMBER:	UN1018

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS:	Listed on the TSCA inventory
OTHER TSCA ISSUES:	None

SARA TITLE III / CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA / CERCLA RQ (lb.)	SARA EHS TPQ (lb.)
No ingredients listed in this section		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS:	IMMEDIATE
	PRESSURE

NATIONAL REFRIGERANTS

R-22

ADDITIONAL REGULATORY INFORMATION:

R-22 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

WARNING: DO NOT vent to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains Chlorodifluoromethane** , an HCFC substance which harms public health and the environment by destroying ozone in the upper atmosphere. Destruction of the ozone layer can lead to increased ultraviolet radiation which, with excess exposure to sunlight, can lead to an increase in skin cancer and eye cataracts.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

Canada – Listed on DSL
EU - EINECS # 2008719

16. OTHER INFORMATION

CURRENT ISSUE DATE: December, 2008
PREVIOUS ISSUE DATE: August, 2007

OTHER INFORMATION:

HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0
ANSI/ASHRAE 34 Safety Group – A1
UL Classified

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101
3. Clean Air Act Class II Substance

17. DISCLAIMER

Injury & Illness Prevention Program Receipt
Safety Manual & Code of Safe Practices Receipt

I accept full responsibility for any injury or illness which may occur during or after business hours. Any injury that is not caused by Company error or faulty machinery is subject to my own personal obligation to resolve. This receipt is to certify that I understand and accept the above statement as true.

This is to certify that I have received a complete copy of the Safety Manual, Code of Safe Practices, and the Injury & Illness Prevention Program.

I understand that failure to abide by these rules may result in disciplinary action and possible termination of my employment with the Company.

I also understand that I am to report any injury to my foreman or superintendent immediately and report all safety hazards.

I further understand that I have the following rights:

- I am not required to work in any area I feel is not safe.
- I am entitled to information on any hazardous material or chemical I am exposed to while working.
- I will not be discriminated against for reporting safety concerns.
- I further acknowledge receipt of the complete program.

I accept full responsibility for my overall health and personal safety both during and after work hours. I also acknowledge that the Company is not held responsible for any personal illness or personal related injury or personal related injury that may occur during these hours.

I HAVE RECEIVED, READ, FULLY UNDERSTAND, AND AGREE TO COMPLY WITHIN AND BE LEGALLY BOUND TO ALL OF THE TERMS AND CONTENTS WITHIN THE INJURY & ILLNESS PREVENTION PROGRAM.

Employee Name:_____

Employee Signature:_____ Date: _____

Signed at: 970 Reserve Dr., Ste. 180
Roseville, California 95678

New Employee Safety Orientation

The following items will be verbally covered with each new employee by the Supervisor on the first day of their employment.

Employee Name:_____Start Date: _____

Job Site:_____Position: _____

Instruction has been received in the following areas:

1. Code of Safe Practices. *
2. Hazard Communication (chemicals) Employee Training Handbook.*
3. Driving Safety Rules.*
4. Safety rule enforcement procedures.
5. Necessity of reporting ALL injuries, no matter how minor, IMMEDIATELY.
6. Proper method of reporting safety hazards.
7. Emergency procedures and First Aid.
8. Proper work clothing and required personal protective equipment.
9. List all special equipment, such as lifts, employee is trained and authorized to use.

10. Heat Illness Prevention.

11. Ladders.

*Give a copy of these items to the employee. Signed at: 970 Reserve Dr., Ste. 180, Roseville, CA 95677.

I agree to abide by all company safety policies and the Code of Safe Practices. I also understand that failure to do so may result in disciplinary action and possible termination.

Signed: _____ Date: _____
Employee

Signed: _____ Date: _____
Supervisor

Harassment and Discrimination Training Receipt

I acknowledge that I received training regarding the prevention of harassment and discrimination. I agree to abide by the principles that were explained in this training. I understand that if I have any questions that were not addressed in training or if I encounter any problems, I can contact the Company Administrator or my Supervisor.

Signed at: 970 Reserve Dr., Ste. 180, Roseville, CA 95678.

Date: _____

Signed: _____
Employee

Signed: _____
Supervisor

Signed: _____
Company Administrator

SAFETY MEETING REPORT

Date: _____ Location: _____

Trainer: _____

SAFETY MEETING INCLUDED THE FOLLOWING TOPICS

_____

_____

_____

_____

_____

Print Name Signature

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

Office Safety Inspection Checklist

- The scope of this safety inspection form is designed to assist office personnel in
- identifying unsafe conditions.
- The checklist is to be completed at the beginning of each semester as directed by the
- district's policy.
- Please complete this form and forward the original to the Site/Department Supervisor.
- Keep a copy for 1 year plus the current year.
- Follow-up on the status of corrective actions and work orders monthly.
- List each item requiring correction in the REMARKS section and IDENTIFY THE AREA,

BUILDING, AND ROOM IN EACH CASE.

Inspector Date Location/Area

	Circle One	Comments
1. Desk and file drawers are closed immediately after use.	Y N n/a	_____
2. File cabinets, storage cabinets, bookshelves and other items over 5 feet in height are properly anchored	Y N n/a	_____
3. Extension cords, phone cords, and cables are properly routed or covered to avoid trip and fall hazards	Y N n/a	_____
4. A maximum of one power strip per electrical receptacle is used	Y N n/a	_____
5. Aisles, walkways, and work areas are free of trip and fall hazards (i.e. torn carpets, turned up edges of door mats, boxes etc.)	Y N n/a	_____
6. Exit paths are free of boxes/materials at all times	Y N n/a	_____
7. All work areas are adequately illuminated	Y N n/a	_____
8. Storage and equipment rooms are neat and orderly	Y N n/a	_____
9. Work and storage areas are free of improper storage (e.g., heavy, high and/or unstable storage)	Y N n/a	_____
10. Stairways are free of obstructions and have a nonslip Tread	Y N n/a	_____
11. 36" clearance is maintained in front of all electrical Panels	Y N n/a	_____
12. Step stools or ladders are readily available for reaching high places.	Y N n/a	_____

13. The tension on the paper cutter blade is adjusted to prevent the blade from free falling. Y N n/a _____

14. Material Safety Data Sheets are available for all hazardous materials used by employees (i.e., ditto fluid) Y N n/a _____

15. Employees who are responsible for performing first aid have been trained in blood borne pathogen prevention annually. Y N n/a _____

16. The alarm and intercom systems are operable. Y N n/a _____

17. Portable fire extinguishers are adequate, charged, pins secure, mounted and tags current Y N n/a _____

18. Fire extinguishers are accessible (i.e., unblocked) Y N n/a _____

19. Duplicating fluid is stored in a cabinet away from heat producing sources. Y N n/a _____

20. Employees are trained annually in the use of fire extinguishers. Y N n/a _____

21. Electrical cords and plugs are in good condition (i.e., not frayed, taped, spliced, or ground prong missing). Y N n/a _____

22. Electrical receptacles are in good working condition Y N n/a _____

23. Computer workstations are ergonomically correct (document holders, wrist rests etc.) Y N n/a _____

24. Hand trucks, dollies, or carts are available and used for handling bulk mail and supplies Y N n/a _____

25. The first aid room is equipped with red biohazardous waste bags Y N n/a _____

26. The first aid room is equipped with sharp container Y N n/a _____

27. Gloves and one-way valve resuscitators are available to employees performing first aid and CPR Y N n/a _____

28. The Preferred Provider list poster and Workers' Compensation Benefits poster is posted in the staff lounge(s) on the certificated and classified bulletin boards Y N n/a _____

29. Employees have been instructed in proper lifting Techniques Y N n/a _____

30. Employees who provide first aid to students have been certified in first aid Y N n/a _____

31. All office employees have had office ergonomic training within the last two years Y N n/a _____

32. Do chairs have any loose casters? Y N n/a _____
Are all rungs and legs sturdy? Y N n/a _____

33. Are there any sharp edges, points, burns, or splinters on furniture Y N n/a _____

34. Are all fans adequately guarded? Y N n/a _____

35. Are all tools in their proper places? Y N n/a _____

36. Are sharp tolls such as scissors and razor blades stored point/blade down? Y N n/a _____

37. Are storage cabinets organized such that heavy items are stored in the lower and middle shelves? Y N n/a _____

38. Are bolted materials within easy reach? Y N n/a _____

39. Are floor surfaces clean? Dry? Free of Debris or tools? Y N n/a _____

40. Is there adequate walking space approaching exits? Y N n/a _____

41. Is all electrical equipment in good working condition? Y N n/a _____

42. Are personal appliances such as space heaters or coffee makers compliant with the buildings electrical circuit system? Y N n/a _____

Safety Survey Checklist Instructions and Information–Office Area
The information below includes a detailed description pertaining to corresponding items listed in the Safety Survey Checklist for Office Area inspection form. Please refer to the items below as needed while performing the safety survey. All requirements listed within each item must be in compliance. List reasons for non-compliance in the applicable comments section on the inspection form.

GENERAL SAFETY
1. Employee health and safety information includes: Emergency evacuation routes (posted in main egress corridors), Notice to Employees-Injuries Caused By Work posting, and emergency procedures.
2. Clearance is maintained for walkways and includes main egress hallways (36") and aisles (24"). Floors are in a secure, safe, and unobstructed condition free from slipping and tripping hazards to allow for a quick exit. Materials are not stored in corridors, exits, hallways and stairwells. Electric cords, telephone, and computer cables are secured.
3. Adequate lighting is provided and maintained for a safe working environment.
4. First aid kits are available and stocked at all times. Employees are informed about the location of the first aid kits.
5. Cabinets and shelves above 48" are seismically restrained (braced or fastened). Lips/restraints or doors are used on storage shelves. There is no unsafe or high overhead storage.
6. Heaviest material is stored in bottom drawers of file cabinets. File and desk drawers open and close easily. Furniture and fixtures are free of sharp edges. Office equipment, tables, chairs, etc. are in good condition. Employees are trained for safe use of office equipment and materials.
7. All stepstools and stepladders are in good working condition at all times for safe use, including safety tread is present on all stepstools and stepladders.
8. Good housekeeping is maintained, including storage and work areas are free of clutter, clean, and orderly.
9. Employees are aware of health and safety requirements, including the Violence-Free Workplace Policy. Employees acknowledge and understand to report safety and security-related concerns to their supervisor.

FIRE AND LIFE SAFETY
1. Exits are clearly marked. All exit doors and egress pathways leading to them are unobstructed with at least 36" clearance.
2. All emergency equipment (i.e. pull stations, sprinkler heads) has a clear, unobstructed path, and is easily accessible. Materials are stored at least 2 feet below the ceiling in non-sprinklered areas and at least 18 inches below sprinkler head deflectors in sprinklered areas.
3. Fire doors are unobstructed, closed, and no doorstoppers or wedges are being used to keep them open.
4. Fire extinguishers are available, visible, accessible, in good condition, certified annually, and inspected monthly. Fire extinguishers are wall-mounted in their designated locations with intact tamper seals and location signs in place, if needed for visibility.
5. Fire alarm audiovisual devices are easily seen, free of obstruction, and functioning properly.
6. The no smoking policy is enforced and employees are not permitted to smoke within 20 feet of the building.
7. Employees are trained in emergency evacuation, how to report a fire or other emergency, and how to use a fire extinguisher. Employees participate in evacuation drills.
8. The maximum allowable height for partitions is 60 inches.

ELECTRICAL SAFETY
1. Electrical items including: switches, appliances, outlets, plugs, and cords are in safe working condition (cords are not frayed).

2. Multiple electrical cords are tied to circuit breakers/power strips. Only UL approved power strips or cube adapters with circuit breakers are used. Electrical cords are grounded (3 pronged type). No plug adapters or extension cords (approved for temporary use only) are used. Electrical cords are properly secured (wrapped or tied together), secured to wall (not hanging), not situated under mats or in aisle ways or in any other way so they are a physical hazard. Power strips are plugged directly into approved electrical outlets.
3. Electrical and circuit breaker panels have a minimum of 36" unobstructed access (not blocked). Panel doors are kept closed and latched.

Employee Safety Contact Report

Job Site:_____ Foreman/Supervisor: _____

Employee Name:_____Date: _____

Job Title: _____

Safety Concern:_____

_____

_____

_____

Corrective Action:_____

_____

_____

_____

Signed at: 970 Reserve Dr., Ste. 180, Roseville, CA 95677

Signed: _____
Employee

Signed: _____
Foreman/Supervisor

Accident /Incident Report and Investigation Form

Accident Investigations

To maintain a safe and healthy campus/work environment, a thorough accident investigation should be undertaken as soon as practical after an accident or incident in order to initiate and support corrective and/or preventive actions.

The Accident/Incident Report and Investigation Form should be completed by the employee's supervisor with the employee. The report requires the signature of the supervisor and employee. For accidents/Incidents which require medical attention, or lost or restricted work, the report must be signed by the Divisional Vice President. Completed reports are to be sent to the Director of Human Resources.

Accident /Incident Report and Investigation Form

Directions: Complete sections 1, 2, and 3 for all accidents and incidents. Accidents or incidents that require medical attention or lost or restricted work require the signature of the Divisional Vice President. Attach additional sheets as necessary. Send competed forms to the Director Of Human Resources.

1. EMPLOYEE INFORMATION

Name: _____ **Social Security #** ____-____-____
First MI Last

Dept.: _____ **Job Title:** _____

Full Time ☐ **Part Time** ☐ **Student worker** ☐ **Other** ☐ _____

2. ACCIDENT/ INCIDENT INFORMATION

Date of incident: ____/____/____ **Location:** _____

Time of incident_____**AM/PM** **Time Employee began work** _____**AM/PM**
☐ Check if time cannot be determined

Types of incident (check all that apply) ☐ **Accident** ☐ **Injury** ☐ **Illness** ☐ **Other** _____

What was the employee doing just before the incident occurred? Describe the activity as well as the tools, equipment or materials the employee was using just before the incident.

_____

_____

_____

_____

What happened? Describe the incident. _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Accident /Incident Report and Investigation Form

What was the Injury/illness? Describe what part of the body was affected and how it was affected.

Part of Body Affected

( ) Head
( ) Face
( ) Eyes
( ) Ears
( ) Neck
( ) Shoulders
( ) Chest
( ) Abdomen
( ) Groin
( ) Back (Upper)
( ) Back (Lower)
( ) Buttocks
( ) Fingers
( ) Hands
( ) Wrist
( ) Arms
( ) Toes
( ) Feet
( ) Lower Leg
( ) Knee
( ) Upper Leg
( ) Lungs
( ) Nervous System
( ) Blood System
( ) Skeletal System
( ) Digestive System
( ) Reproductive System
( ) Skin

( ) Other:_____

_____

How It Was Affected

( ) Abrasion
( ) Amputation
( ) Bruise
( ) Burn
( ) Loss of Hearing
( ) Constant Pain
( ) Crushed
( ) Cut/Laceration
( ) Dermatitis
( ) Dismemberment
( ) Eye Injury
( ) Fracture
( ) Heart Attack
( ) Infection
( ) Loss of Feeling
( ) Industrial Illness-Repeated Exposure
( ) Industrial Illness-One Time Exposure
( ) Inflammation
( ) Concussion
( )Contusion
( ) Loss of Sight
( ) Poisoning
( ) Puncture
( ) Strain/Muscle Pull
( ) Sprain
( ) Stroke
( ) Swelling
( ) Trauma
( ) Unconsciousness

( ) Other:_____

_____

_____

What object or substance directly harmed the employee? Examples, "concrete floor", "chlorine", or "grinding wheel fragments". If this question does not apply to the incident, leave it blank.

_____

_____

Accident /Incident Report and Investigation Form

Did the employee receive medical treatment? Yes☐ (list below) No☐

Medical Facility: _____

Attending Physician/Surgeon: _____

☐ **Treated and released** ☐**Hospitalized**

Was this activity part of the employee's regular job? Yes☐ No☐

Did the employee lose any work time after the day of the incident? Yes☐ No☐

If yes, the date time away from work began _____ **Date employee returned to work** _____
☐ Check if date cannot be determined at this time.

Did the employee die as a result of this incident? Yes☐ No☐

Were there any witnesses or other employees directly involved? Yes☐ (list below) No☐

_____
Name **Phone #**

_____
Name **Phone #**

Were any immediate corrective actions taken? Yes☐ (describe below) No☐_____

_____

_____

_____

3. ACCIDENT/ INCIDENT INVESTIGATION

Root causes and contributing factors: (The attached checklist may be used as a guide if needed.)

1. _____
2. _____
3. _____

Why did each of the above items exist (Link #1 with #1 root cause, etc.)

1. _____
2. _____
3. _____

Accident /Incident Report and Investigation Form

Corrective Actions (List what long term actions are being taken as a result of this accident.)

1. _____

_____

_____ **Target Completion Date**_____

2. _____

_____

_____ **Target Completion Date**_____

3. _____

_____

_____ **Target Completion Date**_____

Employee/Injured Party Signature	**Employee/Injured Party Name (print)**	**Date**
Supervisor's Signature	**Supervisor's Name (print)**	**Date**

The signature of the Divisional Vice-President is required for accidents resulting medical attention, or lost or restricted work.

Division Vice President Signature	**Division Vice President Name (print)**	**Date**

For internal use

Signature: Director of Human Resources	Date:	Signature: Manager of Regulatory Affairs & Risk Mgt.	Date:

Accident /Incident Report and Investigation Form

ANALYSIS CHECKLIST

Potential Causes (check all that apply)

1. Mechanical Controls (Guards/Devices)

( ) Were not designed to prevent this circumstance.
( ) Were available but not in place at time of accident.
( ) Were in place but did not work.
( ) Were available but were intentionally not used at time of accident.
( ) Were not available.
( ) Warning devices did not function.
( ) Warning devices functioned but were ignored.
( ) Not applicable.

2. Design/Construction

( ) Poor job layout or design.
( ) Adequate space is not provided for proper positioning.
( ) All necessary equipment to complete the job was not available.
( ) Inadequate ventilation, illumination, surfacing, is not provided.
( ) Improper tool used.
( ) Not applicable.

3. Inspection program/Defective Equipment

( ) Equipment was not adequately inspected or was defective.
( ) Processes/operations were not adequately reviewed.
( ) Inspectors were not adequately trained to recognize the hazard.
( ) Preventative maintenance performed did not address this circumstance.
( ) Inspections were not frequent enough to detect this problem.
( ) Problem was recognized, but work order was never written
( ) Not applicable

4. Policy/Procedure/Work Instructions

( ) There is not a written policy or work instruction covering this circumstance, but there should be.
( ) There is written instruction or policy, but they were not followed.
( ) There is a policy, but it does not correctly address this circumstance.
( ) Not applicable.

5. Environmental/Storage Factors

( )Poor housekeeping.
( ) Insecure storage.
( ) Poor illumination.
( ) Improper ventilation.
( ) Leaking containers/piping/pumps
( ) Improper containers.

6. Materials Handling/Process Operations/Maintenance

( ) Mixing or using the wrong chemical.
( )Over exertion in handling containers.
( ) Improper opening or closing procedures.
( ) Failure to follow lockout, confined space, hot work, or on-line leaking procedures.
( ) overloading equipment or process.
( ) Not applicable.

7. Similar Accidents/Work Practices/Conditions

( ) Similar accidents have occurred without investigation.
( ) Similar accidents or poor work practices have occurred without corrective action.
( ) Employees/management have tolerated the unsafe practices or condition(s)
( ) Not applicable.

8. Training

( ) Employee was not adequately trained in safe work procedures/policies, rules, including chemical hazards.
( ) Employee was not adequately trained in hazard identification.
( ) Employee was not adequately trained in job/equipment specific operation.
( ) Supervisor was not adequately trained.
( )Employee was trained, but did not utilize learned skills/information.

9. Human Factor/Behavior

( ) Not wearing PPE (see item #4)
( ) Design/procedures do not interface well with human characteristics. Make job more difficult to complete.
( ) Job creates too much physical stress.
( ) Job creates too much mental stress.
( ) Inadequate time to adequately complete this job.
( ) Problem was pointed out to members of management but was never corrected.
( ) Employee was not periodically observed on the job.
( ) Job is designed such that is it easier to perform it unsafely.
( ) Job does not fit the person.
( ) Causes awkward postures on positioning.
( ) Job overloads employee with information.
( ) Job requires employee to work too rapidly.
( ) Employee gets a reward to finish quickly.

10. Supervision

( ) Work site inadequately supervised.
( ) Necessary supportive services were not available.
( ) Not applicable.