LP GAS INDUSTRIAL
Equipment Co.
SINCE 1969

LP Gas Industrial Equipment Company

Safety Manual

Safety Programs

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ABRASIVE BLASTING

Purpose

LP Gas Industrial Equipment Co. is a Industrial Propane Company. Employees of LP Gas routinely work in industrial environments where are sand-blasting and spray-painting activities commonly used.

LP Gas recognizes the hazards associated with working in close proximity of such operations and in order to ensure the safety of its employees, LP Gas will inform and train employees to be aware of the conditions that could cause them to be injured.

- **A.** Whenever hazardous substances such as dusts, fumes, mists, vapors, or gases exist or are produced in the course of construction work, their concentrations shall not exceed the limits specified in the "Threshold Limit Values of Airborne Contaminants - 1970" of the American Conference of Governmental Industrial Hygienists.
- **B.** Abrasives and surface coatings on the materials blasted are shattered and pulverized during blasting operations and the dust formed will contain particles of respirable size. The composition and toxicity of the dust from these sources shall be considered in making an evaluation of the potential health hazards.
- **C.** The blast nozzle shall be bonded and grounded to prevent the buildup of static charges.
- **D.** A respiratory protection program shall be established wherever it is necessary to use respiratory protective equipment including worksite-specific procedures and elements for required respirator use. Abrasive blasting respirators shall be worn by all abrasive blasting operators under certain conditions.
- **E.** Equipment for protection of the eyes and face shall be supplied to the operator when the respirator design does not provide such protection.
- **F.** Equipment for protection of the eyes and face shall be supplied to any other personnel working in the vicinity of abrasive blasting operations.
- **G.** Air for abrasive-blasting respirators must be free of harmful quantities of dusts, mists, or noxious gases.
- **H.** The blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.
- **I.** Compressed air shall not be used for cleaning purposes except where the pressure is reduced to less than 30 p.s.i.

AERIAL & SCISSORS LIFT SAFETY PROGRAM

Purpose

The purpose of this section is to outline policies and procedures for the safe operations of scissors lift and aerial lifts operated by LP Gas Industrial Equipment Co. employees. It applies to all operations, programs and locations that require employees to access elevated locations and/or use aerial work platforms; in particular steel erection and inspection.

Definitions

Aerial Lift – A piece of equipment, extendable and/or articulating, designed to position personnel and/or materials in elevated locations.

ANSI – American National Standards Institute.

Lanyard – ANSI approved line designed for supporting one person, with one end connected to a safety harness and the other end attached to a suitable anchorage able to support 5,400 pounds of force. The anchorage can be a structural steel member, an approved lifeline, or other approved anchorage points.

Full Body Harness – ANSI approved body device designed for fall protection, which by reason of its attachment to a lanyard and safety line or an approved anchorage point, which will limit a fall to six (6) feet or less.

Fall Protection

Full body harnesses and lanyards shall only be used, as intended by the manufacturer, for employee fall protection. Appropriate devices shall be used to provide 100% fall protection. The "D" ring on the body harness shall be positioned in the back up between the shoulder blades to minimize impact forces of the body in the event of a fall.

All fall protection equipment shall be carefully inspected prior to each use and periodically throughout the day. Safety equipment showing any signs of mildew, torn or frayed fabric or fiber, burns, excessive wear, or other damage or deterioration which could cause failure shall be permanently removed from service. All fall protection equipment shall be properly maintained and stored when not in use. This includes keeping dry and out of sunlight, away from caustics, corrosives or other materials that could cause defects.

Hard hats and safety harnesses shall be worn by employees in the bucket or platform of any aerial lift device. Other safety personal protective items may be required by either company or client safety policies. High visibility clothing is NOT required for employees, but it is recommended while working in the air.

Consideration must be given to water hazards and appropriate precautions. When 100% fall protection is employed, OSHA water safety standards are not mandated. However it is advisable to take minimum precautions such as readily available buoy and safety line, and a rescue boat.

Equipment

Aerial lift devices shall conform to ANSI Standards applicable to the type of equipment being used – bucket truck, under-bridge inspection vehicle, portable and/or self-propelled personnel lift. Aerial lift devices shall only be used for the purpose(s) intended by the manufacturer. All manufacturer and maintenance department recommendations and warnings regarding operation, capacity and safety precautions shall be strictly followed. Permanent labeling must be conspicuously posted to indicate lifting capacity and travel height.

Only devices approved for lifting personnel shall be used as aerial lifts. Loaders, forklifts or other material lift devices shall NOT be used to transport employees to elevated locations nor as work platforms. Forklifts and cranes may ONLY be used as a last resort, and then only with approved personnel baskets.

Modifications shall not be made to any aerial lift device without the expressed written authorization from the manufacturer. Buckets and bucket liners shall not be drilled, cut, welded on, etc.

Procedures

Lift equipment shall be inspected upon delivery to the jobsite, and daily prior to use. The daily inspection will include testing the controls prior to use and all inspections shall be documented on the Aerial Lift Daily Inspection form.

Before extending or raising the boom or platform, outriggers (if so equipped), shall be positioned properly and the lift will be level. Outriggers shall be placed on mud mats or other SOLID surface, and shall not be used to level the vehicle. If the lift is on unleveled ground, the wheels shall be chocked and the parking brake set. Sufficient clearance shall be checked before raising the lift. For under-bridge units, adequate clearance beneath the boom shall be assured.

LPGIE employees shall keep both feet on the floor of the bucket or platform at all times. When the lift has to be moved, it shall only be moved when the bucket or platform is at the lowered position. For scissor lifts, this is lowered all the way down, and for aerial lifts, this is lowered to the lowest point that the operator can safely see to drive the vehicle.

LPGIE employees are required to wear full body safety harnesses with lanyards. The lanyards shall be attached to an engineered anchorage point inside the lift. Do not wrap the lanyard around a rail and tie back onto itself. LPGIE employees are not to anchor on structural members outside of the lift, unless exiting the lift to get on the structural members.

Platform lifts (scissor lifts) shall have a top and mid rail and a kick plate (toe board), along with an engineered anchorage point to tie off. LPGIE employees shall not climb nor stand on the mid or top rails, keeping both feet on the floor of the platform.

Tools, parts or any materials shall not be dropped or thrown from the bucket or platform. When using welding or heating equipment from the bucket or platform, the vehicle shall be protected from sparks and slag and special care shall be taken to remove flammable objects away from the lifts.

Electrical Safety

When working near electrical lines or equipment, avoid direct or indirect contact. Direct contact is body contact. Indirect contact is when the body touches or is in dangerous proximity to any object that is in contact with energized systems. Always assume lines are "live" and carry high voltage. Electrical lines can only be considered "dead" when verified by licensed electricians from the utilities department, and proper lockout and tagout has been performed.

LPGIE employees shall not position any aerial lifts closer than ten (10) feet to a power line that carries up to fifty (50) kilovolts. For each kilovolt over 50, add four (4) inches.

LPGIE employees are to be trained concerning the hazards and precautions of working near power lines.

Ensure posted warning placards are in place concerning electrical lines.

If the operator is unable to assess the clearances while operating the aerial lift, then a "spotter" must be used to observe the clearances and warn the operator.

Training

Aerial lift operators shall be trained and certified to use the various lifts on the jobsites.

Training may be obtained from the rental companies supplying the lifts. If not available from the rental companies, contact the Safety Director for training options.

All employees operating lifts shall be issued a LP Gas Industrial Equipment Co. operator's card, to be carried at all times on their person, when working on a LP Gas Industrial Equipment Co. jobsite. Retraining shall be accomplished annually or when an employee shows a lack of understanding of aerial lift safe operating procedures.

AMMONIA AWARENESS

Purpose

With the type of work that we do at LP Gas, we don't come in contact with ammonia. We have however listed some information regarding ammonia awareness just in case the opportunity ever comes up.

About 80% of the ammonia produced by industry is used in agriculture as fertilizer. Ammonia is also used as a refrigerant gas, for purification of water supplies, and in the manufacture of plastics, explosives, textiles, pesticides, dyes and other chemicals. It is found in many household and industrial-strength cleaning solutions. Household ammonia cleaning solutions are manufactured by adding ammonia gas to water and can be between 5 and 10% ammonia. Ammonia solutions for industrial use may be concentrations of 25% or higher and are corrosive.
Some chemical/physical properties of ammonia are:

- At room temperature, ammonia is a colorless, highly irritating gas with a pungent, suffocating odor.
- In pure form, it is known as anhydrous ammonia and is hygroscopic (readily absorbs moisture).
- Ammonia has alkaline properties and is corrosive.
- Ammonia gas dissolves easily in water to form ammonium hydroxide, a caustic solution and weak base.
- Ammonia gas is easily compressed and forms a clear liquid under pressure.
- Ammonia is usually shipped as a compressed liquid in steel containers.
- Ammonia is not highly flammable, but containers of ammonia may explode when exposed to high heat.

Ammonia interacts immediately upon contact with available moisture in the skin, eyes, oral cavity, respiratory tract, and particularly mucous surfaces to form the very caustic ammonium hydroxide. Ammonium hydroxide causes the necrosis of tissues through disruption of cell membrane lipids (saponification) leading to cellular destruction. As cell proteins break down, water is extracted, resulting in an inflammatory response that causes further damage.

Inhalation

Ammonia is irritating and corrosive. Exposure to high concentrations of ammonia in air causes immediate burning of the nose, throat and respiratory tract. This can cause bronchiolar and alveolar edema, and airway destruction

resulting in respiratory distress or failure. Inhalation of lower concentrations can cause coughing, and nose and throat irritation. Ammonia's odor provides adequate early warning of its presence, but ammonia also causes olfactory fatigue or adaptation, reducing awareness of one's prolonged exposure at low concentrations.

Children exposed to the same concentrations of ammonia vapor as adults may receive a larger dose because they have greater lung surface area-to-body weight ratios and increased minute volumes-to-weight ratios. In addition, they may be exposed to higher concentrations than adults in the same location because of their shorter height and the higher concentrations of ammonia vapor initially found near the ground.

Skin or Eye Contact

Exposure to low concentrations of ammonia in air or solution may produce rapid skin or eye irritation. Higher concentrations of ammonia may cause severe injury and burns. Contact with concentrated ammonia solutions such as industrial cleaners may cause corrosive injury including skin burns, permanent eye damage or blindness. The full extent of eye injury may not be apparent for up to a week after the exposure. Contact with liquefied ammonia can also cause frostbite injury.

Ingestion

Exposure to high concentrations of ammonia from swallowing ammonia solution results in corrosive damage to the mouth, throat and stomach. Ingestion of ammonia does not normally result in systemic poisoning. Employees at LP Gas Industrial Equipment Co. are provided with and required to use impervious clothing, gloves, face shields and other appropriate protective clothing necessary to prevent any possibility of skin contact with liquid anhydrous ammonia or aqueous solutions of ammonia containing more than 10% by weight of ammonia. Similar precautions should be taken to prevent the skin from becoming frozen from contact with vessels containing liquid anhydrous ammonia.

LP Gas Industrial Equipment Co. requires employees to be aware of owners' contingency plans and provisions. Employees are informed where ammonia is used in the host facility and aware of additional plant safety rules.

ARSENIC EXPOSURE SAFETY

Purpose

The purpose of this procedure is to identify the controls and actions necessary to prevent adverse health effects to employees from occupational exposure to arsenic, and to ensure that LP Gas Industrial Equipment Co. arsenic exposure management practices meet regulatory requirements.

Scope

This procedure applies to all LP Gas Industrial Equipment Co. operations where employees may be exposed to arsenic. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers LP Gas Industrial Equipment Co. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Background

Arsenic exposure in the workplace occurs through inhalation, ingestion, dermal or eye contact. Chronic exposure to arsenic can lead to dermatitis, mild pigmentation keratosis of the skin, vasospasticity, gross pigmentation with hyperkeratinisation of exposed areas, wart formation, decreased nerve conduction velocity, and lung cancer. Acute exposures can cause lung distress and death.

Responsibilities

Managers and Supervisors

• In coordination with the Safety Manager, develop and implement written project/task specific arsenic exposure management procedures prior to the start of activities to reduce exposure to or below the permissible limits.
• Ensure personnel are aware of work that has the potential of exposure to arsenic.
• Ensure individuals responsible for monitoring areas of exposure are properly trained.
• Ensure personnel receive documented medical surveillance if required.
• Ensure that all affected employees receive initial and annual arsenic required training.
• Ensure that training materials are readily available to all affected employees.
• *Inform the Safety Manager of upcoming work involving arsenic-containing materials, allowing the Safety Manager to provide any necessary monitoring and training.*
• *Ensure employees have the appropriate personal protective equipment (PPE) and are properly trained in its use and care, including respiratory protection.*
• *Ensure employees comply with the arsenic compliance program.*

Safety Manager shall:

• *Implement a written arsenic compliance program when the PEL of 10 ug/m (3) is exceeded.*
• *Maintain the arsenic compliance program, notifying management of any regulatory changes and ensuring compliance with federal and state requirements.*

Affected Employees shall:

• Comply with the arsenic compliance program, consulting with the supervisor or Safety Manager to ensure the proper PPE is used when required.
• Comply with the medical surveillance program.
• Attend required training.
• Wear respiratory protection equipment and other specified PPE as required by the project/task specific control program.
• Maintain respiratory protection equipment in good working order, notifying the supervisor or Safety Manager of any problems prior to starting work.
• Review material safety data sheets or consult with the supervisor to identify any container with arsenic-containing material.

Procedure

Written Arsenic Compliance Program

Each worksite shall develop and implement a written arsenic compliance program if arsenic poses any occupational exposure. The minimum criteria to be contained within the written program shall include:
• A description of each operation where arsenic is omitted, machinery use, material processed, controls in place, crew size, employee job responsibilities and maintenance practices.
• A description of the specific means that will be employed to meet compliance.

The arsenic compliance program must be reviewed and updated annually or more often to reflect the status of the program.
The arsenic compliance program must be provided for examination and copying upon request of affected employees, their representatives or the Assistant Secretary and the Director of OSHA.

Exposure Monitoring

Determinations of airborne exposure levels shall be made from air samples that are representative of each employee's exposure to inorganic arsenic over an eight (8) hour period.

Housekeeping Plan
A written housekeeping and maintenance plan shall be kept at each worksite and shall list appropriate frequencies for carrying out housekeeping operations and for cleaning and maintaining dust collection equipment. The plan shall be available for inspection by the Assistant Secretary of OSHA

Signage
Adequate signs shall be in place demarcating the regulated areas. If LP Gas Industrial Equipment Co. is not the host employer, then LP Gas Industrial Equipment Co. will verify proper signs are placed at the work location.
The host employer or LP Gas Industrial Equipment Co. shall post signs demarcating regulated areas bearing the following legend:

DANGER
INORGANIC ARSENIC
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
NO SMOKING OR EATING
RESPIRATOR REQUIRED

Respiratory Protection & PPE
Respiratory protection shall be provided in accordance with 29 CFR 1910.134 (see LP Gas Industrial Equipment Co. Respiratory Protection Program).
Respiratory protection will be used during the following circumstances required while working with arsenic:
• Periods necessary to install or implement feasible engineering or work-practice controls.
• Work operations, such as maintenance and repair activities, for which LP Gas Industrial Equipment Co. establishes that engineering and work-practice controls are not feasible.
• Work operations for which engineering, and work-practice controls are not yet sufficient to reduce employee exposures to or below the permissible exposure limit.
• Emergencies.

Where the possibility of skin or eye irritation from inorganic arsenic exists, and for all workers working in regulated areas, LP Gas Industrial Equipment Co. shall provide at no cost to the employee and shall ensure that employees use appropriate and clean protective work clothing and equipment including, but not limited to, coveralls, gloves, shoes or coverlets, and face shields or vented goggles.

Change Rooms & Showers
LP Gas Industrial Equipment Co. shall provide for employees working in regulated areas or subject to the possibility of skin or eye irritation from inorganic arsenic, clean change rooms equipped with storage facilities for street clothes and separate storage facilities for protective clothing and equipment. LP Gas Industrial Equipment Co. shall assure that employees working in regulated areas or subject to the possibility of skin or eye irritation from inorganic arsenic shower at the end of the work shift.

Medical Surveillance
LP Gas Industrial Equipment Co. shall establish and maintain an accurate record for each employee subject to medical surveillance.

Training
Training shall be conducted at or before initial assignment and annually thereafter for all employees who are potentially exposed to arsenic and LP Gas Industrial Equipment Co. will ensure employee participation. Training materials must be readily available to all employees.
All training shall be documented.

ASBESTOS SAFETY PROGRAM

Purpose

The purpose of this program is to establish guidelines and procedures in the operations and maintenance of asbestos containing materials at LP Gas Industrial Equipment Co. to protect all employees, contractors, visitors and vendors from potential health hazards of asbestos related diseases.

This Program applies to all buildings and structures owned by LP Gas Industrial Equipment Co., to all LPGIE employees and sub-contractors of LP Gas Industrial Equipment Co., to occupants of LP Gas Industrial Equipment Co. buildings and to external organizations who may come into contact with or disturb asbestos-containing material in LP Gas Industrial Equipment Co. buildings. The Program applies to routine work during which an employee might encounter asbestos as well as work undertaken to repair or remove asbestos-containing material.

Policy

It is the policy of LP Gas Industrial Equipment Co. that only qualified employees shall be involved in any asbestos repairs, maintenance or removal. All unqualified employees shall be protected from exposure to asbestos fibers by isolating and controlling access to all affected areas during asbestos work. All tasks involving the disturbance of asbestos containing material will be conducted only after appropriate work controls have been identified and implemented. A qualified supervisor shall be available at asbestos controlled work sites during all activities. Proper personal protective equipment, vacuums and HEPA filters shall be used and properly maintained. If outside contractors are used, the company shall ensure all contractor employees have been properly trained and have been issued proper equipment and protective gear.

Responsibilities

Management:

* Ensure all Asbestos Containing Material is identified and labeled
* Ensure training is effective for authorized employees
* Conduct medical surveillance of affected employees
* Establish engineering controls for all work with asbestos containing material
* Provide adequate and proper equipment and personal protective gear
* Ensure proper disposal of all asbestos containing material

Supervisors:

* Qualified supervisors shall provide effective on-site management during work with asbestos containing material
* Supervisors will notify the Safety Coordinator immediately upon discovering damaged asbestos material

Employees:

* Qualified employees must follow the exact procedures for repair or removal of asbestos containing material, including proper use of containment equipment, clean up equipment and personal protective gear.
* Unqualified employees are to stay clear of all asbestos work areas and report any damaged asbestos containing material to their supervisor

Hazards

Asbestos is a common, naturally occurring group of fibrous minerals. Asbestos fibers have been used in a variety of building materials; however, LP Gas Industrial Equipment Co. takes an aggressive effort to use non-asbestos containing materials in new construction and renovation projects. Generally, most asbestos is found in pipe insulation, doors, textured paints and plasters, structural fireproofing, and floor tiles. Friable asbestos (that is, material that contains more than 0.1% asbestos by weight and can be crumbled by hand) is a potential hazard because it can release fibers into the air if damaged. Long term exposure to airborne asbestos is necessary for chronic lung disease. Significant and long term exposure to asbestos from activities that directly disturb asbestos-containing materials (such as asbestos mining) can lead to a variety of respiratory diseases, including asbestosis

and mesothelioma (cancer of the lung lining). Asbestosis is a non-malignant, irreversible disease resulting in fibrosis of the lung. Asbestos-related cancers tend also to result from substantial long-term exposure; however, mesothelioma may result from much smaller exposures to asbestos.

Hazard Control

Engineering Controls:
Engineering controls include the use of enclosures such as monitoring equipment, glove bags, tenting, negative pressure work areas, HEPA filters, controlled vacuums, water misters and other equipment to ensure containment and clean-up of asbestos work areas.
Administrative Controls:
All qualified workers shall be issued proper personal protective equipment, such as respirators, disposable coveralls, gloves, etc. Written procedures and management authorizations are required for all work involving asbestos containing material

Training Control

All qualified employees, supervisors and managers shall receive the proper level of training, as outlined in this programs

Definitions
Asbestos - Asbestos is a generic term describing a family of naturally occurring fibrous silicate minerals. As a group, the minerals are noncombustible, do not conduct heat or electricity and are resistant to many chemicals. Although there are several other varieties that have been used commercially, the most common 141asbestos mineral types likely to be encountered in LP Gas Industrial Equipment Co. buildings are chrysotile (white asbestos), amosite (brown asbestos), and crocidolite (blue asbestos). Among these, white asbestos is by far the most common asbestos mineral present in LP Gas Industrial Equipment Co. buildings.
Friable Asbestos - Friable asbestos material means finely divided asbestos or asbestos-containing material or any asbestos-containing material that can be crumbled, pulverized or powdered by hand pressure. Individual fibers in friable asbestos-containing material can potentially become airborne and can then present a health hazard. Three types of friable material commonly used in buildings are:

- Sprayed fibrous fireproofing
- Decorative or acoustic texture coatings
- Thermal insulation

Non-friable Asbestos - Non-friable asbestos includes a range of products in which asbestos fiber is effectively bound in a solid matrix from which asbestos fiber cannot normally escape. Non-friable asbestos includes a variety of products including asbestos cement tiles and boards and asbestos reinforced vinyl floor tiles. Cutting, braking, sanding, drilling of similar activities can release asbestos fiber from even non-friable asbestos materials.

Asbestos Work Categories

Category 1:
Work includes the installation or removal of non-friable asbestos in which the asbestos fiber is locked in a binder such as cement, vinyl or asphalt which holds the material together.
Category 2:
Work involves work with friable asbestos that is of short duration in situations which create low levels of airborne asbestos. Example of category 2 work are enclosure of friable asbestos, application of tape or sealant to asbestos containing pipe insulation and minor removal of friable asbestos and minor installation, maintenance or repair work above false ceilings where sprayed asbestos fireproofing is present on beams.
Category 3:
Work involves possible exposure to friable asbestos over long periods of time or work that generates high levels of asbestos. Included in category 3 work are removal projects where relatively large amounts of asbestos are removed from a building including removal of friable asbestos from structural material, cleaning or removal of heating or air handling equipment that has been insulated with asbestos. Also included in category 3 work are cuttings or grinding of asbestos containing materials using power tools.

General Rules:
When in doubt, treat all material as containing asbestos and comply with all applicable rules and regulations and protective measures.

All Asbestos Containing Material (ACM) will be handled by certified and licensed asbestos abatement personnel. The friability of the ACM will dictate the type of removal/maintenance required.

Employees who are uncertified and unlicensed will not handle any ACM >1%.
This will include encapsulation projects, renovation/removal and/or demolition of any type of structure. This will prevent the potential for accidental exposure from the mishandling of any ACM.
When an uncertified, unlicensed employee questions whether they may be handling suspect ACM, the employee will immediately contact their supervisor.
The employee shall not resume working at the site until the area has been checked to verify the material is not ACM.

Uncertified, unlicensed employees will not cross over a barrier/containment area where asbestos projects are in progress.

Any employee who discovers ACM or suspect ACM in damaged or poor condition should report it to their supervisor so the identified material is repaired.

Medical Examinations

Employees assigned to asbestos removal will be given medical examinations at Company expense in compliance with 29 CFR 1926.1101 and 40 CFR 763 - Subpart G.

- Within 30 days of first employment or assignment to a job exposing the employee to asbestos containing material
- Annually
- Within 30 days of termination of employment
- Medical examination for employees assigned to asbestos removal will include:
- Medical and work history with special emphasis directed to symptoms of the respiratory system, cardiovascular system and digestive tract
- Medical questionnaire contained in 29 CFR 1926.1101
- A physical examination including a chest roentgenogram and pulmonary function test that includes measurement of the employee's forced vital capacity and expiratory volume.
- No employee shall be assigned to tasks requiring the use of respirators if an examining physician determines the employee will be unable to function normally while using it or that the employee might otherwise be impaired
- Records of all physical examinations performed for asbestos work related activities will be maintained permanently by LP Gas Industrial Equipment Co.

Asbestos Inventory

LP Gas Industrial Equipment Co. has conducted surveys and prepared a written inventory of the type and locations of asbestos-containing material to:

- Allow for periodic condition inspections
- Allow for maintenance and repair of damaged asbestos
- For each building the inventory contains the following information
- Type of asbestos-containing material (sprayed fireproofing, texture coating, or thermal insulation)
- The location of the material
- When it has been sampled, the type and percentage of asbestos present

Also included in the survey information is sampling results showing the absence of asbestos in material which might be mistaken for an asbestos-containing material.

Asbestos Identification

Asbestos identification system is used to alert people to the presence of asbestos.
Asbestos is identified by tags, stickers, pipe labels, signs and other high visibility means. Where feasible, stickers indicate the presence of asbestos in thermal insulation, in asbestos board and tiles and in other locations. Warnings may also be placed near the entrances of rooms -particularly mechanical rooms where unusually large amounts of asbestos may be present.

Inspection

Inspection of the condition of friable asbestos is integrated into the Maintenance Department routine inspection program. Periodic inspections and reports on the status of facilities and equipment in LP Gas Industrial Equipment Co. buildings are produced to note damage to asbestos that might result in release of asbestos.
When damaged ACM is discovered a work order will be issued to initiate the assessment/ remediation as required.

Access Control

Access to mechanical and electrical rooms, service shafts, tunnels and other locations is to be restricted where asbestos may be present in unusually large amounts and where other hazards may also be present. Such areas are locked and accessible only to authorized personnel. Where sprayed asbestos-containing fireproofing is present in a building above a false ceiling, access to the space is restricted.

Repair and Maintenance of ACM

Should an LPGIE employee or a contractor encounter material which is not identified and is not listed in the Asbestos Inventory and which might reasonably be expected to be asbestos, the person will stop any work which could create airborne asbestos and report the discovery to a supervisor. Where it is determined that friable asbestos-containing material is in a condition that could likely lead to inhalation exposure, the supervisor will immediately limit access to the location and initiate repairs, removal or encapsulation. Where there is reasonable doubt about the composition of a friable material, it will be treated as asbestos until testing demonstrates that asbestos is present at levels below 1%. Cleanup and repair of asbestos-containing material will only be carried out by the appropriate clean up procedure by employees or contractors who have been properly trained.

When routine work is to take place in an area where asbestos is present or when the work might disturb friable asbestos, LPGIE employees will be informed of the potential for exposure through a notation on the work order. If upon reviewing the work situation, the employee believes that normal work practices do not provide an adequate measure of safety, the employee will report these concerns to the supervisor. The supervisor will review the work situation and authorize any required additional precautions. All LPGIE employees, visitors, vendors and contractors will be notified in advance when work involving asbestos is to be carried out in any area of LP Gas Industrial Equipment Co. buildings which they occupy.

Training

All LP Gas Industrial Equipment Co. employees who remove, repair or work around friable asbestos and those whose work might disturb friable asbestos-containing material will be trained to carry out their work without endangering themselves, their coworkers or other building occupants.

Level 1 Training:
All affected Maintenance Department employees who do not receive levels 2 or 3 training will receive Level 1 training which will acquaint them with:

- The types, properties and uses of asbestos
- Ways to recognize asbestos
- The hazards of asbestos fiber inhalation
- Types of activities which could release asbestos fibers
- The LP Gas Industrial Equipment Co. Asbestos Inventory and Asbestos Identification

State and Federal regulations regarding work with asbestos and disposal of asbestos-containing waste
Refresher training will be provided every second year. Only those with Level 1 training will be allowed to carry out or supervise Category 1 asbestos work.

Level 2 Training:
All LP Gas Industrial Equipment Co. employees who conduct or may be expected to conduct Category 2 or 3 works will receive training in:

- All Level 1 topics
- Ways to recognize and avoid damage to asbestos-containing material
- The use, fitting, limitations, care and disposal of protective equipment
- Asbestos containment and ventilation during removal
- Wet and dry clean up procedures
-

Refresher training will be provided every second year. Except for actual asbestos removal, only those with Level 2 training will be allowed to carry out or supervise Category 2 asbestos work.

Level 3 Training:
Level 3 training will be provided for insulators and others who are authorized to remove friable asbestos and for those who supervise asbestos removal work that is performed by either LP Gas Industrial Equipment Co. Employees or external contractors.
Level 3 training provides practical hands-on experience in all phases of small and medium scale asbestos removal. Those who will carry out small scale asbestos removal work will receive additional on-the-job training working with experienced asbestos workers.

Contracted Work

Asbestos Removal Work:
Major asbestos removal is normally contracted to external firms who specialize in asbestos removal work. LP Gas Industrial Equipment Co. requires that all such work be carried out in accord with the requirements established by Georgia regulations. At all such projects the contractor will ensure that cleanup is properly completed and that all asbestos and asbestos contaminated material is collected, and disposed of in accord with the Georgia regulations. The contractor will be required to submit air testing results to demonstrate that the cleanup has been carried out properly and the area can be reoccupied safely.

Other Work:
LP Gas Industrial Equipment Co. often employs contractors to service equipment such as, telephones, refrigeration and air conditioning equipment and to carry out other construction and renovation projects. When contractors are required to work in areas where asbestos is present or there is a possibility of disrupting friable asbestos LP Gas Industrial Equipment Co. will provide:

Notification of the known locations and types of asbestos present (or suspected to be present) in the area where the contractor will work Information on LP Gas Industrial Equipment Co. asbestos labeling system.

Asbestos Work Procedures

Discovering Damaged Asbestos:
When asbestos is discovered the following steps describe the actions to be taken by trades Employees and their supervisors. The steps comply with LP Gas Industrial Equipment Co. Asbestos Policy, which states the long term goal is to remove all asbestos and the short term goal is to manage asbestos to minimize exposure to airborne asbestos. It is important to note that all asbestos is to be logged in the inventory, regardless of its state of repair.

1) Complete the Asbestos Inventory Form - The employee is to complete the FIRST SECTION of the Asbestos Inventory Form and submit it to his Supervisor.
2) Sampling - The Supervisor will determine if samples are required to confirm the existence of asbestos. This will be done by checking the inventory to see if asbestos in that location has already been tested. If necessary, the Supervisor will close off an area (mechanical spaces) or shut down equipment (air handling units) pending test results and remedial action.

3) Repair/Removal and Cleanup - If the asbestos is damaged, it is certain a clean-up will be required. The clean-up and repair should happen together. The repair and clean-up will be charged to a work order and the number recorded on the Inventory Form. If removal is required, the supervisor will determine whether the removal will be carried out by a contractor or by LP Gas Industrial Equipment Co. Employees. The work order number must be logged on the Inventory Form.
4) Labeling - All known asbestos containing material should be labeled. For asbestos-pipe insulation, yellow paint will be applied directly to the insulation. In areas where asbestos is present in multiple locations it will be sufficient to provide warning signage at each entry point into a room. Blue paint will be applied to any new insulation which is not readily obvious to be asbestos free.
5) Logging in Database - After completing the Asbestos Inventory Form, it will be given to the Safety Coordinator for logging into the Asbestos Inventory.

Clean-up of Asbestos Containing Material

Asbestos only poses a health hazard when it becomes airborne and people inhale the fiber. When asbestos-containing material has been disturbed, effective clean-up will ensure that asbestos does not present a health hazard. Clean-up of dust which might contain traces of asbestos, such as a custodian might encounter in routine cleaning in buildings where asbestos is present, will not require special precautions. To ensure that clean-up of significant quantities of asbestos will not cause a health hazard; the following procedure will be followed:

- Clean-up of significant amounts of asbestos containing material will be only be done by Employees who have been trained and who are wearing appropriate protective clothing and a fitted, air-purifying respirator.
- Dry sweeping of asbestos-containing waste or other clean-up activities which will create airborne dust are not permitted
- Large pieces of asbestos containing material will be collected by hand and properly bagged in accord with the disposal procedure.
- Whenever possible, asbestos dust will be thoroughly wetted and clean up with a wet mop or a wet vac. Contaminated water will be discharged to a sewer.
- Containers, mops and other equipment which might be contaminated with asbestos will be rinsed with water and the rinse water discharged to a sewer.
- If additional clean-up is need it will be carried out using a vacuum equipped with a HEPA filter. Within Maintenance Department there is one vacuum assigned for asbestos clean-up.

Non-friable ACM Work

Asbestos that is effectively bonded in a non-asbestos matrix cannot easily become airborne. As such, provided the material is not broken or abraded, there is little risk of inhalation exposure to asbestos. To ensure that minor work involving non-friable asbestos (including vinyl asbestos tile, asbestos asphalt roofing, and asbestos ceiling and wall tile) the following procedure will be followed.

Procedure

- Before beginning the work the worker will carefully inspect the asbestos containing material to ensure that the planned work will not create airborne asbestos dust.
- Where dust that might contain asbestos fiber is present, the worker will clean the material using a wet method or a HEPA filtered vacuum.
- Following completion of the task the worker will carry out any required clean wet methods or a HEPA filtered vacuum and will then carefully bag for disposal all asbestos containing waste.

Note:
Cutting, drilling, sanding or breaking the material are likely to create airborne asbestos dusts and will require additional precautions

Work above false ceilings

Only workers who have successfully completed Level 2 Asbestos Safety Training and who are authorized to do so by Maintenance Department may move ceiling tiles or perform work above the dropped ceilings where asbestos

insulation is present on building structure. The following procedure shall be used whenever minor work such as installation of telephone or computer lines, or servicing of ventilation or lighting system components requires work above the suspended ceiling.

Procedure

Before removing a ceiling tile, the area around the tile shall be isolated by creating an enclosure of 4 ml or heavier polyethylene sheeting. The sheeting shall be taped to the ceiling t-bar and the floor using duct tape.

Those working within the enclosure shall wear a properly fitted, air purifying respirator equipped with a particulate filter designed to remove asbestos fibers from inhaled air and a pair of coveralls.

Air supply or return grills located within the enclosure shall be sealed with 4 mil or thicker polyethylene sheeting to prevent contamination of the ventilation system.

The ceiling tile shall be carefully removed and the upper surface vacuumed with a vacuum fitted with a HEPA filter.

The worker shall then carefully vacuum the upper surface of surrounding tiles before carrying out the assigned task.

Following completion of the above-the-ceiling work, the removed ceiling tile shall be replaced and the interior of the enclosure carefully cleaned using wet cleaning techniques or a HEPA filtered vacuum.

Note:
Additional precautions may be required depending upon the specific tasks to be undertaken. Any task, which is likely to disrupt the sprayed-on insulation, will require additional precautions.

Repairs to ACM

Where asbestos is known or believed to be present in damaged insulation, repairs or removal are needed to prevent asbestos fiber from becoming airborne. Only workers who have successfully completed Level 3 Asbestos Safety training and who are authorized to do so may undertake such repairs or removal. The following procedure will be used whenever minor repairs to asbestos containing insulation are undertaken:

Procedure

Access to areas where minor repair is to be carried out will be restricted to authorized people only. When necessary, signs will be posted advising of access restrictions.
Workers repairing asbestos containing insulation will wear coveralls and a properly fitted, air purifying respirator equipped with a particulate filter designed to remove asbestos fibers from inhaled air.
Before beginning the repair, the area will be carefully cleaned using the Clean-up of Asbestos-Containing Material Procedure
When feasible a drop cloth shall then be placed beneath the insulation to be repaired.
Before beginning the repair, all feasible steps (wetting with amended water, encapsulating adjacent asbestos-containing material, etc.) will be taken to prevent the release of asbestos fibers.
Following the repair the worker will carefully bag for disposal all asbestos containing waste and clean the surrounding area using wet cleaning techniques or a HEPA filtered vacuum.

Single Use Glove Bag Procedure

The following procedure will be followed when single-use asbestos removal glove bags are used. The procedure may only be used on tasks that are small enough to be completely enclosed in the glove bag and which do not leave exposed asbestos in place when the bag is removed.

Preparation

Only an employee who has completed level 3 training and who is wearing appropriate coverall and an air purifying respirator (3M 6000 Series with a purple, 6240 particulate filter or equivalent) will carry out glove bag removal of asbestos.

Before beginning removal work, access to the area will be restricted. If the work site is located in areas where other Maintenance Department Employees might be exposed to asbestos and in all work sites located in publicly accessible areas, warning notices will be posted.

Steps will be taken to prevent accidental movement, contact with heat, cold or electricity, or release of chemicals.

The work area will be cleaned using a HEPA filtered vacuum or wet cleaning to remove asbestos-containing material contaminating the immediate work area.
Where possible a plastic sheet will then be placed beneath the pipe or fitting from which the asbestos is to be removed.

Steps will be taken to prevent exposure where damage to the insulation might allow release of fibers. Steps include making temporary repairs using duct tape or wetting the exposed fiber using amended water.

Glove Bag Removal

The asbestos-containing material will be thoroughly wetted using amended water.

With tools in bag, the single-use bag will be positioned and secured using adhesive and tape as necessary.

Working through the gloves, the asbestos will be removed exercising care to avoid puncturing the bag.

When removal is compete or bag is full, sprayer (containing amended water) will be inserted into the bag and the pipe or fitting, tools and the bag interior will be washed.

Tools will then be placed in an inverted glove withdrawn from bag and the glove sealed from the bag using duct tape.

The tools will then be removed by cutting through the duct tape ensuring that both the bag and the glove remain sealed.

The tools will then be submerged in water and the glove opened. Tools will be cleaned under water.

The glove bag will then be carefully removed, sealed and placed in a sealed container pending packaging for disposal.

Clean Up

The surface of the pipe or fitting will be carefully wet wiped and treated with sealer.

The plastic sheet will then be carefully wet wiped and rolled up.

All solid waste created during removal jobs including glove bags, disposable coveralls, wipe rags and plastic sheeting will be treated as asbestos containing waste and handled as detailed in the disposal procedure.

Multiple-Use Glove Bag Procedure

This procedure describes the use of multiple use glove bags. It may be used on tasks that require the bag to be repositioned to complete the entire job.

Preparation

Only an Employee who has completed level 3 training and who is wearing appropriate coverall and an air purifying respirator (3M 6000 Series with a purple,
6240 particulate filter or equivalent) will carry out glove bag removal of asbestos.

Before beginning removal work, access to the area will be restricted. If the work site is located in areas where other Maintenance Department Employees might be exposed to asbestos and in all work sites located in publicly accessible areas, warning notices will be posted.

Steps will be taken to prevent accidental movement, contact with heat, cold or electricity, or release of chemicals.

The work area will be cleaned using a HEPA filtered vacuum or wet cleaning to remove asbestos-containing material contaminating the immediate work area.
Where possible a plastic sheet will then be placed beneath the pipe or fitting from which the asbestos is to be removed.

Steps will be taken to prevent exposure where damage to the insulation might allow release of fibers. Steps include making temporary repairs using duct tape or wetting the exposed fiber using amended water.

Glove Bag Removal

The asbestos containing material will be thoroughly wetted using amended water.

With tools in bag, the bag will be positioned and secured using adhesive and tape as necessary.

Working through the gloves, the asbestos will be removed exercising care to avoid puncturing the bag.

When removal is compete or bag is full, sprayer (containing amended water) will be connected to the valve and the pipe or fitting, tools and the bag interior will be washed. If the bag is too repositioned to remove additional asbestos, remaining exposed ends of asbestos will be thoroughly damped.

Tools will then be placed in an inverted glove withdrawn from bag and the glove sealed from the bag using duct tape.

The tools will then be removed by cutting through the duct tape ensuring that both the bag and the glove remain sealed.

The tools will then be submerged in water and the glove opened. Tools will be cleaned under water.

The glove bag will then be removed and placed in a sealed container pending packaging for disposal.

Clean Up

The surface of the pipe or fitting will be carefully wet wiped and treated with sealer.
The plastic sheet will then be carefully wet wiped and rolled up.
All solid waste created during removal jobs including glove bags, disposable coveralls, wipe rags and plastic sheeting will be treated as asbestos containing waste and handled as detailed in the disposal procedure.

Modified Enclosure Procedure

The following Modified Enclosure Method may be used for removal of asbestos from ceilings, walls, beams pipes or other equipment providing that the job is small enough that it can be completed within one shift without the need for repeated entry into the work area.

The method may not be used for jobs involving:

- Amosite
- Crocidolite
- Friable asbestos of any type

Additional precautions will be required if the exhaust air cannot be discharged outdoors.
Modified enclosure removals may only be undertaken by Employees who have completed level three training and who have received modified enclosure removal training.

Preparation

If dust which might contain asbestos is present, pre clean the work site using wet cleaning or HEPA vacuum cleaning.

Protect floor, walls equipment within the work area which might be damaged by water.
Ensure that steps are taken to protect workers from any energized equipment or systems located within the work area.

Post signs and restrict access to work area.

Seal area to prevent air leakage into adjacent areas or air handling system using framing as necessary, 150 ml plastic sheeting, tape, sealants and caulking as required. Construct an overlapping, double curtained entrance to work area.

Install HEPA filtered negative air unit in work area. Unit must provide 4 air changes per hour while maintaining a pressure difference of -0.02 inches of water.
Direct filtered exhaust air outdoors.

Removal

Employees entering the work are shall wear a disposable Tyvek type suit including a head cover and an air purifying respirator (3M 6000 Series with a purple, 6240 particulate filter or equivalent).

With the area sealed and negative air unit in operation, saturate asbestos containing material with amended water using airless sprayer.

Remove asbestos using additional amended water as needed being careful not to create airborne dust

Brush the area from which asbestos has been removed and then wet wipe or vacuum to remove final traces of asbestos. Following removal of asbestos, treat the area with slow dry sealer.

Clean Up

Place all waste in specially marked heavy duty asbestos waste disposal bags. Seal waste bags securely using duct tape before removing from the enclosure. Wipe all tools with a damp cloth to remove traces of asbestos contamination before removing them from the enclosure.

Wet wipe or vacuum (using the designated shopvac marked ASBESTOS ONLY) all areas within the enclosure not covered by plastic to remove traces of asbestos.

If a HEPA filtered shopvac was used, it shall be wiped with a damp cloth and the hose end covered with tape before being removed from the enclosure. If the vac is to be opened to change a filter or bag, the work will be carried out in an enclosure under negative pressure with HEPA filtered air exhausted outdoors.

Wet wipe the interior of plastic sheeting used to form the enclosure. Remove plastic by rolling, wet wiping any visible particulate matter that make be visible.

Wet wipe the disposable Tyvek suit and remove. Place the plastic sheeting, the suit and the used respirator cartridges in an asbestos waste bag along with other remaining contaminated material.

Arrange for reconnection of any services running through the work area which were disconnected to accommodate removal work.

Dispose of waste as per waste disposal procedure.

Disposal of Asbestos Containing Waste Materials

Handling and disposal of asbestos containing waste is regulated by both State and Federal regulations. To ensure compliance with these regulations and to ensure that no-one is exposed to asbestos the following procedure is to be followed:

- Only an Employee who has completed Level 2 training and who is wearing appropriate air purifying respirator will package asbestos waste.
- Waste asbestos will be thoroughly wetted and then placed in specially labeled 6 mil plastic bags. The bag will be securely sealed using duct tape.
- The bagged asbestos will then be placed in a second, labeled 6 mil plastic gab which is again taped closed
- Asbestos waste may be transported from the location where it was produced to an interim storage location if the bags are free from punctures 153or tears and if the outside of the bag is free of asbestos. Asbestos waste will be transported in an enclosed vehicle or beneath a secured tarpaulin. No other cargo may be carried while the waste asbestos is being moved. After the waste asbestos is moved to an interim storage site, the driver will, if necessary clean the vehicle to remove asbestos contamination.
- Asbestos waste must be disposed of at a waste disposal site which is approved to receive asbestos by the State Department of Georgia.
- Shipment of waste asbestos must be coordinated with the waste disposal site which is to receive the waste. Asbestos disposal will normally be carried out by external contractors.
- Shipments for disposal must be done in accord with Georgia and Federal
- DOT regulations and must be accompanied by a properly completed shipping document.

ASSURE EQUIPMENT GROUNDING CONDUCTOR PROGRAM

It is the policy of LP Gas Industrial Equipment Co. to establish and implement assured equipment grounding conductor program on construction sites covering all cord sets, receptacles which are not a part of the permanent wiring of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. This policy shall apply to all construction sites not equipped with ground fault circuit interrupters in accordance with OSHA standard 1926.400 (h)

Supervisors are designated to implement the assured equipment grounding conductor program:

> 1926.32 (f) defines competent person as one who is capable of identifying existing and predictable hazards in the surrounding area or working conditions which are unsanitary, hazardous or dangerous to employees, and who is authorized to take prompt corrective measures to eliminate them.

Supervisors will be responsible and accountable for the following:

Each cord set, attachment cap, plug and receptacle of cord set and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins, or insulation damage, and for indication of possible internal damage. Equipment found damaged or defective may not be used until repaired.

Supervisors are responsible for tests on all cord sets, receptacles which are not a part of the permanent wiring of the building or structure, and cord and plug connected equipment repaired to be grounded. Tests shall be documented on the log for assured equipment grounding conductor program and shall be on the job site for inspection by OSHA officials and any affected employee. Equipment that does not meet prescribed test shall not be put into service. The following tests shall be performed:

A. All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

B. Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding shall be connected to its terminal.

In accordance with OSHA Construction Safety and health Standards 1926.21 Safety Training and Education, supervisors shall attend such training sessions as the company may deem necessary.

A copy of this policy shall be at the job site for inspection and copy by OSHA officials and any affected employee. Management retains the authority to designate that certain jobs comply with regulation 1926.400 (h) by use of ground fault circuit interrupters in lieu of the program established above. A copy of the completed forms will be kept on each applicable job site for inspection purposes.

BENZENE AWARENESS

Purpose

The purpose of this policy is to prevent potential accidents from exposure to benzene by educating LP Gas Industrial Equipment Co. employees as to the hazards presented by benzene in the performance of their duties.

Scope

In this section we will help LP Gas Industrial Equipment Co. employees to understand:

- What is Benzene?
- Hazardous Characteristics
- Other Common Names
- Potential Exposure Points
- Effects of Exposure
- Personal Protective Equipment used to minimize injury
- Safety Precautions
- Contingency Plans

What is Benzene?

Benzene is a toxic, flammable, and colorless to light yellow liquid which has an aromatic odor. It is lighter than water and insoluble (not able to dissolve in water).
Benzene has been found to be in association with various fossil fuels and some of their byproducts.

Other Common Names

Other common names for benzene include:

- Benzol
- Carbon Oil
- Coal Naphtha
- Cyclohexadiene
- Phenyl Hydride

Points of Exposure

LP Gas Industrial Equipment Co. employees may encounter benzene during the performance of many routine duties such as:

- Tank Gauging
- Field Maintenance
- At Refining Sites
- Working Near Production Piping
- Well Heads
- Flow Lines
- Fueling Stations
- Effects of Exposure

Benzene exposure may present many different serious physical and health hazards, depending upon the rout and the duration of exposure. Primarily LP Gas Industrial Equipment Co. employees can be exposed through inhalation, ingestion or absorption, allowing benzene to influence many different target organs including the:

- Eyes
- Skin
- Respiratory System
- Central Nervous System
- Blood
- Bone Marrow

Acute (short term) effects may include:

- Dizziness
- Vomiting
- Coughing
- Eye, Skin, and Respiratory Irritation

- Weakness
- Exhaustion
- Euphoria
- Shortness of Breath
- Irritability

Chronic (long term) effects may include

- Staggered Gait
- Anorexia
- Dermatitis
- Depression
- Eye, Skin, and Respiratory Track Irritation
- Leukemia
- Anemia
- Depression of Immune System

Permissible Exposure Limits

The Occupational Safety and Health Administration (OSHA) has set the Permissible Exposure Level (PEL) at 1 part per million (PPM) based off the Time Weighted Average (TWA) of 8 hours in a 5 day work week. OSHA also placed the Short Term Exposure Level (STEL) at 5 ppm. This is a level based off a TWA of 15 minutes.

Personal Protective Equipment (PPE)

When working in potential Benzene areas where exposure amount will be above the PEL, LP Gas Industrial Equipment Co. employees will evaluate the situation and use PPE according to the level of hazard presented. This equipment may include:

- Respirators
- Chemical Resistant Gloves
- Chemical Resistant Clothing with Long Sleeves
- Aprons
- Safety Goggles
- Face Shields
- Chemical resistant boots
- Safety Showers
- Fire Retardant Clothing

Safety Precautions

As mentioned before Benzene is also extremely flammable with a flash point at 12 degrees Fahrenheit and lower explosive limit (LEL) of 1.2%. For this reason it is extremely important that LP Gas Industrial Equipment Co. identify all potential sources of ignition including smoking, and take all necessary precautions including permits, proper fire extinguishers, smoking only in designated areas, and proper training to minimize the potential of a fire.

Smoking is prohibited in potential benzene areas

Contingency Plans/ Emergency Plans

Emergencies will vary from site to site and location to location therefore LP Gas Industrial Equipment Co. employees must be informed of potential hazards in their area of operation prior to beginning work activities, including owner contingency plans on location, potential benzene areas, and host facility additional plant safety rules.

BLOODBORNE PATHOGEN PROGRAM

Purpose

An infection control plan must be prepared for all persons who handle, store, use, process, or disposes of infectious medical wastes. This infection control plan complies with OSHA requirement, 29 CFR 1910.1030, Blood Borne Pathogens. The plan includes requirements for personal protective equipment, housekeeping, training, and a procedure for reporting exposures.

Responsibilities

- The Company Nurse or Physician will conduct the Bloodborne Pathogen Program and maintain records of training and inspections for this program.
- Management will ensure proper conduct of the program though inspections, record keeping and periodic audit.

Definitions

Biological Hazard - The term biological hazard or biohazard is taken to mean any viable infectious agent that presents a risk, or a potential risk, to the well-being of humans.

Medical Wastes/Infectious Wastes - All waste emanating from human or animal tissues, blood or blood products or fluids. This includes used first aid bandages, syringes, needles, sharps, material used in spill cleanup and contaminated PPE or clothing.

Universal Precautions - Refers to a system of infectious disease control that assumes that every direct contact with body fluids is infectious and requires every employee exposed to be protected as though such body fluids were infected with blood-borne pathogens. All infectious/medical material must be handled according to Universal Precautions (OSHA Instruction CPL 2-2.44A)

Hazards

Unprotected exposure to body fluids presents the possible risk of infection from a number of bloodborne pathogens notably Hepatitis and HIV.

Hazard Control

Engineering Controls - prevention of exposure to bloodborne pathogens engineering controls include proper storage facilities and containers, syringes designed to prevent accidental needle sticks, autoclaves and disinfectant equipment.

Administrative Controls - prevention of exposure to bloodborne pathogen administrative controls include universal precautions, assignment of PPE, employee training, use of spill kits specifically designed for blood and body fluids, restricted access to waste collection points and waste disposal procedures.

Reporting and Record Keeping:
Any reports required by OSHA will be maintained by the Occupational Health Department. All reports (Training Certificates, Notice of HBV Vaccinations, exposure reports) will be maintained for 30 years. Occupationally contracted HBV or HIV will be 10 recorded on the OSHA 300 Log of Occupational Injuries and Illnesses as an illness. Exposures to blood-borne pathogens from contact with sharps will be recorded on the OSHA 300 Log of Occupational Injuries and Illnesses if treatment such as gamma globulin, hepatitis B immune globulin or hepatitis B vaccine is prescribed by a Physician.

Training

All personnel assigned duties as EMT, Paramedics, First Aid Station Staff, HAZMAT responders; Custodial Employees (those that clean rest rooms, etc.) will receive initial and annual training by a qualified medical practitioner on the Bloodborne Pathogen Program. Additionally, personnel trained in First Aid shall be offered this annual training.

All new and current affected Employees will be trained initially and annually thereafter.
The content of the training program will include:

1. Company Policy
2. Types and transmission of Blood-Borne Pathogens
3. General Safety Rules
4. Universal Precautions
5. Use of Personal Protective Equipment
6. Medical Waste Disposal Procedures
7. Post Exposure Treatment and Procedures
8. HBV Vaccinations

Documentation of training will be by Control of Blood-Borne Pathogens Training Certificate

All Employees not affected by this Program will receive an overview of the program requirements during scheduled department Safety Meetings with documentation by
Safety Meeting Minutes Form.

Hepatitis-B Virus (HBV) Vaccinations

Occupational Health Professionals and those required to provide first aid or emergency response duties or medical care on a routine basis will be offered Hepatitis-B Virus (HBV) Vaccinations at Company expense. Employees that transfer to a job or their job is reclassified to include exposure to blood-borne pathogens will be offered HBV Vaccinations within 10 working days of the transfer or reclassification.

The choice for HBV vaccination is not mandatory. If an affected Employee chooses not to have the vaccination at the initial offering, they will have the opportunity to be vaccinated when they are ready. The Company will document the offer, acceptance or declination, and vaccination dates with the Notice of HBV Vaccinations Form.

Post Exposure Treatment and Notification Procedures

Should an affected Employee or an Employee acting as a "Good Samaritan" be occupationally exposed to HIV/HAV/HBV the affected Employee will report the exposure to the Company Nurse. The Company will provide for the Employee to be tested for HIV/HAV/HBV at Company expense. Following the initial blood test at time of exposure, LPGIE Employees will be retested at 6 weeks, 12 weeks and 6 months 11 to determine if transmission has occurred. During this period, the Employee will follow the recommendations provided by the Physician or the U. S. Public Health Service.

An "occupational exposure" is defined as blood or body fluid contact from an injured or ill Employee to the affected Employee or injury by a contaminated sharp object.

The source individual's blood is tested as soon as possible and after consent is obtained to determine HBV and HIV infectivity. (Hepatitis B surface Antigen, Hepatitis C Antibody and HIV Screen)

The exposed employee's blood shall be collected as soon as feasible and tested for HBV
(Hepatitis B Antibody, Hepatitis C Antibody) and HIV serological status after consent is obtained (Employee Consent for HIV Antibody Testing).

During all phases of Post Exposure, the confidentiality of the affected Employee and exposure source will be maintained on a "need to know basis". The Blood-Borne Pathogens Exposure and Treatment form is used to document the exposure and offer of medical assistance to the affected Employee and use the Medical Consent for BloodBorne Pathogens Testing form for the exposure source. The results of any HIV/HAV/HBV tests conducted will be provided to the exposed and source Employees within 5 business days of receipt.

General Procedures

The following procedures must be followed by personnel when in medical rooms or laboratories.

All supervisors must ensure that their staff is trained in proper work practices, the concept of universal precautions, personal protective equipment, and in proper cleanup and disposal techniques.

Resuscitation equipment, pocket masks, resuscitation bags, or other ventilation equipment must be provided to eliminate the need for direct mouth to mouth contact in groups where resuscitation is a part of their responsibilities.

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a potential for exposure to any health hazard.
Food and drink must not be stored in refrigerators, freezers, or cabinets where blood or other potentially infectious material is stored or in other areas of possible contamination.

According to the level of risk, wearing laboratory or protective clothing may be required for persons entering infectious disease laboratories. Likewise, showers with a germicidal soap may be required before exit.

Gowns, aprons, or lab coats must be worn whenever there is a possibility that body fluids could splash on skin or clothing.

Gloves must be made of appropriate disposable material, usually intact latex or vinyl.
They must be used in the following circumstances:

- When the employee has cuts, abraded skin, chapped hands, dermatitis, or similar conditions.
- When examining abraded or non-intact skin of a patient with active bleeding.
- While handling blood or blood products or other body secretions during routine laboratory procedures.

Employees must wash their hands immediately, or as soon as possible, after removal of gloves or other personal protective equipment and after hand contact with blood or other potentially infectious materials.

All personal protective equipment must be removed immediately upon leaving the work area, and if this equipment is overtly contaminated, it must be placed in an appropriate area or container for storage, washing, decontamination, or disposal.

Contaminated clothing must not be worn in clean areas or outside the building.

All procedures involving blood or other potentially infectious agents must be performed in a manner that will minimize splashing, spraying, and aerosolization.

Medical Wastes

Medical/infectious waste must be segregated from other waste at the point of origin.

Medical/infectious waste, except for sharps (i.e., razor blades, broken glass, needles, etc.) capable of puncturing or cutting, must be contained in double disposable red bags conspicuously labeled with the words "INFECTIOUS WASTE" and "BIOHAZARD."

Used needles or other sharps (razor blades, broken glass, scalpels, etc.) must not be sheared, bent, broken, recapped, or resheathed.

Infectious sharps must be contained for disposal in leak-proof, rigid puncture-resistant containers. Infectious waste contained as described above must be placed in reusable or disposable leak-proof bins or barrels that are conspicuously labeled with the words "INFECTIOUS WASTE" and "BIOHAZARD." These waste barrels are picked up regularly by an outside company licensed to handle infectious wastes.

All infectious agents, equipment, or apparatus must be disinfected in an autoclave or otherwise disinfected before being washed or disposed of. Each individual working with infectious bio-hazardous agents is responsible for dis-infection and disposal of these agents.

Biological wastes that do not contain radioactive or hazardous substances may be disinfected by steam sterilization (autoclave) then disposed of in the regular trash.

Liquid bio-hazardous waste may be disposed of in the sewage system following chemical decontamination.

Reusable glassware must be decontaminated in sodium hypo chlorite (household bleach) solution (1:9) prior to rinsing and acid washing. The glassware must then be sterilized in an autoclave.

To minimize the hazard to firefighters or emergency response personnel, at the close of each work day and before the building is closed, all infectious or toxic material must be placed in a refrigerator, placed in an incubator, or autoclaved or otherwise disinfected.

Infectious agents must not be placed in an autoclave and left overnight in anticipation of autoclaving the next day.

Floors, laboratory benches, and other surfaces in buildings where infectious agents are handled must be disinfected with a suitable germicide, such as 1:9 sodium hypo chlorite solution (household bleach) as often as necessary as determined by the supervisor.

The surroundings must be disinfected after completion of operations involving planting, pipetting, centrifuging, and similar procedures with infectious agents.
Infectious agents must not be dumped into the building drainage system without prior disinfection.

Cuts

If an employee has a needle stick, cut, or mucous membrane exposure to another person's body fluids he/she must report the incident immediately to the Company Nurse.

Blood Exposure

All employees exposed to human blood and blood products must report to the Company Nurse for information and possible inclusion in the Hepatitis B Immunization Program.

Infection Control Plan

The purpose of the Infection Control Plan is to protect the health and safety of the persons directly involved in handling the materials, Company personnel and the general public by ensuring the safe handling, storage, use, processing, and disposal of infectious medical waste. This plan complies with OSHA requirement proposed for 29 CFR 1910.1030, Bloodborne Pathogens.

Universal precautions

Refers to a system of infectious disease control which assumes that every direct contact with body fluids is infectious and requires every employee exposed to be protected as though such body fluids were infected with blood-borne pathogens. All infectious/medical material must be handled according to Universal Precautions (OSHA Instruction CPL 2-2.44A).

The following universal precautions must be taken.

1. Gloves must be made of appropriate disposable material, usually intact latex or vinyl. They must be used:
   A.) when the employee has cuts, abraded skin, chapped hands, dermatitis, or the like.
   B.) when examining abraded or non-intact skin of a patient with active bleeding.
   C.) while handling blood or blood products or other body secretions during routine procedures.
2. Gowns, aprons, or lab coats must be worn when splashes of body fluid on skin or clothing are possible.
3. Mask and eye protection are required when contact of mucosal membranes (eyes, mouth or nose) with body fluids is likely to occur (e.g. splashes or aerosolization).
4. Resuscitation equipment, pocket masks, resuscitation bags, or other ventilation equipment must be provided to eliminate the need for direct mouth to mouth contact.

Waste Disposal Plan

1. Medical/Infectious waste must be segregated from other waste at the point of origin.
2. Medical/Infectious waste, except for sharps (e.g. razor blades, broken glass, needles, etc.) capable of puncturing or cutting must be contained in double disposable red bags conspicuously labeled with the words, "INFECTIOUS WASTE --BIOHAZARD."
3. Infectious sharps must be contained for disposal in leak-proof, rigid puncture resistant containers.
4. Infectious waste thus contained as described in procedures 2 and 3 above must be placed in reusable or disposable leak-proof bins or barrels which must be conspicuously labeled with the words, "INFECTIOUS WASTE -- BIOHAZARD."
5. These waste barrels are be picked up regularly by an outside company licensed to handle infectious wastes.

6. Spills/Disinfectants: a solution of sodium hypo chlorite (household bleach) diluted
7. 1:9 with water must be used to disinfect, following initial cleanup of a spill with a chemical germicide approved as a hospital disinfectant. Spills must be cleaned up immediately.
8. After removing gloves, and/or after contact with body fluids, hands and other skin surfaces must be washed thoroughly and immediately with soap or other disinfectant in hot water.
9. Other biological wastes that do not contain radioactive or hazardous substances may be disinfected by steam sterilization (autoclave) and then disposed of in the regular trash.
10. Liquid biohazard waste may be disposed of in the sewage system following chemical decontamination.
11. Reusable glassware must be decontaminated in sodium hyper chlorite (household bleach) solution (1:9) prior to rinsing and acid washing. Then the glassware must be sterilized in an autoclave.

Personal Protective Equipment for Worker Protection
Against HIV and HBV Transmission

TASK	GLOVES	APRON	MASK	EYEWEAR
Control of Bleeding w/ spurting blood	X	X	X	X
Bleeding control with minimal bleeding	X			
Emergency Child Birth	X	X	X	X
Blood Drawing	X			
Handling & Cleaning Instruments	X			
Cleaning Bio Spills	X			
Taking Temperature				
Giving Injection	X			
Measuring Blood Pressure				

The examples provided in this table are based on application of universal precautions. Universal precautions are intended to supplement rather than replace recommendation for routine infection control, such as hand washing and using gloves to prevent gross microbial contamination of hands (e.g., contact with urine or feces).

Blood-Borne Pathogen Control
Universal Precautions and General Safety Rules
For Posting

Exposure Determination: LP Gas Industrial Equipment Co. and its Divisions and Subsidiaries will not perform invasive medical treatment or provide intravenous medication.
Therefore, the exposure to Blood-Borne Pathogens, as defined in item # 3 below, is determined to be from routine and emergency first aid treatment of common workplace injuries. The following Universal Precautions and General Safety Rules have been established to prevent the spread of viral and bacterial organisms (namely HIV/HAV/HBV). In all cases, the Universal Precautions and General Safety Rules should be followed.

1.

1. Before and immediately after providing patient care, wash exposed areas (hands, arms, etc.) with antibacterial soap.
2. Don and use the required personal protective equipment for the medical care given as outlined in the Personal Protective Equipment for Worker Protection Poster.
3. Treat all human body fluids and items soiled with human body fluids (blood, blood products, seamen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, concentrated HIV/HAV/HBV, and saliva (in dental settings) as if contaminated with HIV/HAV/HBV. (Note: Feces, urine, nasal secretions, sputum, sweat, tears, or vomitus <u>need not be treated as contaminated unless they contain visible blood)</u>
4. No smoking, eating, drinking or storage of food products are permitted in patient treatment areas. Non-medical items, such as clothing and personal effects, should not be stored in the treatment facility.
5. Patient treatment areas will be maintained in a near sanitary condition at all times.
    - Daily and at least once per shift, the Occupational Health Facility will be disinfected with antibacterial/viral solution (at least 10% Chlorine Bleach or equivalent). All medical and personal protective equipment contaminated with human body fluids will be disinfected before being returned for use again.

6. To avoid special handling, all clothing contaminated with human body fluid will be presoaked (sprayed on the affected areas) with the antibacterial/viral solution before being sent to the laundry. (Note: Gloves and eye protection should be worn when handling contaminated clothing until presoaked for 10 minutes)
7. Any spills of body fluid will be presoaked (sprayed on the affected area) with antibacterial/viral solution for 10 minutes before being removed. (Note: Gloves and eye protection should be worn when handling spills of body fluids)
8. Medical Wastes (those soiled with covered human body fluids) will be treated following the Medical Wastes Treatment and Disposal Procedures before being discarded as ordinary wastes.
9. Any suspected exposure to HIV/HAV/HBV by human body fluid contact (via broken skin, human bites, needle sticks, etc.) should be reported to your Supervisor immediately.

Control of Blood-Borne Pathogens Program Medical Waste Treatment and Disposal Procedures *For Posting*

1. All Medical Wastes (those soiled with covered human body fluids) will be placed in a red leak-proof container marked either Biohazard or Medical Waste. All other wastes will be discarded following customary procedures. (Note: Soiled feminine hygiene/sanitary napkins, soiled facial tissues, etc. are not considered a biohazard or medical waste. Pretreatment is not necessary; however, Employees should wear personal protective equipment and wash hands with antibacterial soap afterwards)
2. Don and use the required personal protective equipment when handling medical wastes as outlined in the Personal Protective Equipment for Worker Protection Poster.
3. At the end of each shift, all accumulated medical wastes will be treated to remove biohazards using the following procedure:
    - Prepare a solution of 10 percent chlorine bleach to water (approximately 2 cups chlorine bleach to 1 gallon of water)
    - Pour solution over the medical wastes and thoroughly saturate
    - Let stand for 10 minutes and then drain into sink
    - Discard as ordinary wastes

Caution: Sharp objects (broken glass, hypodermic needles, etc.) should not be handled by hand to prevent accidental punctures and lacerations

4. Rinse medical wastes container and return for use again.
5. Wash hands and exposed areas with antibacterial soap.

CADMIUM AND HEXAVALENT CHROMIUM SAFETY

Purpose:

The purpose of this program is to establish requirements for the use and handling of materials that expose employees to cadmium and/or hexavalent chromium.

Scope

This program covers all employees.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper work procedures for cadmium and hexavalent chromium
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

- As part of the LPGIE and other hazard evaluation processes, identifies and evaluates chromium or cadmium hazards and potential exposures during planning and the conduct of work.
- Reviews and approves the Task-Specific Safety Analysis.
- As necessary, quantitatively determines the presence of chromium or cadmium in materials, substrates, and other media. This may involve the collection of samples for analysis by a qualified laboratory or field testing using acceptable test methods.
- Provides results of any chromium or cadmium survey to management/supervision, along with information regarding hazard potential and control measures. As appropriate, makes recommendations to management/supervision to maintain, modify, upgrade, or downgrade controls accordingly.
- Takes prompt corrective measures (or supports any Competent Person in this role) to eliminate hazards, such as recommending to management/supervision to implement or modify engineering, administrative, work practice, and personal protection (including respiratory protection) controls.
- Conducts periodic exposure assessment.
- As appropriate, assists management/supervision in ensuring that workers have the necessary training and medical surveillance based upon the activity and hazard.
- Ensures that medical monitoring is conducted in accordance with 29 CFR 1926.1126 (for chromium) or 29 CFR 1926.1127 (for cadmium) including imposition of work restrictions where appropriate and reviewing results of medical monitoring.
- In evaluating chromium or cadmium hazards and specifying controls for a job, (a) utilizes reliable historical exposure monitoring data generated for other similar operations or activities, (b) utilizes objective data, and/or (c) plans and conducts initial monitoring to determine exposures and assess the effectiveness of hazard controls.
- Conducts initial and periodic exposure monitoring in accordance with National Institute for Occupational Safety and Health (NIOSH)/OSHA methods if lacking historical or objective data.
- Maintains effective records of jobs monitored, so that a historical database can be used to specify controls and eliminate unnecessary and redundant monitoring for future activities.
- Supports project management/supervision in responding to exposures above the PEL when workers were not adequately protected.
- As appropriate, participates in pre-job and daily worker briefings regarding task-specific chromium or cadmium hazards and controls, work practices/plans (such as JSAs), and other applicable information, including any changes that are made to controls or to the work practices or plans.

Employees

- *Shall follow all requirements regarding the safe work procedures for cadmium and hexavalent chromium.*

Cadmium Procedure

Compliance Program

A written compliance program shall be implemented when the PEL for cadmium is exceeded at a work site.

The following areas shall be addressed within the site compliance program and to ensure emergency plans are in place should a release of cadmium occur:

- *Potential exposure determination including a description of each operation where cadmium is omitted, machinery use, material processed, controls in place, crew size, employee job responsibilities and maintenance practices.*
- *Air monitoring data or developing a justification for not conducting monitoring based on previous monitoring/historical data or objective data.*
- *Engineering controls including the specific means that will be employed to meet compliance.*
- *A report of technology considered in meeting the PEL.*

- *A detailed schedule of implementation.*
- *Consideration of respiratory protection.*
- *A documented, written plan for dealing with emergency situations involving a substantial release of cadmium.*
- *Work practice program.*
- *Other relevant information such as protective clothing, housekeeping, hygiene areas and practices (including consideration of shower facilities), consideration of medical surveillance, training, and recordkeeping.*

The written program must be reviewed and updated annually or more often to reflect significant changes in the compliance status for LP Gas Industrial Equipment Co.

The program shall be provided for examination and copying upon request of affected employees, their representatives or OSHA officials.

Maintenance procedures while working on ventilation systems and changing of filters will be established. Procedures shall be developed and implemented to minimize employee exposure to cadmium when maintenance of ventilation systems and changing of filters. Examples include: Proper use of PPE, use of HEPA filtered vacuums, wet sweeping or other methods to minimize the likelihood of exposure to chromium. No compressed air shall be used to remove chromium from any surface. Cleaning equipment must be handled in a manner that minimizes the reentry of chromium into the workplace.
Construction work activities that result in exposure to chromium or cadmium may include, but are not limited to, the following:

- Demolition or salvage of structures where chromium or cadmium, or materials containing chromium or cadmium, are present.
- Removal or encapsulation of materials containing chromium or cadmium.
- New construction, alteration, repair, or renovation of structures and substrates that contain chromium or cadmium.
- Installation of products containing chromium or cadmium.
- Working with/around Portland cement (in powder or dust form – chromium only).
- Torch-cutting chromium/cadmium containing paints.
- Transportation, disposal, storage, or containment of chromium or cadmium, or materials containing chromium or cadmium.
- Maintenance operations associated with construction activities.
- Welding, cutting, burning, or grinding stainless steel, chromium-/cadmium-containing alloy steel, and chromium/cadmium containing alloys.

Note!!! Exposure to chromium (especially hexavalent chromium) has also occurred when the welding rod or wire in use contains chromium.

The permissible exposure limit (PEL) for cadmium and hexavalent chromium is five (5) micrograms calculated as an 8-hour time-weighted average over a work shift. The action level (AL) of 2.5 micrograms triggers the following requirements:

- Pre-job planning includes, as needed, a thorough identification of chromium or cadmium materials. Identification may include the product name, a Material Safety Data Sheet (MSDS) with the MSDS number (if available) or a sample content analysis. Sampling data includes location, sampling method, sampling dates, laboratory identification, and analytical method.
- If documentation is not feasible or has been determined by the project engineer to be unavailable or unreliable, chromium or cadmium content sufficient to exceed the action level for chromium or cadmium is assumed.

Results of bulk sampling, calculations of potential chromium or cadmium exposure, and other data that demonstrate compliance with this practice (as well as the pertinent standards) are attached to the work package.

Where chromium or cadmium exposure above the action level is suspected, and in the absence of monitoring data, interim protective measures are established that are equal to or greater than the assumed exposure level.

Hexavalent Chromium Procedure

Welding, Cutting, and Grinding

Certain welding and cutting activities have been shown to expose the welder/cutter, and potentially helpers, to hexavalent chromium above the action level when exhaust ventilation is not used. The activities have included the following:

- Shielded metal arc welding, Gas metal arc welding
- Flux cored arc welding, Sub arc welding
- Torch cutting through chromate-containing paints, grinding chromium-containing metals.

The types of metal involved are stainless steel, chromium-containing alloy steel, and chromium-containing nonferrous alloys. Exposure has also occurred when the welding rod or wire in use contains chromium, and exhaust ventilation is not used.
Therefore, exhaust ventilation is always prescribed as a control measure when activities with the materials mentioned above are in use unless historical personal monitoring data performed when similar materials, using similar methods, under similar environmental conditions are used shows conclusively that the welder/cutter and helper (if applicable) are not exposed above the action level without regard to respiratory protection.

Practices and procedures shall ensure that no employee is exposed to hexavalent chromium in excess of the permissible exposure level which is 5 micrograms per cubic meter of air based on an 8 hour Time Weighted Average.

Plasma and Air Arc Cutting and Gouging

Plasma and air arc cutting and gouging operations have been shown to expose the worker and helpers within 10 feet of the work to levels of hexavalent chromium above the permissible exposure limit (PEL) under most circumstances and conditions. Exhaust ventilation and respiratory protection (at least a half-face, tight-fitting respirator with a HEPA filter/cartridge) are always prescribed as control measures when activities with the materials mentioned above are in use; a higher level of respiratory protection may be prescribed, depending on conditions.

Note!!! Each discrete task must begin with ventilation and respiratory protection control measures in place. Respiratory protection may be downgraded only upon conclusive results of breathing zone monitoring of the employee(s) involved in each discrete task showing exposure to be less than 50 percent of the protection factor of the respirator relative to the concentration and PEL of hexavalent chromium. Respiratory protection may be eliminated only upon conclusive results of breathing-zone monitoring of the employee(s) involved in each discrete task showing exposure to be less than the PEL as an 8-hour time-weighted average.

Additional controls may also be appropriate to be in compliance with 29 CFR 1926.1126, depending on the results of evaluations of the materials to be used, environmental conditions, length of the work process/activity, etc. Employees who are exposed at or above the action level 30 days or more per year are enrolled in a medical surveillance program.

Personal hygiene is very important while working with chromium or cadmium products. To avoid accidental ingestion of chromium or cadmium, employees wash thoroughly (regardless of other controls) prior to eating, chewing, smoking, or drinking.

Practices

LP Gas Industrial Equipment Co. Management/supervision supported by safety professional(s), the medical contractor and training providers conducts the following basic steps to control exposure to chromium or cadmium:

- Determine the types of projects, activities, and operations that could involve chromium or cadmium, or chromium or cadmium-containing materials. For those jobs, conduct hazard identification as part of the work design, planning, and control process.
- If chromium or cadmium materials are involved, ensure that project safety (for chromium) or a competent person (for cadmium) conducts a hazard evaluation to determine the potential exposure and to recommend initial controls.
- Develop and implement a Task-Specific Safety when exposure is or is likely to be above the PEL. The JSA (or equal) addresses the scope of work activities; provides initial exposure assessment; and prescribes exposure controls, air-monitoring requirements, work practices, personal protective equipment and additional information as required.
- Incorporate recommendations from project safety for chromium or cadmium hazard control measures into any JSA and work control documents.

Exposure Monitoring

Monitoring or measuring of employee exposure shall be conducted at least every 6 months if the initial monitoring shows employee exposure. Air monitoring will be performed at the beginning of each job task. If exposure monitoring results indicate exposure is above the PEL LP Gas Industrial Equipment Co. must include in the written notification to employees the corrective action being taken to reduce exposure to or below the PEL.

- Notify each affected employee, in writing, of the results of monitoring within five (5) working days.
- Air monitoring for chromium or cadmium may be waived provided the following conditions are met:
    - Monitoring has been performed in the last 12 months.
    - Data from historical monitoring originates from work operations that closely resemble the planned work operations.
    - Workplace and environmental conditions (such as indoors or outdoors, temperature, wind speed, ventilation, and space configuration) are similar to those when the monitoring was performed.
    - The processes, types of material, control methods and work practices are similar.
    - Justification for waving initial monitoring shall be included in the Task-Specific Safety Analysis or equal. Employees involved are briefed regarding the existence of such data.

Surveillance

Medical surveillance shall be provided when an employee experiences signs or symptoms of the adverse health effects of Hexavalent Chromium (dermatitis, asthma, bronchitis, etc.). Medical evaluations will be provided at no cost to employees. Examinations will be performed by or under the supervision of a physician or other licensed health care professional.

Facilities

LP Gas Industrial Equipment Co. must provide change rooms for decontamination and ensure facilities prevent cross-contamination. Washing facilities shall be readily accessible for removing chromium from the skin. Workers must wash their hands and face or any other potentially exposed skin before eating, drinking or smoking.

Regulated Areas

Regulated areas shall be established when exposure to an employee is or is expected to be in excess of the PEL. Regulated areas shall be marked with warning signs to alert employees and access is restricted to authorized persons only.

Controls

If the exposure level is above the PEL for 30 days or more then engineering controls and work practices shall be provided to reduce exposure to the lowest feasible level. If employees can demonstrate that such controls are not feasible LP Gas Industrial Equipment Co. shall use engineering and or work controls to reduce employee exposure to the lowest levels achievable and shall supplement them by the use of required respiratory protection.

Recordkeeping

LP Gas Industrial Equipment Co. is required to maintain and make available an accurate record of all employee exposure monitoring, medical surveillance and training records.

Respiratory Protection & PPE

The appropriate respirator shall be used when engineering controls and work practices cannot reduce employee exposure during work operations where engineering controls and work practices are not feasible and emergencies. Respirators shall be provided in accordance with 1910.134 (Respiratory Protection) (see LP Gas Industrial Equipment Co.. Respiratory Protection Program). Specific requirements contained within 1926.1127 (Cadmium) regarding respiratory protection shall also be followed including:

- Providing employees with full face piece respirators when they experience eye irritation.
- Providing HEPA filters for powered and non-powered air-purifying respirators.
- Providing a powered air-purifying respirator instead of a negative-pressure respirator when an employee entitled to a respirator chooses to use this type of respirator and such a respirator will provide adequate protection to the employee.

PPE will be provided when there is a hazard from skin or eye contact and employees are required to use the PPE. Gloves, aprons, coveralls, goggles, foot covers and other as needed PPE shall be provided at no cost to the employee and will be removed at the end of the work shift. LP Gas Industrial Equipment Co. must clean, launder, and replace all protective clothing as needed.

Housekeeping

All surfaces shall be maintained as free as practicable of chromium. All spills and releases of chromium shall be cleaned promptly with approved procedures including use of HEPA filtered vacuums as the primary method, dry or wet sweeping or other methods to minimize the likelihood of exposure to chromium.

No compressed air shall be used to remove chromium from any surface unless the compressed air is used in conjunction with a ventilation system designed to capture the dust cloud created by the compressed air or no alternative method is feasible.
Cleaning equipment must be handled in a manner that minimizes the reentry of chromium into the workplace.

Training

LP Gas Industrial Equipment Co. shall provide appropriate types of training for employees who are potentially exposed to chromium or cadmium prior to their initial assignment and annually thereafter. LP Gas Industrial

Equipment Co. will assure employee participation and maintain a record of the training contents. This training includes:

- Hazard communication training for potentially exposed employees.
- Training specified by the applicable chromium or cadmium standard for workers exposed at the action level for any one day, or who are exposed to chromium or cadmium compounds that are skin irritants.
- *Respirator training if respirators are to be used.*
- *Provide information to workers regarding task-specific chromium or cadmium hazards and control methods, the JSA, work practices, medical surveillance and other applicable information, including any changes that are made to these controls.*
- *Provide training annually, as appropriate, to workers who continue to have exposure to chromium or cadmium at or above the action level on any one day.*
- *All training will be recorded and include the identity of the employee trained, the signature of the person who conducted the training and the date of the training.*
- *Training records must be kept for one year.*

COMPRESSED GAS CYLINDERS

Purpose:

The purpose of this program is to prevent injury from failing or failure of compressed gas cylinders and to establish requirements for handling, lifting and storing compressed gas cylinders safely.

Scope

This program covers all employees and contractors who handle, transport and/or use compressed gas cylinders.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper handling, storage and use requirements for compressed gas cylinders.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

Employees

- Shall follow all requirements regarding the safe handling, storage and use of compressed gas cylinders.

Procedure

General

Cylinders shall not be accepted, stored or used if evidence of denting, bulging, pitting, cuts, neck or valve damage is observed. If damage is observed:

- The cylinder must be taken out of service.
- The cylinder's owner shall be notified to remove the cylinder from the premises.
- If owned, the cylinder shall be de-pressured and inspected as required by this program.

Cylinder Identification

Gas identification shall be stenciled or stamped on the cylinder or a label used. No compressed gas cylinder shall be accepted for use that does not legibly identify its content by name.

Handling
Valve caps must be secured onto each cylinder before moving or storage.

Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes or electromagnets are prohibited to be used for lifting compressed gas cylinders.

The preferred means to move compressed gas cylinders is with a cart, carrier or with a helper.

Compressed gas cylinders must not be allowed to strike each other.

When a cylinder cap cannot be removed by hand the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.

Storing
All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.

- Cylinders must be secured by means that will prevent the cylinder from falling.
- When securing the cylinder, the restraints shall not be attached to electrical conduit or process piping.

Empty and non-empty cylinders shall be stored separately. All stored cylinders shall be capped.

Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing. Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely assigned places away from elevators, stairs or gangways.

Use
Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt and solvents. Only tools provided by the supplier should be used to open and close cylinder valves.

Never force or modify connections.

Only regulators and gauges shall be used within their designated ratings.

The use of a pressure-reducing regulator is required at the cylinder, unless the total system is designed for the maximum cylinder pressure.

Valves must be closed when cylinders are not in use.

Cylinders shall not be used as rollers or supports.

Cylinders shall not be placed where they can come in contact with electrical circuits.

Cylinders must be protected from sparks, slag or flame from welding, burning or cutting operations.

Empty cylinders must be returned to designated storage areas as soon as possible after use.

Inspection of Compressed Gas Cylinders

LP GAS INDUSTRIAL EQUIPMENT CO. shall determine that compressed gas cylinders under its control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962. Some elements include, but are not limited to:

- Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.
- These owned cylinders shall be visually inspected prior to charging, before each use and at least annually.
- All inspections and testing must be documented.

High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater.

- High pressure cylinders shall be taken out of service and submitted for re-qualification testing when any of the following conditions are identified by visual inspection.
- Cuts, dings, gouges, dents bulges, pitting, neck damage or evidence of exposure to fire.
- The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi.

- Low pressure cylinders fall into two categories, those requiring requalification and those that do not require re-qualification.
- Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
- The tare weight of the cylinder is less than 90% of the stamped on weight of the cylinder.
- Observed pitting, dents, cuts, bulging, gouges or evidence of exposure to fire.
- Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions; dents, bulges, pitting or neck damage.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Leaking Cylinders

Leaking cylinders should be moved promptly to an isolated, well-ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions.

Transportation

Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled. Regulators should be removed and cylinders capped before movement. Cylinders should not be dropped or permitted to strike violently and protective caps are not used to lift cylinders.

Empty Cylinder Marking

Cylinders should be marked as "MT" and dated when empty. Never mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled as carefully as when filled.

Engineering Controls

Engineering controls such as emergency shutoff switches, gas cabinets and flow restrictors should be used wherever possible to control hazards. Emergency eyewash facilities should be present where corrosive gases or materials are used.

CONFINED SPACE PROGRAM

I. OBJECTIVE

The purpose of LP Gas Industrial Equipment Co. Confined Space Program is to set procedures that will ensure workers safe entry into confined spaces and permit-required confined spaces to perform routine tasks associated with their employment. This procedure is designed to provide the minimum safety requirements in accordance with the Occupational Safety and Health
Administration's (OSHA) Confined Space Standard, 1910.146.

II. BACKGROUND

A confined space is defined as any location that has limited openings for entry and egress, is not intended for continuous employee occupancy, and is so enclosed that natural ventilation may not reduce air contaminants to levels below the threshold limit value (TLV). Examples of confined spaces include: manholes, stacks, pipes, storage tanks, trailers, tank cars, pits, sumps, hoppers, and bins. Entry into confined spaces without proper precautions could result in injury, impairment, or death due to:

A. an atmosphere that is flammable or explosive;
B. lack of sufficient oxygen to support life;
C. contact with or inhalation of toxic materials; or
D. general safety or work area hazards such as steam or high pressure materials.

III. ASSIGNMENT OF RESPONSIBILITY

- Employer

In administering this Confined Space Program, LP Gas Industrial Equipment Co. will:

- Monitor the effectiveness of the program.
- Provide atmospheric testing and equipment as needed.
- Provide personal protective equipment as needed.
- Provide training to affected employees and supervisors.
- Provide technical assistance as needed.
- Preview and update the program on at least an annual basis or as needed.
- Terminating the permit and closing it out after job completion.
- Program Manager

The Safety Director is responsible for managing the Confined Space Program, and shall:

- Ensure that a list of confined spaces at all LP Gas Industrial Equipment Co. worksites is maintained.
- Ensure that canceled permits are reviewed for lessons learned.
- Ensure training of personnel is conducted and documented.
- Coordinate with outside responders.
- Ensure that equipment is in compliance with standards.
- Ensure that the Supervisor in charge of confined space work shall:
    a. Ensure requirements for entry have been completed before entry is authorized.
    b. Ensure confined space monitoring is performed by personnel qualified and trained in confined space entry procedures.

c. Ensure a list of monitoring equipment and personnel qualified to operate the equipment is maintained by the Safety and Occupational Health Office.
d. Ensure that the rescue team has simulated a rescue in a confined space within the past twelve (12) months.
e. Know the hazards that may be faced during entry, including the mode (how the contaminant gets into the body), signs or symptoms, and consequences of exposure.
f. Fill out a permit.
g. Determine the entry requirements.
h. Require a permit review and signature from the authorized Entry Supervisor.
i. Notify all involved employees of the permit requirements.
j. Post the permit in a conspicuous location near the job.
k. Renew the permit or have it reissued as needed (a new permit is required every shift).
l. Determine the number of Attendants required to perform the work.
m. Ensure all Attendant(s) know how to communicate with the entrants and how to obtain assistance.
n. Post any required barriers and signs.
o. Remain alert to changing conditions that might affect the conditions of the permits (i.e., require additional atmospheric monitoring or changes in personal protective equipment).
p. Change and reissue the permit, or issue a new permit as necessary.
q. Ensure periodic atmospheric monitoring is done according to permit requirements.
r. Ensure that personnel doing the work and all support personnel adhere to permit requirements.
s. Ensure the permit is canceled with the work is done.
t. Ensure the confined space is safely closed and all workers are cleared from the area.
u. Provisions & procedures for pedestrian, vehicle & other barriers as necessary to protect entrants from external hazards & a method for verifying that conditions in the permit space are acceptable for entry during its duration.

Entry Supervisors

Team Supervisor shall serve as the Entry Supervisor(s), and shall be qualified and authorized to approve confined space entry permits. The Entry Supervisor(s) shall be responsible for:

1. Determining if conditions are acceptable for entry.
2. Authorizing entry and overseeing entry operations.
3. Terminating entry procedures as required.
4. Serving as an Attendant, as long as the person is trained and equipped appropriately for that role.
5. Ensuring measures are in place to keep unauthorized personnel clear of the area.
6. Checking the work at least twice a shift to verify and document permit requirements are being observed (more frequent checks shall be made if operations or conditions are anticipated that could affect permit requirements).
7. Ensuring that necessary information on chemical hazards is kept at the worksite for the employees or rescue team.
8. Ensuring a rescue team is available and instructed in their rescue duties (i.e., an onsite team or a prearranged outside rescue service).
9. Ensuring the rescue team members have current certification in first aid and cardiopulmonary resuscitation (CPR).

Attendants

Qualified personnel shall function as an Attendant(s) and shall be stationed outside of the confined workspace. The Attendant(s) shall:

1. Be knowledgeable of, and be able to recognize potential confined space hazards.
2. Maintain a sign-in/sign-out log with a count of all persons in the confined space, and ensure all entrants sign in and out.
3. Monitor surrounding activities to ensure the safety of personnel.
4. Maintain effective and continuous communication with personnel during confined space entry, work, and exit.
5. Order personnel to evacuate the confined space if he/she:
    a. observes a condition which is not allowed on the entry permit;

b. notices the entrants acting strangely, possibly as a result of exposure to hazardous substances;
c. notices a situation outside the confined space which could endanger personnel;
d. notices a hazard within the confined space that has not been previously recognized or taken into consideration;
e. must leave his/her work station; or
f. must focus attention on the rescue of personnel in some other confined space that he/she is monitoring.

6. Immediately summon the Rescue Team if crew rescue becomes necessary.
7. Keep unauthorized persons out of the confined space, order them out, or notify authorized personnel of an unauthorized entry.
8. To make this process as safe as possible, LP Gas Industrial Equipment Co. does NOT allow a single attendant to monitor more than one (multiple) confined spaces.
9. The attendant will hold accountability for entrants and keep them in compliance with entry permits. Permits must identify the permit space to be entered, the purpose of the entry, date and authorized duration of the permit and also include name.

Attendants must

Receive confined space training to safely observe and support entrants from outside of confined spaces; prevent entry by unauthorized personnel; understand the hazards or potential hazards of confined spaces; maintain accurate count of authorized entrant(s) in the space; continually observe and communicate with entrants to help ensure the safety of entrants, being on the alert for any signs or symptoms that might indicate hazardous conditions; monitor activities inside and outside the space to ensure that it is safe for entrants to remain in the area; remain at the entry of a confined space until relieved by another attendant; order entrant(s) evacuation if any prohibited or hazardous conditions develop during the entry:

1. Perform a non-entry rescue and/or summon rescue in the event of entrant incapacitation.
2. Ensure that at least one attendant is stationed outside the permit space for the duration of entry operations. Coordinate entry operations when employees of more than one employer are working in the permit space. This will help to not endanger our employees or that of an employer. Typically, the Entry Supervisor does this.

Rescue Team

The Rescue Team members shall:

1. Complete a training drill using mannequins or personnel in a simulation of the confined space prior to the issuance of an entry permit for any confined space and at least annually thereafter.
2. Respond immediately to rescue calls from the Attendant or any other person recognizing a need for rescue from the confined space.
3. In addition to emergency response training, receive the same training as that required of the authorized entrants.
4. Have current certification in first aid and CPR.

Entrants/Affected Employees

Employees who are granted permission to enter a confined space shall:

1. Read and observe the entry permit requirements.
2. Remain alert to the hazards that could be encountered while in the confined space.
3. Properly use the personal protective equipment that is required by the permit.
4. Immediately exit the confined space when:
    a. they are ordered to do so by an authorized person;
    b. they notice or recognize signs or symptoms of exposure;
    c. a prohibited condition exists; or
    d. the automatic alarm system sounds.
5. Alert Attendant(s) when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

IV. TRAINING

LP Gas Industrial Equipment Co. shall provide training so that all employees whose work is regulated by this Confined Space Program acquire the understanding, knowledge, and skills necessary for the safe performance of their duties in confined spaces.

A. Training Frequency

Responsible Person shall provide training to each affected employee:

1. before the employee is first assigned duties within a confined space;
2. before there is a change in assigned duties;
3. when there is a change in permit space operations that presents a hazard for which an employee has not been trained; and when LP Gas Industrial Equipment Co. has reason to believe that there are deviations from the confined space entry procedures required in this program, or that there are inadequacies in the employee's knowledge or use of these procedures.
4. Understand that they are entitled to request additional monitoring at any time. Employees, or their representatives, are entitled to request the space be re-evaluated.

The training shall establish employee proficiency in the duties required in this program, and shall introduce new or revised procedures within one year or, as necessary, for compliance with this program.

B. General Training

All employees who will enter confined spaces shall be trained in entry procedures.
Personnel responsible for supervising, planning, entering, or participating in confined space entry and rescue shall be adequately trained in their functional duties prior to any confined space entry. Training shall include:

1. Explanation of the general hazards associated with confined spaces.
2. Discussion of specific confined space hazards associated with the facility, location, or operation.
3. Reason for, proper use, and limitations of personal protective equipment and other safety equipment required for entry into confined spaces.
4. Explanation of permits and other procedural requirements for conducting a confined space entry.
5. A clear understanding of what conditions would prohibit entry.
6. Procedures for responding to emergencies.
7. Duties and responsibilities of the confined space entry team.
8. Description of how to recognize symptoms of overexposure to probable air contaminants in themselves and co-workers, and method(s) for alerting the Attendant(s).

Refresher training shall be conducted as needed to maintain employee competence in entry procedures and precautions.

C. Specific Training

1. Training for atmospheric monitoring personnel shall include proper use of monitoring instruments, including instruction on the following:
    a. proper use of the equipment;
    b. calibration of equipment;
    c. sampling strategies and techniques; and
    d. exposure limits (PELs, TLVs, LELs, UELs, etc.).
2. Training for Attendants shall include the following:
    a. procedures for summoning rescue or other emergency services; and
    b. proper utilization of equipment used for communicating with entry and emergency/rescue personnel.
3. Training for Emergency Response Personnel shall include:
    a. rescue plan and procedures developed for each type of confined space that is anticipated to be encountered;
    b. use of emergency rescue equipment;

c. first aid and CPR techniques; and
d. work location and confined space configuration to minimize response time.

D. Verification of Training
Periodic assessment of the effectiveness of employee training shall be conducted by the Safety Director. Training sessions shall be repeated as often as necessary to maintain an acceptable level of personnel competence.

V. IDENTIFICATION OF HAZARDS AND EVALUATION OF CONFINED SPACES

A. Survey
Compliance Manager shall ensure a survey of the worksite is conducted to identify confined spaces. This survey can be partially completed from initial and continuing site characterizations, as well as other available data (i.e., blueprints and job safety analyses). The purpose of the survey is to develop an inventory of those locations and/or equipment at LP Gas Industrial Equipment Co. that meet the definition of a confined space. This information shall be communicated to personnel, and appropriate confined space procedures shall be followed prior to entry. The initial surveys shall include air monitoring to determine the air quality in the confined spaces. The potential for the following situations shall be evaluated by Compliance Manager:

1. Flammable or explosive potential;
2. Oxygen deficiency; and
3. Presence of toxic and corrosive material.

B. Hazard Reevaluation
The Compliance Manager shall identify and reevaluate hazards based on possible changes in activities or other physical or environmental conditions that could adversely affect work. A master inventory of confined spaces shall be maintained. Any change in designation of a confined space will be routed to all affected personnel by Compliance Manager.

C. Pre-Entry Hazard Assessment
A hazard assessment shall be completed by Safety Officer prior to any entry into a confined space. The hazard assessment should identify:

1. the sequence of work to be performed in the confined space;
2. the specific hazards known or anticipated; and
3. the control measures to be implemented to eliminate or reduce each of the hazards to an acceptable level.
4.

No entry shall be permitted until the hazard assessment has been reviewed and discussed by all persons engaged in the activity. Personnel who are to enter confined spaces shall be informed of known or potential hazards associated with said confined spaces.

D. Hazard Controls
Hazard controls shall be instituted to address changes in the work processes and/or working environment. Hazard controls must be able to either control the health hazards by eliminating the responsible agents, reduce health hazards below harmful levels, or prevent the contaminants from coming into contact with the workers.

The following order of precedence shall be followed in reducing confined space risks.

1. Engineering Controls

Engineering controls are those controls that eliminate or reduce the hazard through implementation of sound engineering practices.

Ventilation is one of the most common engineering controls used in confined spaces. When ventilation is used to remove atmospheric contaminants from a confined space, the space shall be ventilated until the atmosphere is within the acceptable ranges. Ventilation shall be maintained during the occupancy if there is a potential for the atmospheric conditions to move out of the acceptable range. When ventilation is not

possible or feasible, alternate protective measures or methods to remove air contaminants and protect occupants shall be determined by Safety Officer prior to authorizing entry.

When conditions necessitate and can accommodate continuous forced air ventilation, the following precautions shall be followed:

a. Employees shall not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.
b. Forced air ventilation shall be directed so as to ventilate the immediate areas where an employee is or will be present within the space.
c. Continuous ventilation shall be maintained until all employees have left the space.
d. Air supply or forced air ventilation shall originate from a clean source.
e. Testing should be conducted prior to each confined space entry and the atmosphere should be periodically tested as necessary to determine that acceptable entry conditions are maintained during entry operations. Continuous monitoring during entry is the recommended practice. Monitoring of the space must inform the entrants of potential hazards and results, they must also participate in the permit review and signing. Ventilation must be used and testing must be conducted before entry & during work.

2. Work Practice (Administrative) Controls

Work practice (administrative) controls are those controls which eliminate or reduce the hazard through changes in the work practices (i.e., rotating workers, reducing the amount of worker exposure, and housekeeping).

3. Personal Protective Equipment (PPE)

If the hazard cannot be eliminated or reduced to a safe level through engineering and/or work practice controls, PPE should be used. Compliance Manager shall determine the appropriate PPE needed by all personnel entering the confined space, including rescue teams. PPE that meets the specifications of applicable standards shall be selected in accordance with the requirements of the job to be performed.

VI. ENTRY PERMITS

The Confined Space Entry Permit is the most essential tool for assuring safety during entry in confined spaces with known hazards, or with unknown or potentially hazardous atmospheres.
The entry permit process guides the supervisor and workers through a systematic evaluation of the space to be entered. The permit should be used to establish appropriate conditions. Before each entry into a confined space, an entry permit will be completed by Safety Officer. The team supervisor will then communicate the contents of the permit to all employees involved in the operation, and post the permit conspicuously near the work location. A standard entry permit shall be used for all entries.

A. Key Elements of Entry Permits

A standard entry permit shall contain the following items:

1. Space to be entered.
2. Purpose of entry.
3. Date and authorized duration of the entry permit.
4. Name of authorized entrants within the permit space.
5. Means of identifying authorized entrants inside the permit space (i.e., rosters or tracking systems).
6. Name(s) of personnel serving as Attendant(s) for the permit duration.
7. Name of individual serving as Entry Supervisor, with a space for the signature or initials of the Entry Supervisor who originally authorized the entry.
8. Hazards of the permit space to be entered.
9. Measures used to isolate the permit space and to eliminate or control permit space hazards before entry (i.e., lockout/tagout of equipment and procedures for purging, ventilating, and flushing permit spaces).
10. Acceptable entry conditions.

11. Results of initial and periodic tests performed, accompanied by the names or initials of the testers and the date(s) when the tests were performed.
12. Rescue and emergency services that can be summoned, and the means of contacting those services (i.e., equipment to use, phone numbers to call).
13. Communication procedures used by authorized entrants and Attendant(s) to maintain contact during the entry.
14. Equipment to be provided for compliance with this Confined Space Program
15. (i.e., PPE, testing, communications, alarm systems, and rescue).
16. Other information necessary for the circumstances of the particular confined space that will help ensure employee safety.
17. Additional permits, such as for hot work, that has been issued to authorize work on the permit space.

B. Permit Scope and Duration

A permit is only valid for one shift. For a permit to be renewed, the following conditions shall be met before each reentry into the confined space:

1. Atmospheric testing shall be conducted and the results should be within acceptable limits. If atmospheric test results are not within acceptable limits, precautions to protect entrants against the hazards should be addressed on the permit and should be in place.
2. Safety Officer shall verify that all precautions and other measures called for on the permit are still in effect.
3. Only operations or work originally approved on the permit shall be conducted in the confined space.
4.

A new permit shall be issued, or the original permit will be reissued if possible, whenever changing work conditions or work activities introduce new hazards into the confined space. Compliance Manager shall retain each canceled entry permit for at least one (1) year to facilitate the review of the Confined Space Entry Program. Any problems encountered during an entry operation shall be noted on the respective permit(s) so that appropriate revisions to the confined space permit program can be made.

VII. ENTRY PROCEDURES

When entry into a confined space is necessary, either the Entry Supervisor or Safety Officer may initiate entry procedures, including the completion of a confined space entry permit. Entry into a confined space shall follow the standard entry procedure below.

A. Prior to Entry

The entire confined space entry permit shall be completed before a standard entry. Entry shall be allowed only when all requirements of the permit are met and it is reviewed and signed by an Entry Supervisor. The following conditions must be met prior to standard entry:

1. Affected personnel shall be trained to establish proficiency in the duties that will be performed within the confined space.
2. The internal atmosphere within the confined space shall be tested by Safety Officer with a calibrated, direct-reading instrument.
3. Personnel shall be provided with necessary PPE as determined by the Entry Supervisor.
4. Atmospheric monitoring shall take place during the entry. If a hazardous atmosphere is detected during entry:

   Personnel within the confined space shall be evacuated by the Attendant(s) or Entry Supervisor until the space can be evaluated by Safety Officer to determine how the hazardous atmosphere developed; and controls shall be put in place to protect employees before reentry.

B. Opening a Confined Space

Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent anyone from falling through the opening. This barrier or cover shall protect each employee working in the space from foreign objects entering the space. If it is in a traffic area, adequate barriers shall be erected.

C. Atmospheric Testing

Atmospheric test data is required prior to entry into a confined space. Atmospheric testing is required for two distinct purposes: (1) evaluation of the hazards of the permit space, and (2) verification that acceptable conditions exist for entry into that space. If a person must go into the space to obtain the needed data, then Standard Confined Space
Entry Procedures shall be followed. Before entry into a confined space, Safety Officer shall conducts testing for hazardous atmospheres. The internal atmosphere shall be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and potential toxic air contaminants, in that order.

Testing equipment used in specialty areas shall be listed or approved for use in such areas by Safety Manager. All testing equipment shall be approved by a nationally recognized laboratory, such as Underwriters Laboratories or Factory Mutual Systems.

1. Evaluation Testing
The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity. The analysis shall identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that 222 space. Evaluation and interpretation of these data and development of the entry procedure should involve a technically qualified professional (i.e., consultant, certified industrial hygienist, registered safety engineer, or certified safety professional).

2. Verification Testing
A confined space that may contain a hazardous atmosphere shall be tested for residues of all identified or suspected contaminants. The evaluation testing should be conducted with specified equipment to determine that residual concentrations at the time or testing and entry are within acceptable limits. Results of testing shall be recorded by the person performing the tests on the permit. The atmosphere shall be periodically retested (frequency to be determined by Safety Officer to verify that atmospheric conditions remain within acceptable entry parameters.

3. Acceptable Limits
The atmosphere of the confined spaces shall be considered to be within acceptable limits when the following conditions are maintained:

a. oxygen: 19.5 percent to 23.5 percent;
b. flammability: less than 10 percent of the Lower Flammable Limit (LFL); and
c. toxicity: less than recognized American Conference of Governmental
d. Industrial Hygienists (ACGIH) exposure limits or other published exposure levels [i.e., OSHA Permissible Exposure Limits (PELs) or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs)].

D. Isolation and Lockout/Tagout Safeguards
All energy sources that are potentially hazardous to confined space entrants shall be secured, relieved, disconnected, and/or restrained before personnel are permitted to enter the confined space. Equipment systems or processes shall be locked out and/or tagged out as required by the LP Gas Industrial Equipment Co. Lockout/Tagout Program [which complies with OSHA's 29 CFR 1910-147 and American National Standards Institute (ANSI) Z244.1-1982, Lockout/Tagout of Energy Sources] prior to permitting entry into the confined space. In confined spaces where complete isolation is not possible, Safety Manager shall evaluate the situation and make provisions for as rigorous isolation as practical. Special precautions shall be taken when entering double-walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall.

Where there is a need to test, position, or activate equipment by temporarily removing the lock or tag or both, a procedure shall be developed and implemented to control hazards to the occupants. Any removal of locks, tags, or other protective measures shall be done in accordance with the LP Gas Industrial Equipment Co. Lockout/Tagout Program.

E. Ingress/Egress Safeguards
Means for safe entry and exit shall be provided for confined spaces. Each entry and exit points shall be evaluated by Safety Officer to determine the most effective methods and equipment that will enable employees to safely enter and exit the confined space.

Rescue services must be either:

1. Provided by the host facility, or
2. Provided by an outside service which is given an opportunity to examine the entry site, practice rescue, and decline as appropriate, or
3. Provided by the employer by selecting a rescue team that is equipped and trained to perform the needed rescue services.
4. Rescue service must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed.

Appropriate retrieval equipment or methods shall be used whenever a person enters a confined space. Use of retrieval equipment may be waived by the Safety Manager if use of the equipment increases the overall risks of entry or does not contribute to the rescue.
A mechanical device shall be available to retrieve personnel from vertical confined spaces greater than five (5) feet in depth.

F. Warning Signs and Symbols
All confined spaces that could be inadvertently entered shall have signs identifying them as confined spaces. Signs shall be maintained in a legible condition. The signs shall contain a warning that a permit is required before entry. Accesses to all confined spaces shall be prominently marked.

VIII. EMERGENCY RESPONSE

A. Emergency Response Plan
Compliance Manager shall maintain a written plan of action that has provisions for conducting a timely rescue of individuals within a confined space, should an emergency arise. The written plan shall be kept onsite where the confined space work is being conducted. All affected personnel shall be trained on the Emergency Response Plan.

B. Retrieval Systems and Methods of Non-Entry Rescue
Retrieval systems shall be available and ready when an authorized person enters a permit space, unless such equipment increases the overall risk of entry, or the equipment would not contribute to the rescue of the entrant. Retrieval systems shall have a chest or full body harness and a retrieval line attached at the center of the back near shoulder level or above the head. If harnesses are not feasible, or would create a greater hazard, wristlets may be used in lieu of the harness. The retrieval line shall be firmly fastened outside the space so that rescue can begin as soon as anyone is aware that retrieval is necessary. A mechanical device shall be available to retrieve personnel from vertical confined spaces more than five (5) feet deep.

ATTACHMENT
Sample Process Duty Roster

Process: Tank Steam/Wash Rack	
Entry Supervisor Entrants	
1. Upon receipt of a tank for cleaning, do a visible check for product. If product is visible in the tank, then the tank will be refused. 2. Complete and attach certification and danger tag to tank. 3. Provide confined space entry permit for the tank. 4. Verify that entrants have proper training and knowledge of known hazards, including the mode of exposure (how it gets into the body), signs or symptoms, and results of exposure.	1. Purge tanks with cold water prior to steam cleaning. 2. Obtain the confined space entry permit and authorized signature. 3. Complete a safe entry checklist prior to entering the confined space. 4. Fill out and attach the caution tag after tank is purged and cleaned. 5. Know space hazards, including information on the mode of exposure (how it gets into the body), signs or symptoms, and results of exposure. 6. Use the correct personal protective equipment (PPE) properly. 7. Maintain communication with standby person to enable them to monitor entrant's actions and alert the entrant to evacuate if necessary. 8. Exit from permit space as soon as possible: when ordered to by authorized persons; when entrant notices or recognizes the signs or symptoms of exposure; when a prohibited condition exists; and/or when the automatic alarm system sounds. 9. Alert the standby person when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.
Process: Tank Maintenance	
Entry Supervisor Entrants	
1. Upon receipt of a tank for maintenance, do a visible check for product. If product is visible in the tank, then the tank will be refused. 2. Complete and attach certification and danger tag to tank. 3. Provide confined space entry permit for the tank. 4. Verify that entrants have proper training and knowledge of known hazards, including the mode of exposure (how it gets into the body), signs or symptoms, and the results of exposure.	1. Prior to moving any tank into the maintenance bay, ensure tank has been cleaned and/or purged per attached caution tag, test atmosphere, and record results on hot tag. (Tank will not be moved into bay until the atmosphere has been tested and is determined to be within acceptable limits.) 2. In bay, if work will require confined space entry, obtain confined space entry permit from the Service Writer. 3. Obtain the confined space entry permit and the authorized signatures. 4. Complete the safe entry checklist prior to confined space entry. 5. Know space hazards, including information on the mode of exposure (how it gets into the body), signs or symptoms, and results of exposure. 6. Use the correct personal protective equipment (PPE) properly. 7. Maintain communication with standby person to enable them to monitor the entrant's actions and alert the entrant to evacuate if necessary. 8. Exit from permit space as soon as possible: when ordered to by authorized persons; when entrant notices or recognizes signs or symptoms of exposure; when a prohibited condition exists; and/or when the automatic alarm system sounds. 9. Alert the standby person when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

CONSTRUCTION CRANES

General Safety Rules

LP Gas Industrial Equipment Company operators shall comply with the following rules while operating the cranes and hoists:

- Do not engage in any practice that will divert your attention while operating the crane.
- Cranes must not be used unless ground conditions are able to support the equipment and any supporting materials per the manufacturer's specifications. Equipment must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction (if necessary) with the use of supporting materials, the equipment manufacturer's specification for adequate support and degree of level of the equipment are met.
- Manufacture instructions and prohibitions must be followed at all times when assembling and/or disassembling equipment.
- Only a competent and qualified person will be allowed to direct the assembly/disassembly of equipment.
- Before operation, verify that all operation equipment is not within 20 feet of a power line. Identify the work zone and do a pre-operation hazard assessment. The work zone shall be identified by demarcating boundaries such as flag and range limiting devices, or defining the work zone as 360 degrees around the equipment up to the maximum working radius. The hazard assessment must determine if any part of the equipment could get closer than 20 feet to a power line.
- Proper measures must be taken if it is determined that any part of the equipment, load line or load can get closer to 20 feet to a power line:
    1.) Determine the line's voltage and minimum approach distance permitted in Table A
    2.) Ensure the power lines have been de-energized and visibly grounded
    3.) Ensure no part of the equipment, load line or load gets closer than 20 feet to the power line
- Respond to signals only from the person who is directing the lift or any appointed signal person. Obey a stop signal at all times, no matter who gives it.
- A visual inspection of all the equipment must be conducted by a competent person at the beginning or prior to each shift. These will include, but not limited to, control mechanisms, pressurized lines, hooks and latches, wire rope, electrical apparatus, tires and ground conditions.
- All equipment must be inspected monthly by a competent person and documented.
- All safety devices on the equipment must be in proper working condition before operation begins.
- All manufacturer procedures that are applicable to the operational functions of equipment, including its use with attachments, must be complied with.
- The procedures that are applicable to the operation of the equipment will be readily available in the cab at all times. Procedures include rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions and operator's manual.
- The operator has the authority to stop and refuse to handle loads whenever there is a safety concern.
- If the operator's view is obstructed, if site specific safety requires it, or if the operator determines that it is necessary then a signal person must be provided.
- If a hazard is identified, it must be marked by boundaries of the crane swing radius with warning lines, railings, or similar barriers. This applies if the equipment has the potential to strike and injure an employee or pinch/crush an employee against any other object.
- Do not move a load over people. People shall not be placed in jeopardy by being under a suspended load. Also, do not work under a suspended load unless the load is supported by blocks, jacks, or a solid footing that will safely support the entire weight. Have a crane or hoist operator remain at the controls or lock open and tag the main electrical disconnect switch.
- Ensure that the rated load capacity of a crane's bridge, individual hoist, or any sling or fitting is not exceeded. Know the weight of the object being lifted or use a dynamometer or load cell to determine the weight.
- Check that all controls are in the OFF position before closing the mainline disconnect switch.
- If spring-loaded reels are provided to lift pendants clear off the work area, ease the pendant up into the stop to prevent damaging the wire.
- Avoid side pulls. These can cause the hoist rope to slip out of the drum groove, damaging the rope or destabilizing the crane or hoist.
- To prevent shock loading, avoid sudden stops or starts. Shock loading can occur when a suspended load is accelerated or decelerated, and can overload the crane or hoist. When completing an upward or downward motion, ease the load slowly to a stop.
- Any modifications or additions that may affect the capacity or safe operation of the equipment must not be made without written approval from the manufacturer or approval from a registered professional engineer.

DISCIPLINARY ACTION PROGRAM

These guidelines document the process for Disciplinary Action in the LP Gas Industrial Equipment Co. organization to be enforced by Management with a goal Of ZERO accidents and injuries. It is the responsibility of Management to carry out the following actions:

-
- Disciplinary action will be taken for violation of company policy, safety procedures (ex.
- Not filling out a hot work permit) or work performance issues.
- Disciplinary actions will be effective for a minimum of (6) months.
- Initial disciplinary action will include but is not limited to a verbal and written warning.
- Subsequent violation while initial disciplinary action is in effect will result in but not limited to suspension.
- Additional violations while secondary disciplinary action is in effect may result in termination.
- A disciplinary action report will be used to document all actions taken.
- Depending on the severity of the violation, initial disciplinary action may include termination.

Driving Safety

Policy Statement

LP GAS INDUSTRIAL EQUIPMENT CO has implemented a Driving Safety policy to inform workers of the driving expectations placed upon the employees. This ensures the safety and health of the employees on the job site, as well as all other involved individuals.

LP GAS INDUSTRIAL EQUIPMENT CO are responsible for ensuring that the following policy for control, training, personal protective equipment and safe work practices is enforced.

Driver Requirements

LP GAS INDUSTRIAL EQUIPMENT CO will only allow authorized employees to drive a motor vehicle in the course and scope of the work to be performed, or operate a company owned vehicle. Each driver will be appropriately assessed, licensed, and trained to operate the company vehicle. The driver's license of each driver will be valid and kept current.

Authorized drivers will be prohibited from operating a motor vehicle while under the influence of any of the following that might impair their driving skills:

- Alcohol
- Illegal drugs
- Prescription or over the counter medications -- without prior approval

Authorized drivers will report to the appropriate personnel any of the following:

- Collision
- Traffic violation, or
- Near miss incident

Seat belts will be worn by all occupants at all times whenever the vehicle is in motion.

Vehicle Requirements

The company vehicle will be fit for the purposes intended, and will be maintained in a safe working order. When transporting loads, the load will be secured, and will not exceed the manufacturers load specifications, or the legal limits for the vehicle.

Safe Driving Practices

All authorized drivers will follow safe driving practices and safe driving behaviors to include but not limited to:

- Cell phone use is prohibited while driving
- Do not manipulate radios or other equipment which may cause a distraction
- Do not exceed the posted speed limit
- Maintaining a safe distance between other vehicles, and
- Do not exceed the occupant capacity of the vehicle

ELECTRICAL SAFETY

Purpose

The purpose of the Electrical Safety program is to set forth procedures for the safe use of electrical equipment, tools, and appliances at LP Gas Industrial Equipment Co.

Scope

This program applies to all LP Gas Industrial Equipment Co. employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers LP Gas Industrial Equipment Co. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Affected Personnel - Personnel who normally use and work with electrical equipment, tools, and appliances, but who do not make repairs or perform lock out/tag out procedures.

Appliances - Electrical devices not normally associated with commercial or industrial equipment such as air conditioners, computers, printers, copiers, coffee pots, microwave ovens, toasters, etc.

Circuit Breaker - A device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined over current without injury to itself when properly applied within its rating. Disconnecting Means - A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

Disconnecting Switch - A mechanical switching device used for isolating a circuit or equipment from a source of power.

Double Insulated Tool - Tools designed of non-conductive materials that do not require a grounded, three wire plug.

Ground - Connected to earth or some conducting body that serves in place of the earth.

Grounded Conductor - A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

Ground Fault Circuit Interrupter (GFCI) - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the over current protective device of the supply circuit. LP Gas Industrial Equipment Co. shall use GFCIs in lieu of an assured grounding program.

Insulated - A conductor encased within material of composition and thickness that is recognized as electrical insulation.

Premises Wiring - That interior and exterior wiring, including power, lighting, control, and signal circuit wiring together with all of its associated hardware, fittings, and wiring devices, both permanently and temporarily installed, which extends from the load end of the service drop, or load end of the service lateral conductors to the outlet (s). Such wiring does not include wiring internal to appliances, fixtures, motors, controllers, motor control centers, and similar equipment.

Qualified Person - One that has been trained in the repair, construction and operation of electrical equipment and the hazards involved.

Strain Relief - A mechanical device that prevents force from being transmitted to the connections or terminals of a cable or extension cord.

Class l Locations - Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Class 1 Division 1 - Is a location (a) in which hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or (b) in which hazardous concentrations of such gases or vapors may exist frequently because of repairs or maintenance operations or because of leakage; or (c) in which a breakdown or faulty operation or equipment or processes might release hazardous concentrations of flammable gases or vapors, and might also cause simultaneous failure of electrical equipment.

Class 1 Division 2 - Is a location (a) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquid, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in of abnormal operation of equipment or (b) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operations of the ventilating equipment; or (c) that is adjacent to a Class 1, Division 1 location, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

Class II locations - Class II locations are those that are hazardous because of the presence of combustible dust. Class II locations include the following:

Class II, Division 1 - A Class II, Division 1 location is a location (a) in which combustible dust is or may be in suspension in the air under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures; or (b) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes, or (c) in which combustible dusts of an electrically conductive nature may be present.

NOTE: This classification may include areas of, areas where metal dusts and powders are produced or processed, and other similar locations that contain dust producing machinery and equipment (except where the equipment is dust-tight or vented to the outside).

These areas would have combustible dust in the air, under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures.

- Combustible dusts that are electrically nonconductive include dusts produced in the handling and processing produce combustible dusts when processed or handled.
- Dusts containing magnesium or aluminum are particularly hazardous and the use of extreme caution is necessary to avoid ignition and explosion.

Class II, Division 2 - A Class II, Division 2 location is a location in which: (a) combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus; or (b) dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment, and dust accumulations resulting there from may be ignitable by abnormal operation or failure of electrical equipment or other apparatus.

NOTE: This classification includes locations where dangerous concentrations of suspended dust would not be likely but where dust accumulations might form on or in the vicinity of electric equipment. These areas may contain equipment from which appreciable quantities of dust would escape under abnormal operating conditions or be adjacent to a Class II Division 1 location, as described above, into which an explosive or ignitable concentration of dust may be put into suspension under abnormal operating conditions.

Responsibilities

Managers/Supervisor

The HSE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.

Operations Managers and Supervisors are responsible for ensuring that only qualified employees and or qualified contractors perform electrical repairs or installations.

Operations Managers are also responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.

Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their supervisor immediately.

Only qualified employees may work on electric circuit parts or equipment that has not been de-energized. Such employees shall be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools.

Safe Work Practices

Inspections

- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter shall be used with all portable hand tools, electric extension cords, drop lights and all 110 volt equipment.

- Faulty equipment, tools, or appliances shall be removed from service immediately and tagged “Out of Service”, dated and signed by the employee applying the tag.

Repairs

- Only Qualified Personnel, who have been authorized by the department supervisor or manager, may make repairs to supply cords on electrical tools and to extension cords.
- The names of employees authorized to make repairs will be posted in the workplace.
- Only certified electricians shall be allowed to make repairs to electrical equipment and wiring systems.
- The supervisor obtaining the services of a certified electrician is responsible to verify the electrician’s credentials.
- Employees shall not enter spaces containing exposed energized parts unless qualified and proper illumination exists to enable employees to work safely.
- Employees shall not wear conductive apparel such as rings, watches, jewelry, etc. (unless they are rendered non-conductive by covering, wrapping, or other insulating means) while working on or near open energized equipment this includes batteries on trucks, forklifts, phone backup systems or other such equipment.
- If employees are subject to handle long dimensional conductor objects (ducts or pipes), steps for safe work practices shall be employed to ensure the safety of workers.

Extension Cords

- Use only three-wire, grounded, extension cords and cables that conform to a hard service rating of 14 amperes or higher, and grounding of the tools or equipment being supplied.
- Only commercial or industrial rated-grounded extension cords may be used in shops and outdoors.
- Cords for use other than indoor appliances must have a rating of at least 14 amps.
- Cords must have suitable strain relief provisions at both the plug the receptacle ends.
- Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.
- Adapters that allow three wire, grounded prongs, connected to two wire non-grounded outlets are strictly prohibited.
- Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.
- Cords may not be run through doorways, under mats or carpets, across walkways or aisles, concealed behind walls, ceilings or floors, or run through holes in walls, or anywhere where they can become a tripping hazard.
- High current equipment or appliances should be plugged directly into a wall outlet whenever possible.

    - All extension cords shall be plugged into one of the following:
    - *A GFCI outlet;*
    - *A GFCI built into the cord;*
    - *A GFCI adapter used between the wall outlet and cord plug.*

- All extension cords and or electrical cords shall be inspected daily or before each use, for breaks, plug condition and ground lugs, possible internal breaks, and any other damage. If damage is found, the extension cord or electrical cord shall be remove from service and repaired or replaced.
- Extension cords shall not be used on compressor skid to operated heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment shall be hard wired per applicable electrical codes.

Outlets

- Outlets connected to circuits with different voltages must use a design such that the attachment plugs on the circuits are not interchangeable.

Multiple Outlet Boxes

- Multiple outlet boxes must be plugged into a wall receptacle.
- Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffeepots, or other high-current loads.

Double Insulated Tools

- Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three wire grounded supply cord connection.
- Double insulated tools must not be altered in any way, which would negate the factory rating.

Switches, circuit breakers, and disconnects

- All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.
- Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.
- Each breaker within a breaker panel must be labeled for the service it provides.
- Disconnect switches providing power for individual equipment must be labeled accordingly.

Ladders

- Only approved, non-conductive ladders, may be used when working near or with electrical equipment, which includes changing light bulbs.
- Ladders must be either constructed of wood, fiberglass, or have non-conductive side rails.
- Wood ladders should not be painted, which can hide defects, except with clear lacquer.
- When using ladders they shall be free from any moisture, oils, and greases.

Energized and Overhead High Voltage Power Lines & Equipment

- A minimum clearance of 10 feet from high voltage lines must be maintained when operating vehicular and mechanical equipment such as forklifts, cranes, winch trucks, and other similar equipment.
- When possible, power lines shall be de-energized and grounded or other protective measures shall be provided before work is started.
- Minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.
    - Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5 Selection and Use of Work Practices - Approach Distances for Qualified Employees – Alternating Current). Approach distances are 10’ for 50kV plus 4” for every additional 10kV.

Confined or Enclosed Work Spaces

- When an employee works in a confined or enclosed space that contains exposed energized parts, the employee shall isolate the energy source and turn off the source and lock and tag out the energy source (Only qualified electricians can work on an exposed energy source).
- Protective shields, protective barriers or insulating materials as necessary shall be provided.

Enclosures, Breaker Panels, and Distribution Rooms

- A clear working space must be maintained in the front, back and on each side of all electrical enclosures and around electrical equipment for a safe operation and to permit access for maintenance and alteration.
- A minimum two-foot working floor space in front of panels and enclosures shall be painted yellow.
- Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
- Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
- All enclosures and distribution rooms must have "Danger: High Voltage – Authorized Personnel Only" posted on the front panel and on entrance doors.
- Flammable materials are strictly prohibited inside distribution rooms (Boxes, rags, cleaning fluids, etc.)

Lock Out/Tag Out

- No work shall be performed on (or near enough to them for employees to be exposed due to the dangers of tools or other equipment coming into contact with the live parts) live parts and the hazards they present.
- If any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- Conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.
- Per LP Gas Industrial Equipment Co. policy all electrical will be outsourced and performed only by qualified and licensed electrical contractors who are familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools. Any equipment being made ready for maintenance will be locked out using LP Gas Industrial Equipment Co.'s Control of Hazardous Energy – Lock Out/Tag Out Program. Lockouts are performed by the HSE Manager, Shop Foreman or Branch Manager. Designated employees in some branches may be trained by local management to lock out equipment. If live sources are to be worked it will only be performed with the knowledge of local management. Only certified electricians may work on electric circuit parts or equipment.
- Only authorized personnel may perform lock out/tag out work on electrical equipment and will follow LP Gas Industrial Equipment Co.'s Control of Hazardous Energy – Lock out/Tag Out Program.
- Authorized personnel will be trained in lock out/tag out procedures.
- Affected personnel will be notified when lock out/tag out activities are being performed in their work area.

Contractors

- Only approved, certified, electrical contractors may perform construction and service work on LP Gas Industrial Equipment Co. or client property.
- It is the Manager/Supervisors responsibility to verify the contractor's certification.

Fire Extinguishers

- Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
- Water type extinguishers shall not be located closer than 50 feet from electrical equipment.

Electric Shock-CPR

- If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
- When it is safe to make contact with the victim, begin CPR if the person's heart has stopped or they are not breathing.

- Call for help immediately.

Electric Welders

- A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
- A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.

Equipment Grounding

- All gas compressors, air compressors, separators, vessels, etc. shall be grounded by means of using a lug and ground strap, nominal in size to a ½" bolt or larger, attached to a ground rod six feet or longer.
- Equipment bonding jumpers shall be of copper or other corrosion-resistance material.
- The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less shall have a ground strap from the container and attached to the skid or a ground rod placed in the ground.

Assured Grounding

OSHA requires that employers shall use either ground fault circuit interrupters (GFCI) or an assured equipment grounding conductor program to protect personnel from electrical shock while working.

- LP Gas Industrial Equipment Co. shall use GFCI's in lieu of an assured grounding program.

Ground Fault Circuit Interrupters

All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
    - Additionally, approved GFCI's shall be used for 240-Volt circuits in the same service as described above.
- GFCI's must be used on all 120 volt, single-phase 15 amp and 20 amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.
- The GFCI must be the first device plugged into a permanent receptacle.
- The GFCI must be tested before each use.

Training

All regular full time and temporary employees will be trained in electrical safety utilizing the LP Gas Industrial Equipment Co. Electrical Safety Training course or an approved equivalent.

Employees who face a risk of electric shock, but who are not qualified persons, shall be trained and familiar with electrically related safety practices.

Employee shall be trained in safety related work practices that pertain to their respective job assignments. Employees shall be trained on clearance distances.

Safe work practices shall be employed to prevent electric shock or other injuries resulting for either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized.

Qualified employees must adhere to the approach distances in Table S5 of CFR 1910.333 (below). LP Gas Industrial Equipment Co. only has unqualified employees.

Voltage Rage (phase to phase) Minimum Approach Distance
Over 300V, not over 750V.....1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV.....1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV.....2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV.....3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV.....3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV.....4 ft. 0 in. (122 cm).
Over 121kV, not over 140kV.....4 ft. 6 in. (137 cm).

EMERGENCY ACTION PLAN

Purpose

Each LP Gas Industrial Equipment Co. location shall have a written Emergency Action Plan, appropriate to the hazards of the workplace, in order to respond to an emergency that may require rescue or evacuation.

Each Emergency Action Plan shall be prepared to reflect all known probable emergency conditions which may arise from within the workplace and from adjacent workplaces, the minimum of which will include fire or other emergencies.

The emergency action plan must be available to all employees to review. An emergency action plan must be in writing, kept in the workplace and available to employees for review. However, if a site has 10 or fewer employees the plan may be orally to employees.

Emergency Response Planning, Issuing and Annual Review Guidelines

Emergency Procedures shall be issued and discussed with all new/transferred personnel upon arrival for assignment.

Emergency Action Plans shall be established, implemented, reviewed, maintained, and updated annually in conjunction with:

- Client emergency services department requirements.
- LP Gas Industrial Equipment Co. safety staff and management.
- The requirement to ensure the plan is up to date to reflect current circumstances at the workplace.

The plan is to be reviewed before the job and when conditions warrant and should be used for routine and non-routine emergencies as well as changes in operation, and products or services which warrant new emergencies situations.

Reviewing the Emergency Action Plan with Employees
A review of the emergency action plan should occur with employees:

- When the plan is developed or the employee is assigned initially to a job.
- When the employee's responsibilities under the plan change.
- When the plan is changed.

Procedures for Emergency Evacuation Planning

The emergency action plan must include procedures for emergency evacuation. An emergency action plan must include at a minimum procedures for emergency evacuation, including type of evacuation and exit route assignments.

The individual site evacuation procedure shall be appropriate to the risk must be developed and implemented to:

- Notify staff, including the first aid attendant, of the nature and location of the emergency,
- Evacuate employees safely and procedures to account for all employees after evacuation,
- Check and confirm the safe evacuation of all employees.
- *Notify the fire department or other emergency responders, and*
- *Notify adjacent workplaces or residences which may be affected if the risk of exposure to a substance extends beyond the workplace. Notification of the public must be in conformity with the requirements of other jurisdictions, including provincial and municipal agencies.*

List of Potential Emergencies

The emergency action plan must include procedures for reporting a fire or other emergency. An emergency action plan must include at a minimum procedures for reporting a fire or other emergency.

Each location shall conduct a risk assessment for hazards posed by potential hazardous substances from accidental release, fie or other such emergencies that could cause an evacuation or rescue and list the potential emergencies for LP Gas Industrial Equipment Co. operations. Procedures for each of these potential emergencies shall be contained within the Emergency Action Plan. Examples include:

Fire
Gas Leaks/Chemical Spills
Bomb Threats
Medical Emergencies
Explosion
Workplace Violence

Guidance Procedures for Potential Emergencies

Fire

- Warn others in the immediate area. Notify the appropriate emergency response personnel by phone or radio and pull the nearest fire alarm if present.
- If nearby staff have been trained, and it is safe to do so, fight the fire using a portable fire extinguisher. Remember, if in doubt get out.
- Evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Gas Leaks/Chemical Spills - Upon smelling or noticing a gas leak or unusual vapors, or a chemical spill:

- Pull fire alarm (if present) or sound warning and evacuate the premises via the nearest exit
- Proceed to the Emergency Assembly Area
- Contact local emergency response personnel by phone or radio
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

If employees are required to control a release of a hazardous substance, to perform cleanup of a spill, or to carry out testing before re-entry, LP Gas Industrial Equipment Co. shall provide:

- Adequate written safe work procedures and documented training.
- Appropriate personal protective equipment which is readily available to employees and is adequately maintained, and
- Material or equipment necessary for the control and disposal of the hazardous substance.
- Bomb Threats
- If a threat is received by phone, mail or other means, get as much information as possible.
- If the threat is received by phone, try to keep the person on the line for as long as possible. Do not hang up the phone, even after the call has been terminated.
- Contact local emergency response personnel by phone or radio.
- If a suspicious device is identified, evacuate the immediate area and notify local emergency response personnel.

Medical Emergencies

- Call for assistance by phone or radio. Give the exact location and details of the medical emergency.
- If qualified, provide basic first aid, and keep the person comfortable. Do not move the person. Do not leave him/her unattended.
- Arrange for emergency medical transportation based on the medical planning portion of the site's Emergency Action Plan.

Explosions

- Get down on the floor, take shelter under tables or desks, and protect your face and head against flying glass and debris.
- Once it is safe to do so, evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Workplace Violence

- Notify security immediately by phone or radio and report the occurrence.
- Do NOT attempt to physically intervene. Protect yourself first at all costs.

Emergency Response Equipment

Listing of Types of Emergency Equipment

Each site Emergency Action Plan shall identify, list the locations of and provide operational procedures for types of emergency equipment. For off-site locations, available emergency equipment should be identified and reviewed with workers prior to commencing work activities. Examples include:

- Living areas with an audible alarm and a fire hose cabinet.
- Emergency lighting, exit doors, dampers and fire stop flaps.
- First aid kits located throughout the facility and in vehicles.
- Portable fire extinguishers being located throughout the facility and clearly marked.
- Only authorized and trained personnel will operate emergency equipment.

Inspection & Maintenance Records

Maintenance records must be kept, including but not limited to the name of manufacturer, the type of equipment, the date put into service, when and for what purpose the equipment has been used, the date of the last inspection and name of the inspecting person, any damage suffered, and the date and nature of any of maintenance on emergency response equipment.

Ropes and associated equipment must be inspected visually and physically by qualified employees after each use for rescue, evacuation or training purposes.

The LP Gas Industrial Equipment Co. designated representative will perform and maintain the LP Gas Industrial Equipment Co.. Emergency Inspection Checklist Form on a monthly basis. The checklist shall be maintained for retention in active files for two years and in on site archives for seven years.

Media Response Plan

LP Gas Industrial Equipment Co. employees must not be interviewed by anyone unless the Legal Department has given prior approval. In most cases the Legal Department will have an attorney present for such interviews.

Note: If after LP Gas Industrial Equipment Co. personnel have received approval for an interview from the Legal Department and another party's attorney appears unannounced, you should politely adjourn the interview until the LP Gas Industrial Equipment Co. Legal Department can be contacted. Personnel must not give any work related interviews, affidavits, written or recorded statements, or depositions without the express approval from the LP Gas Industrial Equipment Co. Legal Department.

In the case of interviews of LP Gas Industrial Equipment Co. employees by non-attorneys, (law enforcement, government officials, media, etc.) you must inform the Legal Department before the interview. If the interview is taped or videotaped, you must request a copy of the tape. If the interview is reduced to writing, you must ask for a copy of any notes or statements taken. This procedure is to avoid information being misrepresented.

All media requests should be referred to the LP Gas Industrial Equipment Co. Chief Operating Officer. Unless requested to do so by the Legal Department, other company personnel are not to give interviews or make statements to the media. Management prefers that families of personnel involved in an incident receive initial notification from a LP Gas Industrial Equipment Co. representative and not the media.

Training

LP Gas Industrial Equipment Co. shall ensure training for Emergency Action Plan is delivered, documented and prepares the staff and facility for emergency conditions. LP Gas Industrial Equipment Co. will designate and train employees to assist in a safe and orderly evacuation of other employees. Requirements include:

- All employees must be given adequate instruction in the fire prevention and emergency evacuation procedures applicable to their workplace.
- The designated site representative shall provide the Emergency Action Plan orientation to all new/transferred personnel before they begin work.
- All personnel shall receive a review/update orientation at least annually, or whenever any new/revised information is to be provided.
- The Emergency Action Plan Orientation Check List shall be completed after orientation and the record maintained in the individual's training records.
- LP Gas Industrial Equipment Co. management shall ensure that contractors/consultants working in areas under the supervision of LP Gas Industrial Equipment Co. also receive the Emergency Action Plan orientation upon arrival to the area.
- Employees expected to perform duties under the Emergency Action Plan will be trained prior to assuming their roles. This will include simulated rescue or evacuation exercises and regular retraining, appropriate to the type of rescue or evacuation being provided, and training records must be kept.
- A list of trained staff responders shall be posted and maintained indicating their name, response function, their work location and what type of equipment they have been trained for.

Location and Use of Emergency Facilities

LP Gas Industrial Equipment Co. shall ensure each Emergency Action Plan lists the location and how to use emergency facilities for each work site. For off-site locations, outside services that can provide assistance in the

event of an emergency should be identified and reviewed with workers prior to commencing work activities. A list shall be posted in a conspicuous area showing local emergency facilities and how to contact. Examples include:

- Client Emergency Response Department (Initial Responder for All Emergencies If Applicable)
- Local Police, Local Hospital, Poison Center (Poison Response) 1-800-332-1414, etc.

Fire Protection & Response

LP Gas Industrial Equipment Co. shall ensure each Emergency Action Plan provides fire protection and response planning within each site Emergency Action Plan and is utilized during all phases of work. As a minimum, all shall include the following:

Protection

- Smoking is not permitted except in designated 'SMOKING" areas.
- Facilities shall be designed and maintained in accordance with local fire code and regulations.
- Portable fire extinguishers shall be stationed, inspected and maintained in accordance with local fire code and regulations. LP Gas Industrial Equipment Co. personnel shall be trained in their use.
- Flammable and combustible liquids shall be properly stored.
- Employees shall report all fire safety issues to their immediate supervisor.
- Facilities shall be inspected by use of the LP Gas Industrial Equipment Co. Emergency Inspection Checklist

Response

In the event of a fire**,** personnel working in facility will adhere to the following procedure for their work area:

- Warn others in the immediate area. Notify the appropriate emergency response personnel by phone or radio and pull the nearest fire alarm if present.
- If nearby staff have been trained, and it is safe to do so, fight the fire using a portable fire extinguisher. Remember, if in doubt get out.
- Evacuate the premises via the nearest exit and proceed to the nearest Emergency Assembly Area.
- Re-enter only after the Emergency Coordinator has given an ALL CLEAR.

Roads are designated as fire lanes. Vehicles can stop there for unloading, but no parking will be allowed.

Alarm & Emergency Communication

Each Emergency Action Plan for LP Gas Industrial Equipment Co. shall contain methods to address alarms and communications in case of an emergency. For off-site locations, the method of emergency notification should be identified and reviewed with workers prior to commencing work activities.

Alarm System

A system must be in place to alert employees. The alarm system shall be distinctive and recognizable as a signal to evacuate the work area or perform actions designated under the emergency action plan. For sites with 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm. Each Emergency Response plan will describe how to activate an alarm and what to do after either activating or hearing an alarm.
Personnel responding to any alarm shall avoid complacency. Every alarm should be treated as an actual incident until proven otherwise. Treating and responding to alarms as a routine happening can result in injuries, fatalities and destruction of property.

Communications
LP Gas Industrial Equipment Co. responders and security use telephones, cell phones and radios in conjunction with emergency response.

Rescue and Evacuation Procedures

Procedures for Rescue and Medical Services
Each site Emergency Action Plan shall address who performs recue services when required. It is the position of LP Gas Industrial Equipment Co. that all rescue and medical duties are performed by client emergency responders or local governmental responders when on their location. For off-site locations, evacuation procedures and methods of rescue shall be identified and reviewed with workers prior to commencing work activities.

At least one member of a rescue team must be a first aid attendant trained to immobilize an injured employee. Effective communications must be maintained between the employees engaged in rescue or evacuation and support persons.

Procedure for Evacuation

Preparation for Evacuation
Each site Emergency Action Plan shall contain a procedure for evacuation if required.

The LP Gas Industrial Equipment Co. designated Emergency Coordinator will maintain an active list of all LP Gas Industrial Equipment Co. and contract emergency responders.

Critical Plant Operations Personnel
Staff designated to remain in the facility to shut down or supervise critical operations or equipment will be specifically trained and authorized by management to perform their duties before any evacuation may occur.

Evacuation Drills
Evacuation drills shall be conducted at least annually. Before conducting an evacuation drill a pre-drill assessment of the evacuation routes and assembly points shall be conducted. The pre-drill assessment is intended to verify that all egress components (stairs, doors, etc.) are in proper order and that occupants can use them safely.

Coordination Within a Facility
Emergency training and drills should also be coordinated within a LP Gas Industrial Equipment Co. facility so that key staff are involved in the planning process and are aware of their responsibilities in an emergency as well as during the drill.

Facility management also needs to be informed of the potential for the interruption in productivity and business operations. Alternatives for the continuity of critical operations need to be considered.

Procedures to Account for All Employees After Evacuation
The emergency action plan must include procedures to account for all employees after the evacuation. An emergency action plan must include at a minimum procedures to account for all employees after evacuation. Each muster or assembly point will have a blank roster for evacuees to enter their name. All completed rosters will be gathered and checked against a master list of employees assigned or checked in at the facility to verify all employees are accounted for.

Emergency Evacuation Notification and Routes
In the event of an emergency occurring within or affecting the work site, the Emergency Coordinator makes the following decisions and ensures the appropriate key steps are taken:

- Advise all personnel of the emergency.
- Activate the emergency notification sequence to alert the appropriate responders and initiate emergency notification within the building.
- Evacuate all persons to the identified assembly area and account for everyone including visitors and clients.

All personnel will proceed to the primary safe area immediately located at the identified emergency assembly area for their location.
A copy of escape routes shall be posted in all offices, at all alarm stations and at all exits.

Sweep Check by LP Gas Industrial Equipment Co. Designated Responders

- LP Gas Industrial Equipment Co. trained responders will establish a pattern that will permit covering the area in the shortest time, with a minimum of backtracking.
- When the evacuation alarm rings, stop work immediately, and conduct a sweep of the area. Ask everyone to leave the premises immediately and proceed to the identified emergency assembly area for their location.
- If you encounter smoke or flame, leave that section immediately, finish your sweep and evacuate the building by activating fire alarm pull stations. Remember, if in doubt get out.
- If anyone refuses to leave, note their name and location, and advise the client emergency services personnel.
- Meet the client emergency services personnel and advise them of your sweep or an area of smoke or flame that you were unable to check. Assist with head count and evacuation if required.
- Ensure that everyone stays at the emergency assembly area until the Emergency Coordinator has given an all clear to re-enter the building.
- In the event of inclement weather, the client will make arrangements to have buses either as temporary shelter or to transport personnel to another location.

Evacuation or Drill Evaluation

Following an evacuation or drill a response review shall be conducted and documented by the LP Gas Industrial Equipment Co. Emergency Coordinator and lessons learned share with the appropriate responders and staff using the LP Gas Industrial Equipment Co. Evacuation Report.

Emergency Response Program Management

Contact information will be provided to employees who need additional information pertaining to the plan or to their respective duties. The LP Gas Industrial Equipment Co. site manager may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.

For the purpose of this Emergency Action Plan guidance the Emergency Coordinator will be designated by the LP Gas Industrial Equipment Co. site manager. His/her alternate will be the LP Gas Industrial Equipment Co. Site Safety Supervisor or otherwise designated by the site manager.

Employees performing rescue or evacuation must wear personal protective clothing and equipment appropriate to the hazards likely to be encountered.

Duties

LP Gas Industrial Equipment Co. Emergency Coordinator

The LP Gas Industrial Equipment Co. Emergency Coordinator ensures that:

- Evacuation drills are conducted on an annual basis.
- Inspections of facilities are performed monthly.
- All necessary repairs of components for evacuation paths are completed.

- Plans for the modification of any part of an evacuation path are reviewed.
- An up to date list of Fire Wardens is maintained.
- Radios and reflective vests and other response equipment are available.

During an evacuation or evacuation exercise, the LP Gas Industrial Equipment Co. Emergency Coordinator:

- Coordinates activities in accordance with either local authorities or the client Security and ERT as required.
- Coordinates Fire Wardens and informs them the nature of the emergency via handheld radios.

Following an evacuation or evacuation exercise, the LP Gas Industrial Equipment Co. Emergency Coordinator:

- Notifies Fire Wardens that it is safe to re-enter the building.
- Prepares a report following an evacuation (actual or drill).
- Reports to management for follow up or corrective actions.

LP Gas Industrial Equipment Co. Site Safety Supervisor

- Assist the LP Gas Industrial Equipment Co. Emergency Coordinator when requested.

Fire Wardens

- Be equipped with radios and reflective vests. The equipment is to be handed into the LP Gas Industrial Equipment Co. Emergency Coordinator and reissued to the next oncoming Fire Warden for the designated area.
- Be familiar with exits and muster stations for their responsible area.
- Direct residents safely out of the building to the designated muster station or to an alternate location.
- Sweep their effected area, ensuring that the alarms are properly functioning and that residents evacuate safely.
- In order to account for all employees after evacuation the fire wardens or designated personnel shall complete a head count and reconcile the evacuees with the attendance or daily housing report at the assigned muster station or alternate location.
- Radio unaccounted for personnel to Security.
- Notify personnel that they may re-enter the building when permission has been given by the appropriate authorities.

Residents, Contractors & Visitors

- All employees, users, contractors and visitors will follow the instructions of the Fire Wardens, Security, ERT, Safety Personnel, managers and supervisors when asked to evacuate the building.
- Know the two safest and most direct evacuation routes from their work area(s).
- Know the designated evacuation assembly point for the building.

FALL PROTECTION

Purpose

The purpose of the fall protection program is to:

- ensure all areas are free from uncontrolled fall hazards
- all employees are properly trained in fall prevention and protection
- fall prevention systems are inspected and monitored to ensure effectiveness
-

Policy

It is the policy of LP Gas Industrial Equipment Co. to take all practical measures possible to prevent employees from being injured by falls. We will take necessary steps to eliminate, prevent, and control fall hazards. We will

comply fully with the OSHA Fall Protection standard (CFR 1926, Subpart M, Fall Protection). The first priority is given to the elimination of fall hazards. If a fall hazard cannot be eliminated, effective fall protection will be planned, implemented, and monitored to control the risks of injury due to falling.

All employees exposed to potential falls from heights will be trained to minimize the exposures.
Fall protection equipment will be provided and its use required by all employees. Foreman will be responsible for implementation of a fall protection plan for their jobsite.

Hazard Identification

The foreman on each jobsite will be responsible for identifying fall hazards on their jobsite. The foreman will evaluate each situation or work procedure where employees may be exposed to a fall of 6 feet or more. The foreman will be responsible for developing a plan to eliminate the exposures, if possible, or to select the appropriate fall protection systems and/or equipment.

Hazard Control

Engineering Controls:

- Personal Fall Protection
- Guard Rail Systems
- Positioning Devices
- Warning Line Systems
- Floor Opening Covers

Administrative Controls:

- Controlled access zones
- Employee training
- Audits
- Inspections
- Supervision
- Signs

Fall Protection Required

The following are examples of situations were fall protection would be needed. This listing is by no means complete, and there are many other situations where a fall of 6 feet or more is possible. It should be noted that ladders and scaffolding are not included in this list because they are covered by other OSHA standards and other requirements of our safety program.

Wall Openings

Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 meters) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 meter) above the walking/working surface must be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

Holes:
Personal fall arrest systems, covers, or guardrail systems shall be erected around holes (including skylights) that are more than 6 feet (1.8 meters) above lower levels.

Leading Edges:
Each employee who is constructing a leading edge 6 feet (1.8 meters) or more above lower levels shall be protected by guardrail systems, safety net systems, or personal fall arrest systems.

Excavations:
Each employee at the edge of an excavation 6 feet (1.8 meters) or more deep shall be protected from falling by guardrail systems, fences, barricades, or covers.
Where walkways are provided to permit employees to cross over excavations, guardrails are required on the walkway if it is 6 feet (1.8 meters) or more above the excavation.

Formwork and Reinforcing Steel:
For employees, while moving vertically and/or horizontally on the vertical face of rebar assemblies built in place, fall protection is not required when employees are moving. OSHA considers the multiple hand holds and foot holds on rebar assemblies as providing similar protection as that provided by a fixed ladder. Consequently, no fall protection is necessary while moving point to point for heights below 24 feet (7.3 meters). An employee must be provided with fall protection when climbing or otherwise moving at a height more than 24 feet (7.3 meters), the same as for fixed ladders.

Hoist Areas:
Each employee in a hoist area shall be protected from falling 6 feet (1.8 meters) or more by guardrail systems or personal fall arrest systems. If guardrail systems (or chain gate or guardrail) or portions thereof must be removed to facilitate hoisting operations, as during the landing of materials, and a worker must lean through the access opening or out over the edge of the access opening to receive or guide equipment and materials, that employee must be protected by a personal fall arrest system.

Overhand Bricklaying and Related Work:
Each employee performing overhand bricklaying and related work 6 feet (1.8 meters) or more above lower levels shall be protected by guardrail systems, safety net systems, or personal fall arrest systems, or shall work in a controlled access zone. All employees reaching more than 10 inches (25 cm) below the level of a walking/working surface on which they are working shall be protected by a guardrail system, safety net system, or personal fall arrest system.

Precast Concrete Erection and Residential Construction:
Each employee who is 6 feet (1.8 meters) or more above lower levels while erecting precast concrete members and related operations such as grouting of precast concrete members and each employee engaged in residential construction shall be protected by guardrail systems, safety net systems, or personal fall arrest systems.

Ramps, Runways, and Other Walkways:
Each employee using ramps, runways, and other walkways shall be protected from falling 6 feet (1.8 meters) or more by guardrail systems.

Low-slope Roofs:
Each employee engaged in roofing activities on low-slope roofs with unprotected sides and edges 6 feet (1.8 meters) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system. On roofs 50 feet (15.24 meters) or less in width, the use of a safety monitoring system without a warning line system is permitted.

Steep Roofs:
Each employee on a steep roof with unprotected sides and edges 6 feet (1.8 meters) or more above lower levels shall be protected by guardrail systems with toe boards, safety net systems, or personal fall arrest systems.

Controlled Access Zones:
A Controlled access zone is a work area designated and clearly marked in which certain types of work (such as overhand bricklaying) may take place without the use of conventional fall protection systems, guardrail, personal arrest or safety net to protect the employees working in the zone.

The employer shall provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.
Controlled access zones are used to keep out workers other than those authorized to enter work areas from which guardrails have been removed. Where there are no guardrails, masons are the only workers allowed in controlled access zones.

Controlled access zones, when created to limit entrance to areas where leading edge work and other operations are taking place, must be defined by a control line or by any other means that restrict access. Control lines shall consist of ropes, wires, tapes or equivalent materials, and supporting stanchions, and each must be:

- Flagged or otherwise clearly marked at not more than 6-foot (1.8 meters) intervals with high-visibility material
- Rigged and supported in such a way that the lowest point (including sag) is not less than
- 39 inches (1 meter) from the walking/working surface and the highest point is not more than 45 inches (1.3 meters)--nor more than 50 inches (1.3 meters) when overhand bricklaying operations are being performed from the walking/working surface
- Strong enough to sustain stress of not less than 200 pounds (0.88 kilonewtons). Control lines shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge Control lines also must be connected on each side to a guardrail system or wall. When control lines are used, they shall be erected not less than 6 feet (1.8 meters) nor more than 25 feet (7.6 meters) from the unprotected or leading edge, except when precast concrete members are being erected. In the latter case, the control line is to be erected not less than 6 feet (1.8 meters) nor more than 60 feet (18 meters) or half the length of the member being erected, whichever is less, from the leading edge.

Controlled access zones when used to determine access to areas where overhand bricklaying and related work are taking place are to be defined by a control line erected not less than 10 feet (3 meters) nor more than 15 feet (4.6 meters) from the working edge. Additional control lines must be erected at each end to enclose the controlled access zone. Only employees engaged in overhand bricklaying or related works are permitted in the controlled access zones.

On floors and roofs where guardrail systems are not in place prior to the beginning of overhand bricklaying operations, controlled access zones will be enlarged as necessary to enclose all points of access, material handling areas, and storage areas.

On floors and roofs where guardrail systems are in place, but need to be removed to allow overhand bricklaying work or leading edge work to take place, only that portion of the guardrail necessary to accomplish that day's work shall be removed.

Fall Protection Systems

When there is a potential fall of 6 feet or more, we will utilize one or more of the following means of providing protection:

Guardrail Systems

Guardrail systems must meet the following criteria. Toprails and midrails of guardrail systems must be at least one-quarter inch (0.6 centimeters) nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for toprails, it must be flagged at not more 6 feet intervals (1.8 meters) with highvisibility material. Steel and plastic banding cannot be used as toprails or midrails. Manila, plastic, or synthetic rope used for toprails or midrails must be inspected as frequently as necessary to ensure strength and stability.

The top edge height of toprails or (equivalent) guardrails must be 42 inches (1.1 meters) plus or minus 3 inches (8 centimeters), above the walking/working level.
When workers are using stilts, the top edge height of the top rail, or equivalent member, must be increased an amount equal to the height of the stilts.

Screens, midrails, mesh, intermediate vertical members, or equivalent intermediate structural members must be installed between the top edge of the guardrail system and the walking/working surface when there are no walls or parapet walls at least 21 inches (53 centimeters) high. When midrails are used, they must be installed a to a height midway between the top edge of the guardrail system and the walking/working level.

When screens and mesh are used, they must extend from the top rail to the walking/working level and along the entire opening between top rail supports.
Intermediate members, such as balusters, when used between posts, shall not be more than 19 inches (48 centimeters) apart.

Other structural members, such as additional midrails and architectural panels, shall be installed so that there are no openings in the guardrail system more than 19 inches (48 centimeters).

The guardrail system must be capable of withstanding a force of at least 200 pounds (890 newtons) applied within 2 inches of the top edge in any outward or downward direction. When the 200 pound (890 newtons) test is applied in a downward direction, the top edge of the guardrail must not deflect to a height less 58 than 39 inches (1 meter) above the walking/working level.

Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding a force of at least
150 pounds (667 newtons) applied in any downward or outward direction at any point along the midrail or other member.

Guardrail systems shall be surfaced to protect workers from punctures or lacerations and to prevent clothing from snagging.

The ends of top rails and midrails must not overhang terminal posts, except where such overhang does not constitute a projection hazard.

When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section must be placed across the access opening between guardrail sections when hoisting operations are not taking place.

At holes, guardrail systems must be set up on all unprotected sides or edges.
When holes are used for the passage of materials, the hole shall have not more than two sides with removable guardrail sections. When the hole is not in use, it must be covered or provided with guardrails along all unprotected sides or edges.

If guardrail systems are used around holes that are used as access points (such as ladderways), gates must be used or the point of access must be offset to prevent accidental walking into the hole.

If guardrails are used at unprotected sides or edges of ramps and runways, they must be erected on each unprotected side or edge.

Personal Fall Arrest Systems

These consist of an anchorage, connectors, and a body belt or body harness and may include a deceleration device, lifeline, or suitable combinations. If a personal fall arrest system is used for fall protection, it must do the following:

- Limit maximum arresting force on an employee to 900 pounds (4 kilonewtons) when used with a body belt
- Limit maximum arresting force on an employee to 1,800 pounds (8 kilonewtons) when used with a body harness
- Be rigged so that an employee can neither free fall more than 6 feet (1.8 meters) nor contact any lower level
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 meters)
- Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet (1.8 meters) or the free fall distance permitted by the system, whichever is less.
-

The use of body belts for fall arrest is prohibited and a full body harness is required.

Personal fall arrest systems must be inspected prior to each use for wear damage, and other deterioration. Defective components must be removed from service.

Positioning Device Systems

Body harness systems are to be set up so that a worker can free fall no farther than 2 feet (0.6 meters). They shall be secured to an anchorage capable of supporting a least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kilonewtons), whichever is greater.

Safety Monitoring Systems

When no other alternative fall protection has been implemented, the employer shall implement a safety monitoring system. Employers must appoint a competent person to monitor the safety of workers and the employer shall ensure that the safety monitor:

- Is competent in the recognition of fall hazards
- Is capable of warning workers of fall hazard dangers and in detecting unsafe work practices
- Is operating on the same walking/working surfaces of the workers and can see them
- Is close enough to work operations to communicate orally with workers and has no other duties to distract from the monitoring function.

Mechanical equipment shall not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations on low-sloped roofs.
No worker, other than one engaged in roofing work (on low-sloped roofs) or one covered by a fall protection plan, shall be allowed in an area where an employee is being protected by a safety monitoring system.
All workers in a controlled access zone shall be instructed to promptly comply with fall hazard warnings issued by safety monitors.

Warning Line Systems

Warning line systems consist of ropes, wires, or chains, and supporting stanchions and are set up as follows:

- Flagged at not more than 6-foot (1.8 meters) intervals with high-visibility material
- Rigged and supported so that the lowest point including sag) is no less than 34 inches (0.9 meters) from the walking/working surface and60 its highest point is no more than 39 inches (1 meter) from the walking/working surface
- Stanchions, after being rigged with warning lines, shall be capable of resisting, without tipping over, a force of at least 16 pounds 71 newtons) applied horizontally against the stanchion, 30 inches (0.8 meters) above the walking/working surface, perpendicular to the warning line and in the direction of the floor, roof, or platform edge
- The rope, wire, or chain shall have a minimum tensile strength of 500 pounds (2.22 kilonewtons) and after being attached to the stanchions, must support without breaking the load applied to the stanchions as prescribed above
- Shall be attached to each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in the adjacent section before the stanchion tips over.

Warning lines shall be erected around all sides of roof work areas. When mechanical equipment is being used, the warning line shall be erected not less than 6 feet (1.8 meters) from the roof edge parallel to the direction of mechanical equipment operation, and not less than 10 feet (3 meters) from the roof edge perpendicular to the direction of mechanical equipment operation.
When mechanical equipment is not being used, the warning line must be erected not less than 6 feet (1.8 meters) from the roof edge.

Covers

Covers located in roadways and vehicular aisles must be able to support at least twice the maximum axle load of the largest vehicle to which the cover might be subjected. All other covers must be able to support at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time. To prevent accidental displacement resulting from wind, equipment, or workers. Activities, all covers must be secured. All covers shall be color coded or bear the markings "HOLE" or "COVER."

Protection from Falling Objects

When guardrail systems are used to prevent materials from falling from one level to another, any openings must be small enough to prevent passage of potential falling objects. No materials or equipment except masonry and mortar shall be stored within 4 feet (1.2 meters) of working edges. Excess mortar, broken or scattered masonry units, and all other materials and debris shall be kept clear of the working area by removal at regular intervals. During roofing work, materials and equipment shall not be stored within 6 feet
(1.8 meters) of a roof edge unless guardrails are erected at the edge, and materials piled, grouped, or stacked near a roof edge must be stable and self-supporting.

Training

Employees will be trained in the following areas:

a. The nature of fall hazards in the work area
b. The correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems
c. The use and operation of controlled access zones and guardrail, personal fall arrest, safety net, warning line, and safety monitoring systems
d. The role of each employee in the safety monitoring system when the system is in use
e. The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs
f. The correct procedures for equipment and materials handling and storage and the erection of overhead protection
g. Employees role in fall protection plans.
h. Retraining shall be provided if one of the following occurs:
    1. Work place changes and there are needs to be addressed
    2. Fall protection systems and/or equipment changes that are currently in place are no longer prevalent or become obsolete
    3. Deficiencies in training or lack thereof
i. All training for fall protection is documented and kept up to date by the Safety
j. Director
k. If an accident happens to occur, it will be fully investigated by the Supervisor and the Safety Director. After investigation is complete, it will then be recorded and addressed to see if additional training or a modification in the training is needed
l. In the event of a fall, the proper authorities will be contacted immediately. If the accident is an obviously serious fall, call 911 and get in touch with your Supervisor immediately. This could truly be a life or death situation and time is crucial.

FIRE PREVENTION PROGRAM

Purpose

The Company Fire Safety Plan has been developed to work in conjunction with company emergency plans and other safety programs. This includes reviewing all new building construction and renovations to ensure compliance with applicable state, local, and national fire and life safety standards. Fire prevention measures reduce the incidence of fires by eliminating opportunities for ignition of flammable materials.

Responsibilities

Management:

- Ensure all fire prevention methods are established and enforced
- Ensure fire suppression systems such as sprinklers and extinguishers are periodically inspected and maintained to a high degree of working order
- Train supervisors to use fire extinguishers for incipient fires
- Train employees on evacuation routes and procedures

Supervisors:

- Closely monitor the use of flammable materials and liquids
- Train assigned employees in the safe storage, use and handling of flammable materials
- Ensure flammable material storage areas are properly maintained

Employees:

- Use, store and transfer flammable materials in accordance with provided training
- Do not mix flammable materials
- Immediately report violations of the Fire Safety Program

Hazards:

Fire and explosion hazards can exist in almost any work area. Potential hazards include:

- Improper operation or maintenance of gas fired equipment
- Improper storage or use of flammable liquids
- Smoking in prohibited areas
- Accumulation of trash
- Unauthorized Hot Work operations

Hazard Control

Elimination of Ignition Sources:

All nonessential ignition sources must be eliminated where flammable liquids are used or stored. The following is a list of some of the more common potential ignition sources:

- Open flames, such as cutting and welding torches, furnaces, matches, and heaters these sources should be kept away from flammable liquids operations. Cutting or welding on flammable liquids equipment should not be performed unless the equipment has been properly emptied and purged with a neutral gas such as nitrogen.
- Chemical sources of ignition such as D.C. motors, switched, and circuit breakers these sources should be eliminated where flammable liquids are handled or stored.
- Only approved explosion-proof devices should be used in these areas.
- Mechanical sparks-these sparks can be produced as a result of friction. Only non-sparking tools should be used in areas where flammable liquids are stored or handled.
- Static sparks-these sparks can be generated as a result of electron transfer between two contacting surfaces. The electrons can discharge in a small volume, raising the temperature to above the ignition temperature. Every effort should be made to eliminate the possibility of static sparks. Also proper bonding and grounding procedures must be followed when flammable liquids are transferred or transported.

Removal of Incompatibles:

Materials that can contribute to a flammable liquid fire should not be stored with flammable liquids. Examples are oxidizers and organic peroxides, which, on decomposition, can generate large amounts of oxygen.

Control of Flammable Gases:

Generally, flammable gases pose the same type of fire hazards as flammable liquids and their vapors. Many of the safeguards for flammable liquids also apply to flammable gases, other properties such as toxicity, reactivity, and corrosivity also must be taken into account. Also, a gas that is flammable could produce toxic combustion products.

Fire Extinguishers:

A portable fire extinguisher is a "first aid" device and is very effective when used while the fire is small. The use of fire extinguisher that matches the class of fire, by a person who is well trained, can save both lives and property. Portable fire extinguishers must be installed in workplaces regardless of other firefighting measures. The successful performance of a fire extinguisher in a fire situation largely depends on its proper selection, inspection, maintenance, and distribution.

Classification of Fires and Selection of Extinguishers

Fires are classified into four general categories depending on the type of material or fuel involved. The type of fire determines the type of extinguisher that should be used to extinguish it.

1. Class A fires involve materials such as wood, paper, and cloth which produce glowing embers or char.
2. Class B fires involve flammable gases, liquids, and greases, including gasoline and most hydrocarbon liquids which must be vaporized for combustion to occur.
3. Class C fires involve fires in live electrical equipment or in materials near electrically powered equipment.

4. Class D fires involve combustible metals, such as magnesium, zirconium, potassium, and sodium.

Extinguishers will be selected according to the potential fire hazard, the construction and occupancy of facilities, hazard to be protected, and other factors pertinent to the situation.

Location and Marking of Extinguishers:
Extinguishers will be conspicuously located and readily accessible for immediate use in the event of fire. They will be located along normal paths of travel and egress. Wall recesses and/or flush-mounted cabinets will be used as extinguisher locations whenever possible.
Extinguishers will be clearly visible. In locations where visual obstruction cannot be completely avoided, directional arrows will be provided to indicate the location of extinguishers and the arrows will be marked with the extinguisher classification.

If extinguishers intended for different classes of fire are located together, they will be conspicuously marked to ensure that the proper class extinguisher selection is made at the time of a fire. Extinguisher classification markings will be located on the front of the shell above or below the extinguisher nameplate. Markings will be of a size and form to be legible from a distance of 3 feet.

Condition:
Portable extinguishers will be maintained in a fully charged and operable condition. They will be kept in their designated locations at all times when not being used. When extinguishers are removed for maintenance or testing, a fully charged and operable replacement unit will be provided.

Mounting and Distribution of Extinguishers:
Extinguishers will be installed on hangers, brackets, in cabinets, or on shelves.
Extinguishers having a gross weight not exceeding 40 pounds will be so installed that the top of the extinguisher is not more than 3-1/2 feet above the floor.

Extinguishers mounted in cabinets or wall recesses or set on shelves will be placed so that the extinguisher operating instructions face outward. The location of such extinguishers will be made conspicuous by marking the cabinet or wall recess in a contrasting color which will distinguish it from the normal decor.

Extinguishers must be distributed in such a way that the amount of time needed to travel to their location and back to the fire does not allow the fire to get out of control. OSHA requires that the travel distance for Class A and Class D extinguishers not exceed 75 feet. The maximum travel distance for Class B extinguishers is 50 feet because flammable liquid fires can get out of control 65 faster that Class A fires. There is no maximum travel distance specified for Class
C extinguishers, but they must be distributed on the basis of appropriate patterns for Class A and B hazards.

Inspection and Maintenance:
Once an extinguisher is selected, purchased, and installed, it is the responsibility of the Safety Officer to oversee the inspection, maintenance, and testing of fire extinguishers to ensure that they are in proper working condition and have not been tampered with or physically damaged.

Fire Safety Inspections & Housekeeping:
First line supervisors and Safety Committees are responsible for conducting work site surveys that include observations of compliance with the Fire Safety Program. These surveys should include observations of worksite safety and housekeeping issues and should specifically address proper storage of chemicals and supplies, unobstructed access to fire extinguishers, and emergency evacuation routes. Also, they should determine if an emergency evacuation plan is present in work areas and that personnel are familiar with the plan.

Emergency Exits:
Every exit will be clearly visible, or the route to it conspicuously identified in such a manner that every occupant of the building will readily know the direction of escape from any point. At no time will exits be blocked.

Any doorway or passageway which is not an exit or access to an exit but which may be mistaken for an exit will be identified by a sign reading "Not An Exit" or a sign indicating it actual use (i.e., "Storeroom"). Exits and accesses to

exits will be marked by a readily visible sign. Each exit sign (other than internally illuminated signs) will be illuminated by a reliable light source providing not less than 5 foot-candles on the illuminated surface.

Emergency Plan for Persons with Disabilities:
The first line supervisor is assigned the responsibility to assist Persons with Disabilities (PWD) under their supervision. An alternate assistant will be chosen by the supervisor.
The role of the two assistants is to report to their assigned person, and to either assist in evacuation or assure that the PWD is removed from danger.

- Supervisors, alternates, and the person with a disability will be trained on available escape routes and methods.
- A list of persons with disabilities is kept in the Main Office.
- Visitors who have disabilities will be assisted in a manner similar to that of company employees. The Host of the person with disabilities will assist in their evacuation.

Emergencies Involving Fire

Fire Alarms:
In the event of a fire emergency, a fire alarm will sound for the building.

Evacuation Routes and Plans:
Each facility shall have an emergency evacuation plan. All emergency exits shall conform to NFPA standards.

Should evacuation be necessary, go to the nearest exit or stairway and proceed to an area of refuge outside the building. Most stairways are fire resistant and present barriers to smoke if the doors are kept closed.

Do not use elevators. Should the fire involve the control panel of the elevator or the electrical system of the building, power in the building may be cut and you could be trapped between floors. Also, the elevator shaft can become a flue, lending itself to the passage and accumulation of hot gases and smoke generated by the fire.

Emergency Coordinators/Supervisors:
Emergency Coordinators/Supervisors will be responsible for verifying personnel have evacuated from their assigned areas.

Fire Emergency Procedures:
If you discover a fire

- Activate the nearest fire alarm.
- Notify your Supervisor and other occupants.

Fight the fire ONLY if:

1. The fire department has been notified of the fire, AND
2. The fire is small and confined to its area of origin, AND
3. You have a way out and can fight the fire with your back to the exit, AND
4. You have the proper extinguisher, in good working order, AND know how to use it.
5. If you are not sure of your ability or the fire extinguisher's capacity to contain the fire, leave the area.

If you hear a fire alarm:
1. Evacuate the area. Close windows, turn off gas jets, and close doors as you leave.
2. Leave the building and move away from exits and out of the way of emergency operations.
3. Assemble in a designated area.
4. Report to the monitor so he/she can determine that all personnel have evacuated your area.
5. Remain outside until competent authority states that it is safe to re-enter.

Evacuation Routes:
1. Learn at least two escape routes, and emergency exits from your area.
2. Never use an elevator as part of your escape route.
3. Learn to activate a fire alarm.

4. Learn to recognize alarm sounds.
5. Take an active part in fire evacuation drills

FIRST AID

General

Occupational health concerns receive high priority. It is essential that each location be able to adequately respond to first-aid events and resolve all other occupational health problems quickly. The health and wellness of each employee is a key segment of the overall safety environment.

OSHA Requirements

OSHA requirements for medical services and first aid are found in Standard Number 1910.151 and are listed below:

- Ensure the ready availability of medical personnel for advice and consultation on matters of plant health.
- In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid.
- Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

Responsibilities

Management:

- Ensure there is a sufficient number of qualified first-aid providers
- Provide first aid training for all supervisors
- Offer first aid training for all employees

Safety Manager:

- Ensure first-aid and health programs are adequate
- Maintain all required records
- Ensure First-Aid supplies are always well stocked
- Conduct First Aid Training
- Administration of all medical management programs
- Administration of the Return to Work Program
- Maintain Employee Health/Medical Files
- Provide all necessary services in a courteous and professional manner
- Conduct Physical screenings
- Maintain all clinic areas clean, neat, and well stocked.
- Follow accepted medical practices and procedures.
- Adhere to all standards of the Bloodborne Pathogen Program

Records

Treatment Records - are permanent records and will be filled out for any of the following:

- All visits to the processing plant First-Aid Station w/ exception of visits for minor cuts, comfort care, etc.
- All accidents that result in any injury
- All Occupational Illnesses
- Prior to referral to any medical provider

Medical Appointment Log - will be filled in when any appointment for medical treatment, evaluation, or other medical service is made for an employee.

Modified Duty Assignment - forms shall be completed by Consulting Physician for any employee who has a condition that prevents them from conducting their normal duties. This form shall be used to notify management of the limitations of the employee. Management will assign tasks consistent with any limitations.

Questions concerning the limitations are to be directed to Consulting Physician.
Human Resources shall maintain a file for original forms. Copies shall be provided to the employee, the employee's Supervisor and Manager.

Confidentiality - records of all first-aid and medical events shall be kept in each individual's medical file. All medical record information is confidential and shall not be released to third parties without written authorization by the employee involved or as authorized by law.

First Aid Kits

Well stocked First-Aid kit(s) for employee use will be maintained.

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- The basic inventory of each first aid kit must be approved by the company consulting physician. This approval shall be initiated and record maintained by Safety Coordinator.
- These kits will be located so as to allow easy and quick access. First-aid kits and required contents are to be maintained in a serviceable condition.
- All items which must be kept sterile must be individually wrapped and sealed. Items such as scissors, tweezers, tubes of ointments with caps, or rolls of adhesive tape, need not be individually wrapped, sealed, or disposed of after a single use or application.

Post-Accident Substance Abuse Evaluations

For all accidents that result in injuries or property damage or that requires off-site medical attention and/or evaluation, a DOT Drug and Alcohol screening will be conducted in accordance with procedures provided by the Georgia State Worker's Compensation Program. This screening is part of the company Drug Free Workplace Program.

Minor Care

Comfort providing systems such as wraps, balms, hot-wax and other noninvasive, non-medicative procedures may be employed to provide comfort to the employee experiencing minor work related physiological stresses.

Medical Referrals

Safety Coordinator will arrange for employees to see appropriate medical care providers for other than minor work related complaints. A Medical Referral and
Work Release Form shall be filled in by Consulting Physician all medical referrals. This record shall accompany the employee to the care provider and be returned for use in determining the need for any modified duty.

Modified Duty

When an employee has been identified by proper medical authority as having a condition that would limit them in their normal job function, Human Resources hall initiate a Modified Duty Assignment Sheet. This sheet will list the limitations and advise management of the need for assignment to duties that will not exceed the limitations. Management will assign limited duties in writing on the Modified Duty Assignment Sheet. The original shall remain in a Pending &
Review file, held by Human Resources, to prompt periodic monitoring of the employees condition. Copies shall be provided to the employee, the employee's supervisor and manager.

Return to Duty

When conditions have changed, such that the Employee no longer has limitations,
Safety Manager shall initiate Return To Duty actions by filling out the reverse side of the Modified Duty Assignment sheet. Consulting Physician shall consult with the employee's manager to provide guidance for any appropriate reconditioning program based on the Employee's normal job functions. Examples of elements that would be considered are normal job functions, length of time away from normal job, type of limitation, etc. If the limitation

was caused by physiological stress factors, Consulting Physician will provided the employee information to be used to minimize the chance of reoccurrence of the same or similar stress limitation. The original form shall be filed in the employee's medical record and copies provided to the employee, supervisor and manager.

FITNESS FOR DUTY/FATIGUE MANAGEMENT

Purpose

LP Gas Industrial Equipment Co. full and part-time staff are expected to report for work fit for duty, which means able to perform their job duties in a safe, appropriate and an effective manner free from the adverse effects of physical, mental, emotional and personal problems.

Scope

This program applies to all LP Gas Industrial Equipment Co. projects and operations.

Fitness for Duty Process

It is the goal of LP Gas Industrial Equipment Co. to provide a safe workplace for all employees. To accomplish this goal we have adopted the following fitness for duty policy requirements. Supervisors will work with the human resources department when they have a concern about an employee's fitness for duty.

All requirements will be verified through documentation.

Pre-Employment Testing (Physical/Medical Suitability)

Employees are physically capable of performing their job function. Pre-employment physicals (medical exams) and physical evaluations are required to be included in the hiring (post-hire/pre-placement) process, and also when changing into certain job functions, transfers and different environments or in a post-injury returning to work situation (based on the severity of the injury).

Training and Safe Work Requirements (Skills and Knowledge)

Employees must have the required skills to perform their assigned tasks. This is evaluated and documented by any or all of the following for evaluation of the employee's required skills:

- Prior employment reference checks
- Certifications, licenses or other documentation verification
- Task testing
- On the job monitoring
- Performance evaluations
- Training and training retention

Employees are properly trained for their assigned tasks. Employees must receive training specific to their assigned task. Examples might be welding, instrumentation, scaffold building, equipment operator qualifications, respirator fit test, etc. based on a training matrix that reflects the job description and/or tasks being performed. All training is to be documented.

Safe work practices and procedures must be followed. Safe work procedures must be in place prior to work beginning. Employees shall follow our and our client's safety requirements. Examples may include, hot work

permitting, confined space, lockout tagout, process safety management, electrical safety, operator safety and other standard work practices, safety rules or procedures.

Personal Medical Reporting Requirements

Employees must report all medications to their supervisor they are taking that could impair their ability to work safely. Over-the-counter medications such as allergy or cold and flu medications could also impair one's ability to perform safely and must also be reported to their supervisor. The reporting must occur before the employee arrives for work or arranges for transportation to a remote site.

Client Drug and Alcohol Testing Requirements

Drug and alcohol testing for pre-employment, post-accident or random as prescribed by the host facility shall be implemented. Procedures must include and be implemented for drug and alcohol testing as prescribed by DOT or the host client facilities.

Employee Activity and Behavior

We will monitor employee activities and behaviors to determine if employees should be removed from the work site based on our drug and alcohol program requirements. Employee's activities and behaviors will be monitored to determine if employee should be removed from the work site if their ability to perform their duties safely is questioned.

Fit for Duty Examination

Confidentiality
Medical Records and other related records are protected by state and federal confidentiality laws and LP Gas Industrial Equipment Co. policy. The medical record of fitness for duty examination will be maintained in the Human Resources office. Employee medical records will not be released to unauthorized personnel without the employee's written consent or subpoena in accordance with state and federal laws.

Self-Referrals

Employees are responsible for notifying their supervisor if they are fatigued to the point of not being able to perform their duties safely. Employees must be responsible for ensuring they are physically and mentally fit to perform their job functions safely. Employees must take responsibility for their own safety as well as not reporting to work in a condition as to endanger the safety of their fellow workers.

Disciplinary action may occur for an employee not reporting to work in a condition which could endanger their safety or the safety of any other person(s). See below for Management Referral in case there is a question of the employee's ability to work safely.

Management Referral

Management Personnel Responsibility
Management personnel are responsible for monitoring the attendance, performance and behavior of their employees. When an employee's performance and/or behavior (including the odor of alcohol or possible use of any illegal substance) appears to be unsafe, ineffective and/or inappropriate, it is every manager's responsibility to

challenge the employee's behavior and the ability to function, remove the employee from the job, refer the employee for a Fitness for Duty exam immediately and conduct appropriate follow up.

Due to the safety issues involved, supervisors have a special responsibility to implement this policy in a consistent and fair manner.

Procedure

- When any manager or their designee observes an employee who is not performing his/her job safely, appropriately, and effectively, or an odor of alcohol is present, or whose behavior is inappropriate, that manager is to remove the employee from her/his duty immediately and call Human Resources to continue the Fitness for Duty procedure. The employee will be referred to a medical provider for a fitness for duty exam.
- The Fitness for duty evaluation may include testing for chemical (e.g. alcohol and drug) levels, referral for psychiatric evaluation or any other evaluation or follow-up deemed necessary.
- The manager or designee must document the reasons for the fitness for duty request by recording the employee's behavior and noting the names of any witnesses who observed that behavior. Documentation must be submitted to Human Resources by the next business day.
- The employee is required to cooperate fully with the manager and medical personnel. The employee must sign consent forms for both the fitness examination and communication of its results in confidence to Human Resources. Refusal to cooperate will be considered insubordination and will be grounds for disciplinary action. The employee should be suspended pending investigation, which could result in termination.
- Medical personnel will advise Human Resources if the employee is fit or not fit for duty. The medical results of the fitness for duty exam will be communicated to Human Resources.
- If medical personnel determine that the employee is FIT FOR DUTY, the employee must contact Human Resources on the next general business day and the manager in consultation with Human Resources will determine discipline in situations where misconduct may have occurred.
- If medical personnel determine that the employee is NOT FIT FOR DUTY:
    - The manager makes every effort to arrange for safe transportation home for the employee.
    - The employee must contact Human Resources, on the next general business day.
    - The manager, in consultation with Human Resources, will determine discipline in situations where misconduct has occurred.

Subsequent Fitness for Duty Exams

Dependent upon the reason for the fitness exam, employees who violate this policy a second time may be subject to progressive discipline, up to and including termination of employment.

FORKLIFT & MOTORIZED PALLET JACK SAFETY

Purpose

Material handling is a significant safety concern. During the movement of products and materials there are numerous opportunities for personal injury and property damage if proper procedures and caution are not used. This chapter applies to all powered industrial tucks, hoists & lifting gear. The information in this chapter shall be used to train prospective industrial truck operators and provide the basis for refresher and annual retraining. OSHA reference for Powered Industrial Trucks is 1910.178.

Responsibilities

Management:

- Provide adequate training in safe operation of all equipment used to move or access materials
- Provide equipment that is safe to operate
- Implement an "Out of Service" program for damaged equipment
- Not allow modification to equipment except those authorized in writing by the equipment manufacturer
- Establish safe operating rules and procedures

Supervisors:

- Monitor safe operations of material handling equipment
- Ensure all equipment is safety checked daily
- Tag "Out of Service" any damaged equipment

Employees:

- Operate only that equipment for which they have been specifically trained and authorized
- Conduct required daily pre-use inspections
- Report any equipment damage of missing safety gear
- Follow all safety rules and operating procedures

Hazards:

- Falling loads
- Overloading of equipment
- Impact with equipment
- Piercing of containers
- Loading dock roll off
- Chemical contact - battery acid
- Fires during refueling

Hazard Controls:

- Control of equipment keys
- Authorized fueling & recharge areas
- Proper palletizing of material
- Marked travel lanes
- Equipment warning lights
- Seat belts
- Mounted fire extinguishers

Pre-Qualification:

All candidates for Powered Industrial Truck (PIT) operators must meet the following basic requirements prior to starting initial or annual refresher training:

- Must have no adverse vision problems that cannot be corrected by glasses or contacts
- No adverse hearing loss that cannot be corrected with hearing aids
- No physical impairments that would impair safe operation of the PIT
- No neurological disorders that affect balance or consciousness
- Not taking any medication that affects perception, vision, or physical abilities

Training:

Training for Powered Industrial Truck (PIT) Operators shall be conducted by an experienced operator, selected by Management. All operational training shall be conducted under close supervision. All training and evaluation must be completed before an operator is permitted to use a Powered Industrial Truck (forklift, etc) without continual & close supervision. Training consists of:

Trainees may operate a powered industrial truck only:

- Under the direct supervision of persons, selected by management, 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 Content:
Training consists of a combination of formal instruction, practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

Initial Training: Powered industrial truck operators shall receive initial training in the following topics:

Truck-related training topics:

- Operating instructions, warnings, and precautions for the types of truck the operator will 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 (classified) locations where the vehicle will be operated
- Ramps and other sloped surfaces that could affect the vehicle's stability
- Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation 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 an unsafe manner
- The operator has been involved in an accident or near-miss incident
- The operator has received an evaluation that reveals that the operator is not operating the truck safely
- The operator is assigned to drive a different type of truck
- A condition in the workplace changes in a manner that could affect safe operation of the truck
- Once every 3 years an evaluation will be conducted of each powered industrial truck operator's performance.

Safe Operating Procedures (SOP) & Rules:

- Only authorized and trained personnel will operate PITs.
- All PITs will be equipped with a headache rack, fire extinguisher, rotating beacon, back-up alarm and seat belts. Seat belts will be worn at all times by the Operator.
- The operator will perform daily pre- and post-trip inspections.
- Any safety defects (such as hydraulic fluid leaks; defective brakes, steering, lights, or horn; and/or missing fire extinguisher, lights, seat belt, or back-up alarm) will be reported for immediate repair or have the PIT taken "Out of Service".
- Operators will follow the proper recharging or refueling safety procedures.
- Loads will be tilted back and carried no more than 6 inches from the ground.

- Loads that restrict the operator's vision will be transported backwards.
- PITs will travel no faster than 5 mph or faster than a normal walk.
- Hard hats will be worn by PIT Operators in high lift areas. .
- Operator will sound horn and use extreme caution when meeting pedestrians, making turns and cornering.
- Passengers may not ride on any portion of a PIT. Only the operator will ride PITs.
- "NO PASSENGERS" decals will be affixed on all PITs.
- If PITs are used as a man lift, an appropriate man lift platform (cage with standard rails and toe-boards) will be used.
- Aisle will be maintained free from obstructions, marked and wide enough (six foot minimum) for vehicle operation.
- Lift capacity will be marked on all PITs. Operator will assure load does not exceed rated weight limits.
- When un-attended, PITs will be turned off, forks lowered to the ground and parking brake applied.
- All PITs (with exception of pallet jacks) will be equipped with a multi-purpose dry chemical fire extinguisher. (Minimum rating; 2A:10B:C)
- Operators are instructed to report all accidents, regardless of fault and severity, to Management. Management will conduct an accident investigation.
- When loading rail cars and trailers, dock plates will be used. Operators will assure dock plates are in good condition and will store on edge when not in use.
- Rail cars and trailers will be parked squarely to the loading area and have wheels chocked in place. Operators will follow established Docking/Un-Docking Procedures.

Changing and Charging Storage Batteries:

- Battery charging installations shall be located in areas designated for that purpose.
- Facilities shall be provided for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.
- A conveyor, overhead hoist, or equivalent material handling equipment shall be provided for handling batteries.
- Reinstalled batteries shall be properly positioned and secured in the truck.
- A carboy tilter or siphon shall be provided for handling electrolyte.
- When charging batteries, acid shall be poured into water; water shall not be poured into acid.
- Trucks shall be properly positioned and brake applied before attempting to change or charge batteries.
- Care shall be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) shall be open to dissipate heat.
- Smoking is prohibited in the charging area.
- Precautions shall be taken to prevent open flames, sparks, or electric arcs in battery charging areas.
- Tools and other metallic objects shall be kept away from the top of uncovered batteries.

Trucks and Railroad cars:

- The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
- The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.
- Wheel stops or other recognized positive protection shall be provided to prevent railroad cars from moving during loading or unloading operations.
- Fixed jacks may be necessary to support a semitrailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.
- Positive protection shall be provided to prevent railroad cars from being moved while dock boards or bridge plates are in position.

Operations:

- If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.
- Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

- No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- Unauthorized personnel shall not be permitted to ride on powered industrial trucks.
- Arms or Legs shall not be placed between the uprights of the mast or outside the running lines of the truck.
- When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
- Trucks shall not be parked so as to block fire aisles, access to stairways, or fire equipment.

Traveling:

- All traffic regulations shall be observed, including authorized speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.
- The right of way shall be yielded to ambulances, fire trucks, or other vehicles in emergency situations.
- Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.
- The driver shall be required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.
- Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.
- The driver shall be required to look in the direction of, and keep a clear view of the path of travel.
- Grades shall be ascended or descended slowly. When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade. On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.
- Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay shall not be permitted.
- The driver shall be required to slow down for wet and slippery floors.
- Dock board or bridge plates shall be properly secured before they are driven over.
- Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- Running over loose objects on the roadway surface shall be avoided.
- While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

Loading:

- Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.
- Only loads within the rated capacity of the truck shall be handled.
- The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.
- Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward 162 except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

Fueling Safety:

- Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- No truck shall be operated with a leak in the fuel system until the leak has been corrected.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

Maintenance of Powered Industrial Trucks:

- Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.
- Those repairs to the fuel and ignition systems of industrial trucks which involve fire hazards shall be conducted only in locations designated for such repairs.
- Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.
- Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counter-weighting of fork trucks shall not be done unless approved by the truck manufacturer.
- Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily. Where industrial trucks are used on a round-the-clock basis, they shall be examined prior to use each shift. Defects when found shall be immediately reported and corrected.
- When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100 deg. F.) solvents shall not be used. High flash point (at or above 100 deg. F.) solvents may be used.

Safe Operation Procedure for Charging LPG Tank:

1. No Smoking.
2. Move LPG PIT outside for refueling.
3. Turn off PIT.
4. LPG tanks will be removed in the following order:
   - -shut off service valve
   - -disconnect tank from hose
   - -unbuckle and remove tank from bracket
5. LPG tanks will be replaced in to following order:
   - -place tank in bracket and re-buckle
   - -reconnect hose to tank and tighten firmly
   - -open valve slowly and assure proper seal

NOTE: *Federal Law Prohibits dispensing an improper fuel type into any Vehicle or into a non-approved fuel container*.

In Case of LPG Leaks or Tank Rupture

1. DO NOT start or move the PIT.
2. If fuel hose is leaking, close valve immediately and place PIT "Out of Service" until repaired.
3. If tank ruptures, warn other, immediately leave the area (at least 50 feet) and notify Management. Do not re-enter the area until cleared by Management.

Powered Industrial Truck Pre-Use Checklist:

A check of the following items (as applicable) is to be conducted by the operator prior to use each shift.

Lights Horn

Brakes	Backup Warning Alarm
Leaks	Fire Extinguisher
Warning Beacon	

If any deficiencies are noted, the unit is to be placed OUT OF SERVICE until the problem has been corrected. Additionally, it is the operator's responsibility to notify the immediate supervisor and fill out a maintenance request.

GASEOUS CHOLORINE AWARENESS

At LP Gas Industrial Equipment Co., we don't handle chlorine.

GAS HAZARDS

Purpose

It is the intention of *LP GAS INDUSTRIAL EQUIPMENT CO*. to provide gas hazards training and detection equipment that meets or exceeds all federal standards. This program is associated with our Respiratory Protection Program.

Scope

This program applies to all *LP GAS INDUSTRIAL EQUIPMENT CO* projects and operations.

This program supplements the *LP GAS INDUSTRIAL EQUIPMENT CO* Respiratory Protection Program that is in place in accordance with 29CFR 1910.134.

Procedure

Gas Hazards Equipment

- Each employee shall use a portable gas monitor as required in all high gas or potentially high hazard areas.
- The gas monitor must be calibrated prior to use per manufacturer's recommendations and contain a current calibration sticker on the monitor providing the date of last calibration.
- Bump test are required to be completed at the beginning of each day the monitor is in use per the requesting Owner Client and manufacturer's guidelines to insure the monitor is functioning correctly.

Owner Client Contingency Plans Awareness

- *LP GAS INDUSTRIAL EQUIPMENT CO* shall insure all employees are aware of the Owner Client's contingency plan provisions including evacuation routes and alarms. *LP GAS INDUSTRIAL EQUIPMENT CO* employees shall participate in emergency evacuation drills and practice rescue procedures.

Use, Maintenance and Care of Gas Monitors

- Only utilize monitors issued by either *LP GAS INDUSTRIAL EQUIPMENT CO* or made available by the Owner Client - no personal monitors are allowed.
- Have the gas monitor on the outside of all clothing.
- Check the calibration date prior to bump testing. If the calibration date is expired turn the unit in immediately and do not use.
- Bump test each shift prior to using the monitor.
- Monitors are sensitive equipment - avoid physical damage and immediately report any monitor that does not appear to be performing as expected.

Training

All affected employees will receive gas hazards awareness training before their initial assignment and annually thereafter. This shall be in conjunction with the *LP GAS INDUSTRIAL EQUIPMENT CO* Respiratory Protection training. Training shall address, as a minimum:

- Locations of alarm stations
- Gas Monitoring Equipment- Portable and Fixed Detection
- Gas Alarms
- Gas Hazards - Characteristics of gases, to include oxygen deficiency, oxygen or nitrogen enrichment, carbon
- monoxide and hydrogen sulfide
- Any plant or department specific gases of concern
- Signs and symptoms of overexposure
- Personnel Rescue Procedures
- Use and care of Self-Contained Breathing Apparatus (SCBA) - includes donning and emergency procedures (if
- applicable)
- Evacuation Procedures
- Staging Areas – Primary and Secondary

Gas Hazard Awareness training shall be documented and available for review.

GENERAL WASTE MANAGEMENT

Purpose

To inform the employer and employees of how all waste is handled and properly disposed of.

Responsibility

Prior to each shift, wastes, trash, and/or scrap materials will be taken into consideration and a plan will be in place to dispose of this waste. LP Gas Industrial Equipment Co. estimates the waste that will be generated prior to work being performed so that the need for employees, containers and waste removal can be determined. Depending on how busy our employees are and the demand of our products for each day determine how much waste and scrap materials will be generated that day.

Proper handling, organization and storage of each material, chemical, etc… is mandatory and records are kept accordingly. This is done to make sure proper measures are taken and to also minimize potential impact that might be placed on the environment. Waste materials should be properly disposed of as well as properly stored and handled to minimize the potential for a spill or impact to the environment. During outdoor activities, receptacles are placed accordingly and must be covered to prevent dispersion of waste materials as well as to control the potential for run-off.

Employees as well as supervisors must be instructed on the proper disposal method for wastes.
LP Gas Industrial Equipment Co. works closely with a hazardous materials disposal company that manages these dangerous materials and records are kept current on this process. LP Gas Industrial Equipment Co. also properly disposes of on-hazardous wastes, trash and scrap materials. Employees are trained to ensure proper disposal, depending on which material they are dealing with.

All trash and scrap materials are separated and, if possible, recycled. LP Gas Industrial Equipment Co. encourages proper segregation of waste materials to ensure all opportunities are taken advantage of to either reuse or recycle.

HAZARD COMMUNICATION PROGRAM (HAZCOM)

Policy

In accordance with LP Gas Industrial Equipment Co's Hazard Communication Standard, we have established a written hazard communication program to ensure that employees with exposure or potential exposure to hazardous chemicals are provided with appropriate health and safety information. The written hazard communication program applies to all areas where employees are exposed to hazardous chemicals during their work or in a foreseeable emergency.

Supervisors or managers of storage areas where the containers remain sealed are responsible only for maintaining and making available the safety data sheets for the hazardous chemicals stored, not removing or defacing the container labels, and for the information and training requirements of this program to the extent necessary to protect employees in the event of a spill or leak.

Laboratories covered under a written chemical hygiene plan need only comply with the requirements for maintaining container labels, the requirements for providing labels and safety data sheets when transporting or shipping hazardous chemicals outside the laboratory, and the requirement to maintain safety data sheets that are received with shipments of hazardous chemicals.

For the purposes of this program, *hazardous chemical* shall mean any chemical that is a physical or health hazard as defined in the standard, including mixtures and gases.

Hazard Determination

LPGIE will rely on safety data sheets from suppliers to meet hazard determination requirements. It is strongly encouraged, however, that employees seek out additional sources of safety and health information rather than rely solely on safety data sheets. Environmental Health and Safety personnel can assist in locating such sources.

Labeling

The need for adequate labeling extends far beyond the immediate requirements of the individual user, since the individual user may not be present in case of fire or explosion when containers are broken or spilled. The individual user may not be around years later when the containers have deteriorated or otherwise lost their value. Therefore, do not use wax pencil markings, abbreviations, formulas only, code names, or numbers. All labeling will be in conformance with LPGIE's Right-to-Know legislation and the following:

- The immediate supervisor/employee for each work area or unit will be responsible for ensuring that all containers received or shipped are properly labeled.
- Labels on incoming containers of hazardous chemicals may not be removed or defaced unless the container is immediately marked with all of the required information.
- The labels on all containers will include:
    - the identity of the hazardous chemical(s); and
    - appropriate hazard warnings or combination of words, pictures, and symbols that provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards. The hazard warnings and information must also be in accordance with the labeling requirements of any substance-specific standards applicable to the chemical.

- Supervisors and employee's will be responsible for ensuring that all portable containers used in their work areas are labeled with identity and hazard warning unless the chemical is used by the person who made the transfer and is present only during the shift the transfer was made.
- Building utility pipes will be labeled with the common name of their contents, for example, natural gas, steam, hot water, etc.

Safety Data Sheets

- Each department will designate where the Safety Data Sheets for all hazardous chemicals to which various employees may be exposed will be kept and ensure that they are systematically organized and that each affected employee knows how to access them.
- Supervisors will be responsible for properly displaying the required MIOSHA Right To Know poster and postings for notifying employees of new or revised Safety Data Sheets in their areas.
- The employees who transport or ship laboratory preparations outside of the facility shall ensure that a safety data sheet is prepared and included with the chemical or shipment.

Employee Information and Training

The supervisor will be responsible for ensuring that initial and refresher training is performed as required in each department. Records of training conducted will be maintained by each department.

Employees who work in an area where there is exposure to hazardous chemicals during use or in foreseeable emergencies will receive hazard communication training at the time of initial assignment and whenever a new physical or health hazard for which they have not been trained is introduced into their work area. Information and training may be designed to cover categories of hazards or specific chemicals. Employees must be informed of:

- the training requirements of the hazard communication standard;
- any operations in their work area where hazardous chemicals are present; and
- the location and availability of this written hazard communication program, including the required hazardous chemical inventory and safety data sheets required by this program.

Employee training shall include at least all of the following:

- Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (for example: odor, appearance, monitoring devices, etc).
- The physical and health hazards of the chemicals in the work area.
- The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
- The details of the hazard communication program developed by LPGIE, including an explanation of the labeling system and the safety data sheet, and how employees can obtain and use the appropriate hazard information.

Recordkeeping

Each department shall be responsible for maintaining the most recent training record for each affected employee for the duration of employment. The training record shall include the training topics covered, the instructor's name, date of training and the signature of each employee trained.

Safety data sheets will be maintained for a minimum of 30 years after the last use of the chemical. Safety data sheets for chemicals still in use or storage shall be replaced by updated sheets when they become available.

A written or electronic inventory of each hazardous chemical shall be maintained within each department and updated at least annually. The inventory will include the chemical or product name, the amount present, and the work area(s) where it is used.

Non-routine Tasks

Prior to beginning any non-routine task involving actual or potential exposure to hazardous chemicals, employees will be informed of the hazards present and be given training in appropriate work practices and the use of any personal protective equipment necessary. Required personal protective equipment will be provided to the employee before starting the task. Hand protection will be selected on the basis of SDS recommendations, the physical environment, and the manufacturer or vendor's chemical resistance and permeation data when it is available. The employee's supervisor, the area supervisor, or Environmental Health and Safety will be responsible for the selection of personal protective equipment and clothing and for training related to non-routine tasks.

A non-routine task is one that the employee does not normally perform and for which the employee has not previously been trained. An example of a non-routine task would be when a janitor is asked to clean chemical residue from a floor or remove spill debris after a chemical spill in a shop. In this example the shop supervisor would have primary responsibility for selection of personal protective equipment and training.

Outside Contractors and Vendors

The chair/director/manager of the department responsible for soliciting the services of an outside contractor or vender shall be responsibility for ensuring compliance with the requirements of this section if the contractor's employees may be exposed to chemical hazards while working at LP Gas Industrial Equipment Co.

The outside contractor or vendor shall be informed of the following:

- How safety data sheets will be made available for each hazardous chemical their employees may be exposed to while working.
- Any precautionary measures that need to be taken to protect employees under normal operating conditions and in foreseeable emergencies.
- The type of labeling used in the work area.

HAZARD IDENTIFICATION AND ASSESSMENT

Purpose

- To provide guidelines for identifying, assessing and controlling workplace hazards;
- To ensure the potential hazards of new processes and materials are identified before they are introduced into the workplace;
- To identify the jobs/tasks which require risk assessment.

Key Responsibilities

As specified within this program.

LP GAS INDUSTRIAL EQUIPMENT CO. must assess a work site and identify existing or potential hazards before work begins at the work site or prior to the construction of a new work site.

Hazard and Risk Identification

The hazard identification process is used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.

The Safety Manager shall conduct a baseline worksite hazard assessment which is a formal process in place to identify the various tasks that are to be performed and the LP Gas Industrial Equipment Co. identified potential hazards. The results are included in a report of the results of the hazard assessment and the methods used to control or eliminate the hazards identified. The hazard assessment report must be signed and have the date on it. Inputs into the baseline hazard identification include, but are not limited to:

- Scope of work;
- Legal and other requirements;
- Previous incidents and non-conformances;
- Sources of energy, contaminants and other environmental conditions that can cause injury;
- Walk through of work environment;

Hazards identifications (as examples) are to include:

- Working Alone

Thermal Exposure

- Isolation of Energy
- Hearing Protection
- Musculoskeletal Disorders
- Bloodborne Pathogens
- Confined Spaces
- Driving
- General Safety Precautions
- And any other established policy or procedure by LP GAS INDUSTRIAL EQUIPMENT CO.
- Any other site-specific work scope

LP GAS INDUSTRIAL EQUIPMENT CO. has a formal process for identifying potential hazards. Processes are in place to identify potential hazards by the use of JSA's, JHA's, facility wide or area specific analysis/inspections.

All identified hazards are assessed for risk and risk controls are assigned within the worksite hazard assessment for that specific hazard.

Employees and/or sub-contractors are actively involved in the hazard identification process. The LP GAS INDUSTRIAL EQUIPMENT CO. program provides processes to ensure employees and/or sub-contractors are actively involved in the hazard identification process and hazards are reviewed with all employees concerned.

Employees are trained in the hazard identification process. Employees will be trained in the hazard identification process including the use and care of proper PPE.

Unsafe hazards must be reported immediately and addressed by the supervisor. The supervisor discusses the worksite hazard assessment with employees at the respective work location during the employee's documented orientation.

Review of Hazard Assessment

Existing worksite hazard identifications are formally reviewed annually or repeated at reasonably practicable intervals to prevent the development of unsafe and unhealthy working conditions and specifically updated when new tasks are to be performed that have not been risk assessed, when a work process or operation changes, before the construction of a new site or when significant additions or alterations to a job site are made.

The respective supervisor or project manager advises the Safety Manager when additional hazards are introduced into the work place in order to revise planning and assessment needs.

Risk Assessment

Hazards are classified and ranked based on severity. The program identifies hazards are classified/prioritized and addressed based on the risk associated with the task. (See the risk analysis matrix outlining severity and probability).

Risk Controls/Methods to Ensure Identified Hazards Are Addressed and Mitigated

The following describes how identified hazards are addressed and mitigated:

- Risk assessed hazards are compiled with and addressed and mitigated through dedicated assignment, appropriate documentation of completion, and implemented controls methods including engineering or administrative controls and PPE required into the worksite hazard assessment of the site specific HSE plan. No work will begin before the worksite assessment is completed. Additionally, no risk assessed as High (Intolerable) shall be performed.

- If an existing or potential hazard to workers is identified during a hazard assessment LP GAS INDUSTRIAL EQUIPMENT CO. must take measures to eliminate the hazard, or if elimination is not reasonably practicable, control the hazard. If reasonably practicable, LP GAS INDUSTRIAL EQUIPMENT CO. must eliminate or control a hazard through the use of engineering controls. If a hazard cannot be adequately controlled using engineering controls, LP GAS INDUSTRIAL EQUIPMENT CO. must use administrative controls that control the hazard to a level as low as reasonably achievable. If the hazard cannot be adequately controlled using engineering and/or administrative controls, LP GAS INDUSTRIAL EQUIPMENT CO. must ensure that the appropriate personal protective equipment (PPE) is used by workers affected by the hazard. LP GAS INDUSTRIAL EQUIPMENT CO. may use a combination of engineering controls, administrative controls, and personal protective equipment if there is a greater level of worker safety because a combination is used.

Emergency Control of Hazards

Only those employees competent in correcting emergency controls of hazards may be exposed to the hazard and only the minimum number of competent employees may be exposed during hazard emergency control. An

example is a gas leak in a building. Only those personnel with training on fire safety, gas supply shut off and other related controls will attempt to resolve the emergency control of a hazard. LP GAS INDUSTRIAL EQUIPMENT CO. will make every possible effort to control the hazard while the condition is being corrected or under the supervision of client emergency response personnel in every emergency.

Certification of Hazard Assessment

The Safety Manager completes and signs the certification of hazard assessment for the worksite hazard assessment (also see PPE Program) and includes it within the site specific HSE plan. Hazard assessments are reviewed annually and updated when new tasks are to be performed that have not been risk assessed.

Job Safety Analysis (JSA)

For those jobs with the highest injury or illness rates, jobs that are new to our operation, jobs that have undergone major changes in processes and procedures or jobs complex enough to require written instructions will have a Job Safety Analysis performed. Completed JSAs are available from the Safety Manager.

Site Specific HSE Plan (SSSP)
Each work location has a site specific HSE plan. Each employee reporting to a location shall receive a documented orientation from a LP GAS INDUSTRIAL EQUIPMENT CO. supervisor that includes the SSSP for that site. The SSSP contains the LP GAS INDUSTRIAL EQUIPMENT CO. Health and Safety Policy, site specific safety requirements as well as a PPE matrix and a signed site-specific worksite hazard assessment for that location, which the LP GAS INDUSTRIAL EQUIPMENT CO. has a responsibility to provide.

Review Process

The hazard assessment program will be reviewed to ensure no new hazards derived from the corrective measures. The review shall include a management of change consideration as well.

The safety committee shall be involved in the review process as well.

HAZARD WASTE OPERATIONS

Purpose

- To provide guidelines for identifying, assessing and controlling workplace hazards;
- To ensure the potential hazards of new processes and materials are identified before they are introduced
- into the workplace;
- To identify the jobs/tasks which require risk assessment.

Key Responsibilities

As specified within this program.

LP GAS INDUSTRIAL EQUIPMENT CO. must assess a work site and identify existing or potential hazards before work begins at the work site or prior to the construction of a new work site

Hazard and Risk Identification

The hazard identification process is used for routine and non-routine activities as well as new processes, changes in

operation, products or services as applicable.

The Safety Manager shall conduct a baseline worksite hazard assessment which is a formal process in place to identify the various tasks that are to be performed and the accompanying identified potential hazards. The results are included in a report of the results of the hazard assessment and the methods used to control or eliminate the hazards identified. The hazard assessment report must be signed and have the date on it.

Inputs into the baseline hazard identification include, but are not limited to:

- Scope of work;
- Legal and other requirements;
- Previous incidents and non-conformances;
- Sources of energy, contaminants and other environmental conditions that can cause injury;
- Walk through of work environment;
- Hazards identifications (as examples) are to include:
- Working Alone
- Thermal Exposure
- Isolation of Energy
- Hearing Protection
- Musculoskeletal Disorders
- Bloodborne Pathogens
- Confined Spaces
- Driving
- General Safety Precautions
- And any other established policy or procedure by GLOBAL INFRASTRUCTURE SPECIAL OPERATIONS GROUP,
- LLC
- Any other site specific work scope

LP GAS INDUSTRIAL EQUIPMENT CO. has a formal process for identifying potential hazards. Processes are in place to identify potential hazards by the use of JSA's, JHA's, facility wide or area specific analysis/inspections.

All identified hazards are assessed for risk and risk controls are assigned within the worksite hazard assessment for that specific hazard. Employees and/or sub-contractors are actively involved in the hazard identification process. The *LP GAS INDUSTRIAL EQUIPMENT CO.* program provides processes to ensure employees and/or subcontractors are actively involved in the hazard identification process and hazards are reviewed with all employees concerned.

Employees are trained in the hazard identification process. Employees will be trained in the hazard identification process including the use and care of proper PPE.

Unsafe hazards must be reported immediately and addressed by the supervisor. The supervisor discusses the worksite hazard assessment with employees at the respective work location during the employee's documented orientation.

Review of Hazard Assessment

Existing worksite hazard identifications are formally reviewed annually or repeated at reasonably practicable intervals to prevent the development of unsafe and unhealthy working conditions and specifically updated when new tasks are to be performed that have not been risk assessed, when a work process or operation changes, before the construction of a new site or when significant additions or alterations to a job site are made.

The respective supervisor or project manager advises the Safety Manager when additional hazards are introduced into the work place in order to revise planning and assessment needs.

Risk Assessment

Hazards are classified and ranked based on severity. The program identifies hazards are classified/prioritized and addressed based on the risk associated with the task. (See the risk analysis matrix outlining severity and probability).

HEAT ILLNESS PREVENTION

I. Policy
LP Gas Industrial Equipment employees working in outdoor places of employment or in other areas at times when the environmental risk factors for heat illness are present, are at risk for developing heat illnesses if they do not protect themselves appropriately. The objective of this program is employee awareness regarding heat illness symptoms, ways to prevent illness, and what to do if symptoms occur.

It is the policy of California State University, Fullerton that any employee who works outdoors in the heat and all individuals who supervise these employees must comply with the procedures in this program and in the Injury and Illness Prevention Program.

II. Authority
Title 8 of the California Code of Regulations, Section 3395.

III. Scope
This program applies to employees and supervisors working in outdoor places of employment during those times when the environmental risk factors for heat illness are present.

IV. Definitions

Acclimatization
The temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for about two hours per day in the heat.

Environmental risk factors for heat illness
The working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personnel protective equipment worn by employees.

Heat illness
A serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope, and heat stroke. See the appendix for specific information on the forms of heat illness.

Personal risk factors for heat illness
Factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

Preventative recovery period

A period of time to recover from the heat in order to prevent heat illness.

Shade
The blockage of direct sunlight. Canopies, umbrellas, and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

V. Accountability

Environmental Health and Instructional Safety

A. Prepare and maintain a written program which complies with the requirements of Cal/OSHA Title 8, 3395.
B. Provide training to all potentially impacted employees and their supervisors on the risks and prevention of heat illness, including how to recognize symptoms and respond when they appear. Training should be provided annually as a refresher prior to the start of the summer season.

Directors, Managers, and Supervisors

A. Identify all employees who are required to work outdoors where potential heat illness could occur and identify the supervisor of the employees

B. Assure that adequate water and shade are available at a job site when the environmental risk factors for heat illness are present.

C. Ensure that all affected employees have received proper training on heat illness prevention.

D. Ensure that the requirements in this program are followed.

E. Contact University Police to request emergency medical services in the event medical assistance is required. Police will direct emergency medical services to the work site.

Affected Employees

A. Comply with the provisions of the Heat Illness Prevention Program, as described in this document and in the training sessions they attend.

B. Ensure they have drinking water available at all times when the environmental risk factors for heat illness are present.

C. Ensure they have access to a shaded area to prevent or recover from heat related symptoms.

D. Report heat related illness symptoms to the supervisor or directly to the Service Center.

E. Look for the signs and symptoms of heat stress on your co-workers.

VI. Program

Access to Water

Employees must have access to potable drinking water and encouraged to frequently consume small amounts of water throughout the day – up to 4 cups per hour depending heat conditions. If plumbed potable water is not readily accessible, provide portable water containers or bottled water.

Shade

Employees suffering from heat related illnesses or in need of a recovery period from the heat must be provided with access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Access to shade must be permitted at all times. Other methods of cooling, other than shade, can be used if it can be demonstrated that these methods are at least as effective as shade.

Training

Training must be provided for employees working on job tasks where environmental risk factors for heat illness are present, and training for their respective supervisors.
Refresher training must be provided annually.

A. Employees- All employees working on job tasks where environmental risk factors for heat illness are present shall receive instruction before being assigned to work tasks. Training topics shall include the following:

1. Environmental and personal risk factors for heat illness.
2. Procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness.
3. Employees who experience excessive sweating require frequent consumption of small quantities of water, up to 4 cups per hour when working in extreme conditions of heat.
4. Importance of acclimatization.
5. Different types, signs, and symptoms of heat illness.
6. Importance of immediately reporting symptoms or signs of heat illness in themselves or in coworkers to their supervisor.
7. Procedures for responding to symptoms of possible heat illness, including how emergency medical services will be contacted and provided, should they become necessary.
8. Campus procedures for contacting emergency medical services.

B. Supervisors and Affected Employees- Supervisors or their designees shall receive training on the following topics prior to being assigned to supervise outdoor employees:

1. Information as detailed above in employee training requirements.
2. Procedures the supervisor must follow to implement the provisions of this program.
3. Procedures the supervisor must follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response.

VI. RECORDS
All training records prepared in association with the Heat Illness Prevention Program will be

maintained by Environmental Health and Instructional Safety or the department.

HUMAN RIGHTS POLICY

Policy Statement

Respect for human rights is a fundamental value of LP Gas Industrial Equipment Co.. We are committed to supporting, respecting, and protecting human rights in our relationships with our employees, suppliers, and business partners.

Policy Intent

This Policy is guided by the United Nations Guiding Principles on Business and Human Rights.
LP Gas Industrial Equipment Co.'s goal is to support, respect and protect human rights—both in our own business activities and in our business relationships with other parties. LP Gas Industrial Equipment Co. expects the same of its suppliers. This policy, combined with those referenced below that address human rights within their respective scopes, reflects our commitment to human rights and ongoing efforts to protect human rights through our operations.

Child Labor

LP Gas Industrial Equipment Co. is committed to the abolition of child labor within its sphere of influence. To that end, LP Gas Industrial Equipment Co., its employees, and its suppliers must prohibit the hiring of individuals that are under 18 years of age for positions in which hazardous work is required.

Forced Labor

LP Gas Industrial Equipment Co. must not use, be knowingly complicit in, or knowingly benefit from the use of forced or involuntary labor whether bonded, imprisoned, or indentured, including debt servitude and human trafficking.

LP Gas Industrial Equipment Co. also specifically requires that all members of a supplier's workforce understand the terms of their employment, and LP Gas Industrial Equipment Co. prohibits suppliers from withholding or destroying employee identity or immigration documents, passports or work permits.

Fair Compensation

LP Gas Industrial Equipment Co. must compensate employees equitably and competitively relative to the industry and labor market and in accordance with the terms of applicable collective bargaining agreements. LP Gas Industrial Equipment Co. must comply with applicable minimum wage, wage payment, work hours, overtime and benefits laws.

Freedom of Association and Collective Bargaining

The National Labor Relations Act (the "Act") provides that employees, as defined by the Act, have the right to choose whether to form and join trade unions. LP Gas Industrial Equipment Co., its employees, and its suppliers must ensure that the rights of eligible employees to choose whether to be a member of a trade union and to bargain collectively as permitted by the Act are not unlawfully interfered with or restricted.

LP Gas Industrial Equipment Co. must pursue constructive relationships and bargain in good faith with labor unions that represent employees.

Anti-Discrimination and Harassment

LP Gas Industrial Equipment Co. is committed to a work environment free from discrimination, harassment, and retaliation, and to providing equal employment opportunities to all applicants and employees regardless of race, color, religion, gender, age, national origin, ethnicity, marital status, sexual orientation, gender identity or expression, disability, or military status.

LP Gas Industrial Equipment Co., its employees, and its suppliers strive to:

- Provide equal employment opportunities to all applicants and employees.
- Maintain workplaces free from harassment or discrimination toward employees, applicants for employment, customers, or any other individuals who visit or conduct business with LP Gas Industrial Equipment Co. or its suppliers.
- Provide reasonable accommodations to a qualified employee or applicant with a disability, to a pregnant employee or applicant, or to an employee or applicant for their sincerely held religious beliefs or practices, where the reasonable accommodation would enable the employee or applicant to perform the essential functions of their job or to have an equal opportunity to be considered for a job.

Diversity, Equity and Inclusion

At LP Gas Industrial Equipment Co., diversity, equity, and inclusion are fundamental values. Our commitment to human rights is reinforced by our diversity, equity, and inclusion practices because a diverse, equitable and inclusive culture values human rights and empowers our employees to protect human rights and report concerns.

LP Gas Industrial Equipment Co. endeavors to reflect the diversity of the communities we serve and to cultivate a workplace that provides each employee with respect and the opportunity to grow and contribute at their greatest potential. Through our diverse business empowerment initiatives, LP Gas Industrial Equipment Co. is focused on supporting and expanding equitable opportunities for minority, women, disabled, veteran/service-disabled veteran, and LGBTQ-owned business enterprises.

Safe and Healthy Workplace

At LP Gas Industrial Equipment Co., dedication to health and safety is a fundamental value; our efforts to ensure a healthy and safe workplace reinforce our commitment to human rights. LP Gas Industrial Equipment Co., its employees, and its suppliers strive to:

- Operate all aspects of business in a manner that protects the safety and health of employees, contractors, customers, and the general public.
- Provide and use the resources needed to maintain safe and healthy workplaces.
- Identify and take reasonable measures to eliminate or mitigate potential workplace hazards.
- Provide safety information to all employees to educate, train, and protect them from workplace safety hazards.

• Ensure all employees are trained and empowered to stop work anytime that unsafe conditions or behaviors are observed until the job can be completed safely.
• Take action to prevent acts of violence, threats, and physical intimidation in the workplace.

Implementation

Trust, transparency, and accountability support LP Gas Industrial Equipment Co.'s commitment to human rights. LP Gas Industrial Equipment Co. and its employees must abide by LP Gas Industrial Equipment Co.'s Code of Business Conduct, our foundation for making effective, ethical business decisions and for identifying situations that may raise legal and ethical issues. LP Gas Industrial Equipment Co.'s suppliers must meet the expectations of LP Gas Industrial Equipment Co.'s Supplier Code of Conduct and contract terms and conditions.

Transparency and Governance

LP Gas Industrial Equipment Co. seeks to identify, manage, and prevent violations of this policy. Anyone can report a human rights concern through the options listed below:

- Management
- Leadership
- Human Resources

LP Gas Industrial Equipment Co. must take any report concerning human rights seriously, no matter how the report is received. Our procedures are designed to promptly review and resolve each issue, as well as routinely monitor and report as necessary.

Should we identify adverse human rights impacts resulting from our business activities, LP Gas Industrial Equipment Co. is committed to the mitigation or fair and equitable remediation of those adverse impacts. LP Gas Industrial Equipment Co. must also seek to promote access to remediation where we are linked to those adverse impacts through our relationships with third parties.

Effective human rights practices are contingent on employee awareness and execution. LP Gas Industrial Equipment Co. must conduct trainings and issue communications to build awareness of the Company's values and business practices. LP Gas Industrial Equipment Co. employees are required on an annual basis to review and commit to following LP Gas Industrial Equipment Co.'s Code of Business Conduct.

LP Gas Industrial Equipment Co. Corporate Policy References

Many of LP Gas Industrial Equipment Co.'s commitments to human rights as described in this policy are embedded into other relevant policies and statements, which are instrumental in managing our overall approach to human rights, including:

- Code of Business Conduct
- Supplier Code of Conduct
- Safety Policy
- Equal Employment Opportunities Policy
- Workplace Accommodations Policy
- Policy Against Discrimination, Harassment and Retaliation
- Policy Against Sexual Harassment

- Environment Policy
- Environmental, Health and Safety Audit Program
- Corporate Compliance Program
- Anti-Bribery and Anti-Corruption
- Reporting Potential Violations of the Code of Business Conduct
- Investigating and Resolving Alleged Violations of the Code of Business Conduct

Applicability

LP Gas Industrial Equipment Co. corporate policies are expressions of our values and intentions. LP Gas Industrial Equipment Co. is also subject to extensive legal requirements and regulatory approvals, and all our actions in furtherance of this policy must be carried out in compliance with applicable law and regulatory approvals.

HYDRO-BLASTING

29 CFR 1926.302 - Power-operated hand tools
Hydro-blasting:
Hydro-blasting uses the action of water under extremely high pressure to clean surfaces. Hydro-blasting is used for tank, vessel, and pipe cleaning as well as surface preparation. Hydro-blasting equipment may be powered by internal combustion engines (diesel) or electricity. The size of the equipment can vary from small portable units to the size of a tractor trailer. The pressures are enormous, up to 40,000 psi (Ultra High Pressure).

The advantage of hydro-blasting over abrasive blasting is that it can more safely be used in hazardous areas where a spark could cause and ignition of gases or other flammable substances. While dust is certainly not a problem with hydro-blasting, consideration must be given to the disposal of waste water if it is contaminated with toxic or hazardous materials.

Training:
Prior to performing hydro-blasting work, LP Gas Industrial Equipment Co. employees must be trained on the hazards (including penetration of the skin by high pressure water), operating procedures, and maintenance of hydro-blasters.

Training must include a demonstration of the cutting action of the high pressure water and of its ability to cut and penetrate the skin. This live demonstration will emphasize the potential hazard to the human body by actually cutting through a piece of lumber, concrete block, or rubber boot.

Because of the infinite variable uses for hydro-blasting and the combinations of hydro-blasting equipment and the inherent dangers involved with hydro-blasting operations, all hydro-blasting operators must have received training on each type of equipment used. Only authorized personnel may operate hydro-blasting equipment.

Obviously, if an accident should occur and water penetrates the skin, medical attention must be given immediately.

Information and training also will address the tremendous force of the water, shock and electrical hazards, noise hazards, chemical release hazards, slip hazards, fall hazards, kick-back hazards, and visibility hazards.

At a minimum, a hydro-blasting team will consist of a pump operator and a nozzle operator.

Personal Protective Equipment (PPE):

All employees performing hydro-blasting work should wear, at a minimum, waterproof body protection, eye protection, head protection including full face shield, waterproof foot protection with steel toe caps, appropriate hand protection, and hearing protection. Depending on circumstances, metatarsal protective boots may be required.

Hydro-blasting Permits:

A Pre-Operational, Operation, and Post-Operation Permits will be developed by the site (or the contractor performing the work) that contains, at least, the below information:

1. Job Description and equipment being cleaned.
2. Precautions taken to protect electrical equipment.
3. Maximum operating pressure.
4. A list of qualified personnel.

Establishment of a control zone:

A control zone will be established to protect personnel when approaching all ends of the equipment being cleaned. The control zone will be identified by barricades and signage.

Equipment and Procedures:

1. The operator will inspect all hydro-blast equipment prior to use for defects, proper fluid levels, filters, and properly sized/rated fittings. This inspection will cover the high pressure unit, hoses and fittings. Defective equipment will be tagged out of service and not used.
2. All blast cleaning nozzles must be equipped with an operating valve (on the gun or foot pedal) which must be held open manually and always under control of the operator.
3. Objects to be cleaned will never be held manually.
4. The minimum total length of a hydro-blasting gun (hand-operated control valve, lance and nozzle resembling a gun layout) will be 66inches from the shoulder pad to the nozzle.
5. A properly sized anti-reversal device (stinger assembly attached to a nozzle to prevent it from turning around inside a pipe or large tube) will be used throughout the task. The combined length of the hose connection, stinger, and nozzle will be a minimum of 1.5 times the diameter of the pipe being cleaned unless the pipe being cleaned has a "T", then the combined length will be 3 times the diameter of the largest pipe.
6. Moleing device or lance will require a minimum of 2 feet end identification when a pipe flange is available. If no flange or other means to secure the anti-reversal device is used, the hose/flange will require a 2 feet end identification marking and a 4 feet end identification marking of a different color or different pattern.
7. A hydro-blasting system is not to be operated above the lowest working pressure (40% of the burst pressure) of any of its components.
8. All hydro-blasting must be completed from a stable work surface.
9. When operating hydro-blasting equipment, no ladders, step stools, benches, etc. are to be used. Approved scaffolding or platforms that are job specific may be used.

System Shut Down Events:

The system will be shut down and depressurized any time one of the below events occur:

1. The barricade is violated.
2. The equipment malfunctions (special attention should be given to the dump control valve).
3. Repairs need to be made.
4. The system is to be left unattended.

HYDROGEN SULFIDE (H2S) EXPOSURE CONTROL

Purpose

The purpose of this program is to reduce employee hydrogen sulfide (H2S) exposure to below the Permissible Exposure Limits by means of engineering and work practice controls at LP Gas Industrial Equipment Co. This program meets the requirements of OSHA Standard 29CFR 1910.1000 Table Z-2.

Definitions

Acceptable ceiling concentration – Airborne concentration that should not be exceeded at any time during an 8-hour shift.

Acceptable maximum peak concentration – The maximum airborne concentration allowed over a short time period if there is no other measurable exposure over any 8-hour shift.

Container – Any barrel, bottle, can, cylinder, drum, reaction vessel, storage tank, or the like, but does not include piping systems.

Emergency – Any occurrence such as equipment failure, rupture of containers, or failure of control equipment that may or does result in an unexpected significant release of hydrogen sulfide.

Employee exposure – Exposure to airborne hydrogen sulfide that would occur if the employee were not using respiratory protective equipment.

Permissible Exposure Limit (PEL) – The OSHA limit for exposure to airborne hazards.
For benzene the limits are 10ppm TWA, 15ppm STEL 20ppm acceptable ceiling and
50ppm acceptable maximum peak above ceiling once for 10 min if no other exposure occurs.

Route of exposure – The route by which air contaminants enter the body. Exposure routes include inhalation, ingestion, or skin absorption.

Short Term Exposure Limit (STEL) – Airborne concentration measured of any 15 minute time period.

Time- weighted Average (TWA) – Airborne concentration average over an 8-hour period.

Responsibilities

The Program Administrator will:

- Issue and implement this program and ensure that it meets applicable
- requirements
- Provide Hazard Communication Training for H2S
- Implement engineering and work practice controls to prevent exposure to H2S
- Provide appropriate personal protective equipment for exposed employees
- Maintain exposure monitoring records according to the recordkeeping section of this program

Managers and Supervisors will:

- Know and understand the hazards of H2S exposure
- Comply with engineering and work practice controls to prevent exposure to H2S
- Ensure the availability and use of appropriate personal protective equipment for exposed employees

Employees will:

- Comply with all aspects of this H2S exposure control program
- Use engineering and work practice controls to prevent exposure to H2S
- Use personal protective equipment as necessary to prevent H2S exposure

Program Activities

Hazard Recognition

LP Gas Industrial Equipment Co. works to ensure that employees are not exposed to H2S above OSHA exposure limits at any time.

Hydrogen sulfide, or H2S, is colorless, flammable gas that has a distinctive “rotten egg” odor. It is also referred to as hydrogen sulfide, sulfur hydride, sewer gas and stink damp.
The physical characteristics of H2S gas are below:

H2S Characteristic

Color	Colorless
Odor	“Rotten eggs” (detectable @ 10ppb)
Toxicity	Highly toxic
Flammability	Flammable
Solubility	0.4%
Incompatibilities	Strong oxidizers, strong nitric acid, metals

H2S is produced naturally by decaying organic matter, released from liquid manure and natural gas, a byproduct of industrial processes including petroleum refining, mining, tanning, wood pulp processing, and used to produce elemental sulfur, sulfuric acid, heavy water for nuclear reactors. H2S exposure could occur as a result of the following processes:

- Drilling operations
  - Recycling drilling mud
  - Contact with water from crude wells
  - Blowouts
- Tank Gauging
- Routine maintenance at refining operations

Exposure to H2S above published limits can result in adverse health effects including:
- Eye irritation
- Lung effects
- Central Nervous System effects on parts of the brain that controls breathing
- Shock, convulsions and death at high exposures

Symptoms of H2S exposure include:
- Eye irritation
- Nose and throat irritation
- Headache, dizziness
- Nausea
- Cough, breathing difficulty
- Hazard Evaluation:
- Monitoring
  - Monitoring for airborne concentrations of H2S at LP Gas Industrial Equipment Co. work sites is conducted using four-gas meter
- Area four-gas monitors will be set to alarm when airborne H2S concentrations exceed the OSHA STEL limit of 10ppm

Hazard Control

- LP Gas Industrial Equipment Co. employees will not work in areas with airborne concentrations above OSHA Permissible Exposure Limits.
- If circumstances require an exception to the above, NIOSH approved self-contained breathing apparatus or air-supplied respirators will be used.
- Controls include but are not limited to dilution ventilation, forced air ventilation and use of NIOSH approved respiratory protection (SCBA and air supplied only).

Other safety precautions include

- Whenever the four-gas monitor alarms leave area immediately to fresh air area and do not reenter until conditions are proven safe or appropriate respiratory protection is donned.
- Upon commencing operations at a work site obtain, know and understand the facility contingency plan.

Training

- LP Gas Industrial Equipment Co. employees will be trained in the hazards and safe control of H2S exposure using the training materials included in this program
- Training is documented according to the recordkeeping section of this program as well as the recordkeeping sections of the HazCom Program

Recordkeeping

- Training records included in this program are retained with and according to the requirements of the HazCom Program
- H2S monitoring results are documented and retained

INCIDENT INVESTIGATION AND REPORTING

Purpose

The purpose of this program is to have effective procedures for reporting and evaluating/investigating incidents and non-conformances in order to prevent further occurrences.

Responsibilities

Responsibilities for incident investigation will be assigned prior to occurrence of an incident. Individual responsibilities for reporting and investigation must be pre-determined and assigned prior to incidents.

LP GAS INDUSTRIAL EQUIPMENT CO. Safety Manager

Ensures investigations are conducted and assists in identifying corrective actions.

Site Manager and Supervisors

- Investigates (or assists in) incident investigations
- Corrects non-conformances
- LP GAS INDUSTRIAL EQUIPMENT CO injured employees to the medical provider for initial treatment.

Employees

Immediately report any injury, job related illness, spill or damage to any property to their immediate supervisor. If their immediate supervisor is not available the employee is then to immediately notify the project manager. Employees who could be first responders will be trained and qualified in first aid techniques to control the degree of loss during the immediate post-incident phase.

Procedure

After immediate rescue or response, actions to prevent further loss will occur if the scene is safe. For example, maintenance personnel should be summoned to assess integrity of buildings and equipment, engineering personnel to evaluate the need for bracing of structures, and special equipment/response requirements such as safe rendering of hazardous materials or explosives employed.

Investigations of Incidents & Non-conformances

Investigation is an important part of an effective safety program in that it determines the root cause and corrective actions necessary to prevent similar incidents or non-conformances.

The following must be reported to the employee's supervisor immediately. If that person is not available then the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager shall be immediately notified for:

- *Near miss incidents with the potential to harm people, the environment or assets*
- *Work related injuries or illnesses; Property damage including vehicle incidents*
- *Hazardous chemical spillage, loss of containment and contamination*
- *Non-conformance to safety or environmental rules, policies or standards*

The supervisor shall make the necessary notifications and begin the incident investigation process.

In the case of a major injury or incident the scene of the event should be closed off and kept "as is" at the time of the incident. This is vital for effective incident investigation.

Incident investigation occurs as soon as possible, while the facts are still fresh within the minds of those involved (i.e. witnesses). Take the opportunity to talk to all of those involved before they become unavailable or memory fades. An incident investigation must be thorough and concerned only with cause and prevention and must be separate from administrative disciplinary action.

Equipment

Proper equipment will be available to assist in conducting an investigation. Equipment may include some or all of the following items; writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, flags, equipment manuals, etc. The Safety Manager shall have a incident investigation kit prepared in advance.

Incident Reporting Matrix

The Incident Reporting Matrix identifies, based on type of incident, who within corporate management shall be verbally notified and when. It also specifies which type of report from the field shall be completed based on the type of incident.

Reporting of the incident must occur in a specified manner based on site specific requirements and the reporting sequence shall be posted.

EXTERNAL INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	*WHO TO NOTIFY VERBALLY*	*WHEN*	*INCIDENT REPORT FORM*
Minor First Aid	Owner Client	24 hrs	Yes
Injury Above Minor First Aid	911 / Site Medical Response / Owner Client	ASAP	Yes
As Required Injury Reporting	OSHA / Owner Client	Within 8 hrs	Yes
Fire / Explosion	911 / Site Fire Response / Owner Client	ASAP	Yes
Reportable Spill	Site Environmental / Owner Client	Within 24 hrs	Yes

Property/Vehicle Damage	Owner Client	Within 24 hrs	Yes

INTERNAL INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	Safety Manager	ASAP	Yes
Injury Above Minor First Aid	Safety Manager	ASAP	Yes
As Required Injury Reporting	President then Safety Manager	ASAP	Yes
Fire / Explosion	Safety Manager	ASAP	Yes
Reportable Spill	Safety Manager	ASAP	Yes
Property/Vehicle Damage	Safety Manager	ASAP	ASAP

Time Elements for OSHA and Client Notification

Required incidents must be verbally reported to OSHA within 8 hours of their discovery. Incidents must also be reported to the owner client as soon as possible or in a timely manner (within 24 hours of incident).

Incident Review Team and Incident Investigation Report

All incidents will be investigated to the appropriate level with regards to incident severity. While all incidents should be investigated, the extent of such investigation shall reflect the seriousness of the incident utilizing a root cause analysis process or other similar method determined by the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager. They will form an Incident Review Team that participates in the determination of the final root cause investigative incident report. The team consists of representatives of management or other designees as assigned by the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager.

Initial Identification/Assessment of Evidence

Initial identification of evidence immediately following the incident could include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Collection/Preservation and Security of Evidence

Evidence such as people, positions of equipment, parts, and papers must be preserved, secured and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment. All shall be dated.

Witness Interviews and Statements

Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations, and use of trained interviewers should be detailed. The need for follow-up interviews should also be addressed. All items shall be dated.

The final incident investigation report consists of findings with critical factors, evidence, corrective actions, responsible parties, and timelines for corrective action completion.

Results of incident investigations are communicated to employees via the Incident Notice form.

Preparation of the Written Incident Report

Written incident reports will be prepared and include the Field Incident Report Form and a detailed narrative statement concerning the events. The format of the narrative report may include an introduction, methodology, summary of the incident, Incident Review Team member names, narrative of the event, findings and recommendations. Photographs, witness statements, drawings, etc. should be included.

The supervisor completes the LP GAS INDUSTRIAL EQUIPMENT CO Field Incident Report and takes the below steps when beginning an incident investigation.

- Provide emergency assistance, as needed and qualified for
- Secure the area as quickly as possible to retain area in the same condition at the time of the incident
- Notify management by phone according to the Incident Notification Matrix
- Identify potential witnesses
- Use investigation tools, as needed (camera, drawings, video, etc.)
- Tag out for evidence any equipment that was involved
- Interview witnesses (including the effected employee) and obtain written, signed statements and fax to the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager
- Prepare LP GAS INDUSTRIAL EQUIPMENT CO Field Incident Report, sign the form, fax it to the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager
- Implement any immediate corrective actions needed

Incident Notice Form

LP GAS INDUSTRIAL EQUIPMENT CO shall provide documentation and communication of lessons learned and review of similar operations to prevent reoccurrence. Lessons learned are reviewed and communicated. Changes to processes must be placed into effect to prevent reoccurrence or similar events.

In order to communicate incident information and lessons learned from incidents the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager shall send the Incident Notice to all work sites. The form shall be posted on employee bulletin boards and shall be discussed in weekly safety meetings until all employees at the job site have been informed of the incident.

Corrective Actions Resulting from Incident Investigations

Incident investigations should result in corrective actions, individuals should be assigned responsibilities relative to the corrective actions, and these actions should be tracked to closure.

Site Managers are held accountable for closing corrective actions. Corrective actions for safety improvement input are posted at each site and tracked by the LP GAS INDUSTRIAL EQUIPMENT CO Safety Manager to ensure timely follow up and completion.

Corrective actions are also used as needed for revisions to site specific safety plans and the HOUSTON CONTROLS, INC Safety and Health Management System.

Injury Classifications

Injuries shall be classified per the following:

First Aid – Dressing on a minor cut, removal of a splinter, typically treatment for household type injuries.

Lost Work Day Case (LWDC) – An injury that results in an employee being unfit to perform any work on any day after the occurrence of an occupational injury.

Number of Lost or Restricted Work Days – The number of days, other than the day of occupational injury and the day of return, missed from scheduled work due to being unfit for work or medically restricted to the point that the essential functions of a position cannot be worked.

Occupational Injury – An injury which results from a work related activity.

Occupational Illness – Any abnormal condition or disorder caused by exposure to environmental factors while performing work that resulted in medical treatment by a physician for a skin disorder, respiratory condition, poisoning, hearing loss or other disease (frostbite, heatstroke, sunstroke, welding flash, diseases caused by parasites, etc.). Do not include minor treatments (first aid) for illnesses.

Recordable Medical Case (RMC) – An occupational injury more severe than first aid that requires advanced treatment (such as fractures, more than one stitch, prescription medication of more than one dose, unconsciousness, removal of foreign body embedded in eye (not flushing), admission to a hospital for more than observation purposes) and yet results in no lost work time beyond the day of injury.

Restricted Work Day Case (RWDC) – An occupational injury which results in a person being unfit for essential functions of the regular job on any day after the injury but where there is no time lost beyond the day of injury. An example would include an injured associate is kept at work but not performing within the essential functions of their regular job.

Work or Work Related Activity – All incidents that occur in work related activities during work hours, field visits, etc. are reportable and are to be included if the occupational injury or illness is more serious than requiring simple first aid. Incidents occurring during off hours and incidents while in transit to or from locations that are not considered an employee's primary work are not reportable.

The following are examples of incidents that will not be considered as recordable:

- The injury or illness involves signs or symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside the work environment.
- The injury or illness results solely from voluntary participation in a wellness program or in flu shot, exercise class, racquetball, or baseball.
- The injury or illness is solely the result of an employee eating, drinking, or preparing food or drink for personal consumption (whether bought on the employer's premises or brought in). The injury or illness is solely the result of an employee doing personal tasks (unrelated to their employment) at the establishment outside of the employee's assigned working hours.
- The illness is the common cold or flu (Note: contagious diseases such as tuberculosis, brucellosis, hepatitis A, or plague are considered work-related if the employee is infected at work).

Training

LP GAS INDUSTRIAL EQUIPMENT CO shall train personnel in their responsibilities and incident investigation techniques. Personnel must be trained in their roles and responsibilities for incident response and incident investigation techniques. Training requirements relative to incident investigation and reporting are described below:

Training frequency will be based on the specific are of responsibility but shall not exceed once every two years.

Training requirements relative to incident investigation and reporting shall include:

- Awareness
- First Responder Responsibilities
- The Initial Investigation at the Accident Scene
- Managing the Accident Investigation
- Collecting Data
- Analyzing Data
- Developing Conclusions and Judgments of Need
- Reporting the Results

INJURY/ILLNESS RECORDKEEPING

Purpose

The purpose of this program is to define the requirements for recording job related injuries and illnesses for *LP GAS INDUSTRIAL EQUIPMENT CO* .

Scope

This policy shall cover all HOUSTON CONTROLS, INC operations within the United States. Specific guidelines are available at the following website link: http://www.osha.gov/recordkeeping/index.html.

Key Responsibilities

Safety Manager

- Shall ensure all job related injuries and illness are recorded properly in accordance with OSHA requirements.
- Shall ensure all required posting are conducted in accordance with recordkeeping guidelines
- Shall maintain all required records.
- Shall determine the proper classification of job related injuries or illnesses based on OSHA recordkeeping guidelines.

Supervisors

Shall ensure that all job related injuries and illness are reported promptly to the *LP GAS INDUSTRIAL EQUIPMENT CO* Safety Manager.

Employees

Shall promptly report any actual or suspected job related injury or illness.

Procedure

If *LP GAS INDUSTRIAL EQUIPMENT CO* is required to keep records of fatalities, injuries, and illnesses it must record each fatality, injury and illness that:

- work-related; and
- is a new case; and
- meets one or more of the general recording criteria.

LP GAS INDUSTRIAL EQUIPMENT CO must enter each recordable injury or illness on an OSHA 300 Log and 301 Incident Report, or other equivalent form, within seven (7) calendar days of receiving information that a recordable injury or illness has occurred.

A *LP GAS INDUSTRIAL EQUIPMENT CO executive* must certify that he or she has examined the OSHA 300 Log and that he or she reasonably believes, based on his or her knowledge of the process by which the information was recorded, that the annual summary is correct and complete.

Posting

LP GAS INDUSTRIAL EQUIPMENT CO must post a copy of the annual summary in each establishment in a conspicuous place or places where notices to employees are customarily posted. HOUSTON CONTROLS, INC must ensure that the posted annual summary is not altered, defaced or covered by other material.

The annual summary must be posted no later than February 1st of the year following the year covered by the records and the posting kept in place until April 30th.

LP GAS INDUSTRIAL EQUIPMENT CO must save the OSHA 300 Log, the privacy case list (if one exists), the annual summary and the OSHA 301 Incident Report forms for five (5) years following the end of the calendar year that these records cover.

LADDER SAFETY PROGRAM

Purpose

The purpose of this safety policy and procedure is to establish guidelines for the safe use of ladders throughout LP Gas Industrial Equipment Co. by employees, contractors and visitors.

Ladders are used when employees need to move up or down between two different levels. Slips, trips, and falls are significant contributors to LP Gas Industrial Equipment Co. accidents.
Slips, trips, and falls can occur when wrong ladder selection is made and when improper climbing techniques and/or defective ladders are used.

At LP Gas Industrial Equipment Co., the appropriate ladder will be used for the corresponding job and defective ladders will not be used. When hazards exist that cannot be eliminated, then engineering practices, administrative practices, safe work practices, Personal Protective
Equipment (PPE) and proper training regarding ladders will be implemented. These measures will be implemented to minimize those hazards to ensure the safety of employees and the public.

Reference

This safety policy and procedure is established in accordance with Occupational Safety and Health Standards for General Industry (29 CFR 1910.25-27) and Occupational Safety and Health Standards for the Construction Industry (29 CFR 1926.1053).

Responsibilities

Managers/Unit Heads:
Managers/Unit Heads are responsible for ensuring that adequate funds are available and budgeted for the purchase of ladders in their areas. Managers/Unit Heads will obtain and coordinate the required training for the affected employees. Managers/Unit Heads will also ensure compliance with this safety policy and procedure through their auditing process.

Supervisors:
Supervisors are responsible for ensuring that all ladders (fixed and portable) are regularly inspected and properly maintained. They will also be responsible for tagging ladders in need of repair and removing defected ladders from service for repair or destruction.
Supervisors will audit for compliance with this safety policy and procedure during their facility and jobsite audits.

Employees:
Employees shall comply with all applicable guidelines contained in this safety policy and procedure. Employees are also responsible for reporting immediately suspected unsafe conditions or ladders to their supervisor. Employees are to inspect ladders before using and are to keep ladders clean and in good condition.

Safety and Loss Control:
Safety and Loss Control will provide prompt assistance to managers/unit heads, supervisors or others as applicable on any matter concerning this safety policy and procedure. Additionally,
Safety and Loss Control will assist in developing or securing of required training. Safety
Engineers will provide consultative and audit assistance to ensure effective implementation of this safety policy and procedure. Safety and Loss Control will also work with Purchasing
Department to ensure that all newly purchased ladders comply with this safety policy and procedure and current safety regulations.

Training:
Employees using the ladders shall be trained in:

- The proper use of the ladders
- What kind of ladder to use
- How to set up ladders
- Ladder inspection
- Proper maintenance

This training shall be done upon initial employment and/or job assignment. Refresher training shall be provided to employees at the discretion of their supervisor.

Ladder Hazards & Safe Use

Ladder Hazards:
There are inherent hazards associated with ladder use. Typical ladder hazards include:

- Insufficient surface resistance on ladder rungs and steps
- Ladder structural failure
- Ladders tipping sideways, backwards, or slipping out at the bottom
- Ladder spreaders not fully opened and locked, causing the ladder to “walk”, twist or close up when a load is applied to the ladder
- Using metal ladders around electricity
- Using deteriorated ladders
- Using fixed ladders without cages or fall protection

Safe Ladder Use:
Employees should follow certain rules when placing, ascending, and descending ladders which include:

- Hold on with both hands when going up or down. If material must be handled, raise or lower it with a rope either before going down or after climbing to the desired level.
- Always face the ladder when ascending or descending.
- Never slide down a ladder.
- Be sure shoes are not greasy, muddy, or slippery before climbing.
- Do not climb higher than the third rung from the top on straight or extension ladder, or the second tread from the top on stepladders.
- Carry tools on a tool belt not in the hand.
- Never lean too far to the sides. Keep your belt buckle within the side rails.

- Use a 4 to 1 ratio when leaning a single or extension ladder. (Place a 12 foot ladder so that the bottom is 3 feet away from the object the ladder is leaning against.)
- Inspect ladder for defects before using.
- Never use a defective ladder. Tag or mark it so that it will be repaired or destroyed.
- Never splice or lash a short ladder together.
- Never use makeshift ladders, such as cleats fastened across a single rail.
- Be sure that a stepladder is fully open and the metal spreader locked before starting to climb.
- Keep ladders clean and free from dirt and grease.
- Never use ladders during a strong wind except in an emergency and then only when they are securely fastened.
- Never leave placed ladders unattended.
- Never use ladders as guys, braces, or skids, or for any other purpose other than their intended purposes.
- Never attempt to adjust a ladder while a user is standing on the ladder.
- Never jump from a ladder. Always dismount from the bottom rung.

Ladder Safety Devices:
Safety devices are available for both portable and fixed ladders to prevent a climber from falling.
Safety devices for portable ladders include slip-resistant bases, safety tops, and any other device to increase the ladder stability. A portable ladder positioned at a location where it may be tipped over by work activities shall be securely fastened at the bottom and top. Safety devices for fixed ladders include cages (which enclose the stairwell) or a restraint belt attached to a sliding fixture anchored to the ladder.

Ladder Inspection:
An inspection program should be set up by which all ladders are inspected once every three months. Appendix B presents a general inspection form. Ladders that are weak, improperly repaired, damaged, have missing rungs, or appear unsafe shall be removed from the job or site for repair or disposal. Before discarding a wood ladder, cut it up so no one can use it again.
Additionally, portable ladders must be maintained in good condition at all times and inspected frequently. Tag any ladders that have developed defects with DANGEROUS – DO NOT USE, and remove from service for repair or disposal.

For portable wood ladders, all wood parts shall be free from sharp edges and splinters; sound and free from accepted visual inspection from shake, wane, compression failures, decay, or other irregularities. For portable metal ladders, the design shall be without structural defects or accident hazards such as sharp edges, burrs, etc. The selected metal shall be of sufficient strength to meet the test requirements and shall be protected against corrosion. For fixed ladders, all wood parts shall meet the criteria of wood ladders. All metal parts shall meet the criteria of metal ladders.

Maintenance:
Portable wood ladders may be coated with a water-repellent preservative to provide a suitable protective material. Metal ladders and metal parts on wood ladders should be corrosion-resistant and kept free from nicks. If nicks occur, they should be promptly treated to prevent possible metal fatigue due to rust.

Ladder Inspection Checklist

All Ladders:
- Loose steps or rungs are considered loose if they can be moved at all with the hand
- Loose nails, screws, bolts, or other metal parts
- Cracked, split, or broken uprights, braces, steps, or rungs
- Slivers on uprights, rungs, or steps
- Damaged or worn non-slip bases
- Rusted or corroded spots

Stepladders:
- Wobbly from side strain
- Loose or bent hinge spreaders

- Stop on hinge spreaders broken
- Broken, split, or worn steps
- Loose hinges

Extension Ladders:
- Loose, broken, or missing extension locks
- Defective locks that do not seat properly when the ladder is extended
- Deterioration of rope, from exposure to weather, acid or other destructive agents

Fixed Ladders:
- Loose, worn, or damaged rungs or side rails
- Damaged or corroded parts of cage
- Corroded bolts and rivet heads on inside of metal stacks
- Damaged or corroded handrails or brackets on platforms
- Weakened or damaged rungs on brick or concrete slabs
- Base of ladder obstructed

Definitions

Cage – A guard that may be referred to as a cage or basket guard which is an enclosure that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.

Extension Ladder – 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.

Fixed Ladder – Ladder permanently attached to a structure, building, or equipment.

Individual-Rung Ladder – Fixed ladder each rung of which is individually attached to a structure, building, or equipment.

Ladder – 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.

Ladder Safety Device – Device, other than a cage or well, designed to eliminate or reduce the possibility of accidental falls and which may incorporate such features as life belts, friction brakes, and sliding attachments.

Pitch – The included angle between the horizontal and the ladder, measured on the opposite side of the ladder from the climbing side.

Platform Ladder – A self-supporting ladder of fixed size with a platform provided at the working level. The size is determined by the distance along the front rail from the platform to the base of the ladder.

Rail Ladder – Fixed ladder consisting of side rails joined at regular intervals by rungs or cleats and fastened in full length or in sections to a building, structure, or equipment.

Railings – A railing is any one or a combination of those railings constructed in accordance with OSHA Standard 1910.23. A standard railing is a vertical barrier erected along exposed edges of floor openings, wall openings, ramps, platforms, and runways to prevent falls of persons.

Rungs – Ladder cross-pieces of circular or oval cross-section on which a person may step in ascending or descending.

Section Ladder – 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-Step Ladder – A ladder in which an individual getting off at the top must step sideways in order to reach the landing.

Single Ladder – 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 – Portable ladder which represents either a modification or 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.

Stepladder – 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.

Steps – Flat cross-pieces of a ladder on which a person may step in ascending or descending.

Through Ladder – A ladder in which an individual getting off at the top must step through in order to reach the landing.

Well – A permanent complete enclosure around a fixed ladder, which is attached to the walls of the well. Proper clearances for a well will give the person who must climb the ladder the same protection as a cage.

LEAD

Purpose

The purpose of the Company's Lead Safety Program is to protect both our employees and the environment from lead contamination from our operations. The intent of our program is to be in full, continuous compliance with OSHA Standard 29 CFR 1910.1025 and all other local, State and Federal requirements for our industry.

Responsibilities

Management will implement, maintain & monitor effectiveness of:

- entire lead safety program, including semi-annual revisions and updates to reflect the current status of the program
- engineering & administrative controls for lead exposure
- employee training and awareness
- medical surveillance program
- respiratory protection program
- lead disposal program
- housekeeping program
- protective clothing issue, storage and disposal

Supervisors will:

- provide effective and continuous control of all lead operations
- immediately inform management of any deficiencies in engineering or administrative controls
- conduct routine assigned inspections and monitoring
- immediate correct any deviation from operational safety requirements
- provide immediate on-the-spot training for any employee who shows lack of knowledge or application of required operational lead safety requirements
- ensure all employees are properly trained before commencing any operation that may contribute to lead exposure

Employees will:

- follow all operational and lead safety procedures
- Seek immediate supervisor guidance to resolve questions

- Conduct operations in accordance with company provided training
- immediately report to a supervisor any deficiency in engineering or administrative controls
- Properly use, store and dispose of issued and assigned personal protective clothing.
- Maintain change and shower areas neat and orderly

Process, Control & Technical Information:
The following information that describes facility specific information concerning processes and controls are maintained as an addendum to this written program:

A. Description of each operation in which lead is emitted; e.g. machinery used, material processed, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices.
B. Description of the specific means used to achieve compliance, including engineering plans and studies used to determine methods selected for controlling exposure to lead.
C. Report of the technology considered in meeting the permissible exposure limit;
D. Air monitoring data which documents the source of lead emissions;
E. A detailed schedule for implementation of this program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.
F. Records of Employee Training and Notifications
G. Specific work practice program and controls for each operation involving lead exposure
H. Administrative control schedule
I. All other relevant information

Hazards

Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds. The
Permissible Exposure Limit (PEL) set by OSHA is 50 micrograms of lead per cubic meter of air (50 ug/m (3), averaged over an 8-hour workday.

Lead can be absorbed by inhalation (breathing) and ingestion (eating). Lead is not absorbed through your skin. When lead is scattered in the air as a dust, fume or mist it can be inhaled and absorbed through the lungs and upper respiratory tract. Lead can also be absorbed through the digestive system if swallowed. Handling food, cigarettes, chewing tobacco, or make-up which has lead contamination or handling them with hands contaminated with lead, will contribute to ingestion.

A significant portion of inhaled or ingested lead goes into the blood stream. Once in the blood stream, lead is circulated throughout the body and stored in various organs and body tissues.
Some of this lead is quickly filtered out of the body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in the body will increase. Lead stored in body tissues can cause irreversible damage, first to individual cells, then to organs and whole body systems.

Short-term (acute) effects of overexposure to lead:

Lead is a potent, systemic poison. Taken in large enough doses, lead can kill in a matter of days.
A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardio respiratory arrest. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

Long-term (chronic) effective of overexposure to lead:

Chronic overexposure to lead may result in severe damage to blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain.

Initial determination – LP Gas Industrial Equipment Co. has made an initial determination of lead work areas and exposure levels and will conduct subsequent "initial determinations" in the event of changes to hazard control methods or operational processes that affect employee or environmental exposure. Initial determinations are conducted to determine if any employee may be exposed to lead at or above the action level of 30 micrograms per cubic meter of air (30 g/m) (3) averaged over an 8-hour period.

Where a determination is made that no employee is exposed to airborne concentrations of lead at or above the action level, the company shall maintain a written record. The record shall include quantitative sampling data, date of determination, location within the worksite, and the name and social security number of each employee monitored.

Monitoring requirements:
Monitoring and analysis methods shall have an accuracy (to a confidence level of
95%) of not less than plus or minus 20 percent for airborne concentrations of lead equal to or greater than 30 ug/m (3).

Where a determination shows the possibility of any employee exposure at or above the action level, the company shall conduct monitoring which is representative of the exposure for each employee in the workplace or process area who is exposed to lead.

For the purposes of monitoring requirements, employee exposure is that exposure which would occur if the employee were not using a respirator.

Monitoring and sample collection shall cover full shift (for at least 7 continuous hours) personal samples including at least one sample for each shift for each job classification in each work area.

Full shift personal samples must be representative of the monitored employee's regular, daily exposure to lead.

Monitoring Frequency:
At or Above Action Level and Below PEL - Every 6 months of the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit. This monitoring (6 month frequency) will continue until at least two consecutive measurements, taken at least 7 days apart, are below the action level.

Above PEL - If the initial monitoring reveals that employee exposure is above the permissible exposure limit the company will repeat monitoring quarterly. Quarterly monitoring will continue until at least two consecutive measurements, taken at least 7 days apart, are below the PEL but at or above the action level.

Additional monitoring - Whenever there has been a production, process, control or personnel change which may result in new or additional exposure to lead, or whenever any other reason to suspect a change which may result in new or additional exposures to lead, additional monitoring will be conducted.

Employee Notification of Monitoring Results:
Within 5 working days after the receipt of monitoring results, each employee will be notified in writing of the results which represent that employee's exposure.

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

Observation of monitoring:

The company provides affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead.

Observation procedures - Whenever observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing or equipment is required, the company will provide the observer with and assure the use of respirators, clothing and equipment required, and will require the observer to comply with all other applicable safety and health procedures.

Without interfering with the monitoring, an observer is entitled to:

- Receive an explanation of the measurement procedures
- Observe all steps related to the monitoring of lead performed at the place of exposure
- Record the results obtained or receive copies of the results when returned by the laboratory

Engineering Controls:
Where any employee is exposed to lead above the permissible exposure limit for more than 30 days per year, the company will implement feasible engineering and work practice controls (including administrative controls) to reduce and maintain employee exposure to lead. Wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, the company will still use them to reduce exposures to the lowest feasible level and shall supplement them by the use of respiratory protection.

Where any employee is exposed to lead above the permissible exposure limit, but for 30 days or less per year, the company will implement engineering controls to reduce exposures to 200 ug/m (3), but thereafter may implement any combination of engineering, work practice (including administrative controls), and respiratory controls to reduce and maintain employee exposure to lead to or below 50 ug/m (3).

Mechanical ventilation:
When ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system in controlling exposure, such as capture velocity, duct velocity, or static pressure 197shall be made at least every 3 months. Measurements of the system's effectiveness in controlling exposure shall be made within 5 days of any change in production, process, or control which might result in a change in employee exposure to lead.

Recirculation of air - If air from exhaust ventilation is recirculated into the workplace, the system must include:

- A high efficiency filter with reliable back-up filter
- Controls to monitor the concentration of lead in the return air and to bypass the recirculation system automatically if it fails are installed, operating, and maintained.

Administrative Controls:
If administrative controls are used as a means of reducing employees TWA exposure to lead, the company shall establish and implement a job rotation schedule which includes:

- Name or identification number of each affected employee
- Duration and exposure levels at each job or work station where each affected employee is located
- Other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead

Administrative control information and records will be maintained as an addendum to this written program.

Respirators

When respirators are used to supplement engineering and work practice controls to comply with the PEL and all other requirements have been met, employee exposure, for the purpose of determining compliance with the PEL, may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure. The respiratory protection program will be conducted in accordance with 29 CFR 1910.134 (b) through (d) (except (d) (1) (iii)), and (f) through (m). The company will

provide a powered air-purifying respirator when an employee chooses to use this type of respirator and such a respirator provides adequate protection to the employee.

Respirators must be used during:

- Periods necessary to install or implement engineering or work-practice controls.
- Work operations for which engineering and work-practice controls are not sufficient to reduce employee exposures to or below the permissible exposure limit.
- Periods when an employee requests a respirator
-

Protective Clothing & Equipment:

If an employee is exposed to lead above the PEL, without regard to the use of respirators or where the possibility of skin or eye irritation exists, the company will provide at no cost to the employee appropriate protective work clothing and equipment such as, but not limited to:

-
- Coveralls or similar full-body work clothing;
- Gloves, hats, and shoes or disposable shoe coverlets; and
- Face shields, vented goggles, or other appropriate protective equipment
-

Cleaning and replacement - the company will:

- Provide the protective clothing in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to a respirator are over 200 ug/m(3) of lead as an 8-hour TWA.
- Provide for the cleaning, laundering, or disposal of protective clothing and equipment
- Repair or replace required protective clothing and equipment as needed to maintain their effectiveness.
- Assure that all protective clothing is removed at the completion of a work shift only in change rooms provided for that purpose
- Assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change-room which prevents dispersion of lead outside the container.
- Inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.
- Assure that the containers of contaminated protective clothing and equipment required by paragraph (g) (2) (v) are labeled as follows: CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.
- Prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.

Housekeeping

- All surfaces shall be maintained as free as practicable of accumulations of lead.
- Floors and other surfaces where lead accumulates may not be cleaned by the use of compressed air.
- Shoveling, dry or wet sweeping, and brushing may be used only where vacuuming or other equally effective methods have been tried and found not to be effective.
- Where vacuuming methods are used, the vacuums shall be used and emptied in a manner which minimizes the reentry of lead into the workplace.

Hygiene Facilities & Practices:

The following is requirements pertain to all areas where employees are exposed to lead above the PEL, without regard to the use of respirators:

- No storage or consumption of food or beverages
- No tobacco product storage or use
- No cosmetics stored or used
- No personal clothing or articles, except in authorized change areas

Change rooms:

Clean change rooms are provided for employees who work in areas where their airborne exposure to lead is above the PEL. Change rooms are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross contamination. Employees who are required to shower after work shifts are not allowed to leave the workplace wearing any clothing or equipment worn during the work shift.

Showers:
Employees who work in areas where their airborne exposure to lead is above the PEL must shower at the end of the each work shift.

Lunchrooms:
Separate lunchroom facilities are provided for employees who work in areas where their airborne exposure to lead is above the PEL. These facilities are temperature controlled, have positive pressure and filtered air supply, and are readily accessible to employees. All affected employees must wash their hands and face prior to eating, drinking, smoking or applying cosmetics in the lunchroom area. Employees may not enter lunchroom facilities with protective work clothing or 200 equipment unless surface lead dust has been removed by vacuuming, down draft booth, or other cleaning method.

Lavatories:
An adequate number of separate lavatory facilities are maintained for employees who work in lead controlled process areas.

Signs:
Proper signs will be posted at the entrance and exits to all lead hazard areas, No other signs or statements may appear on or near any lead hazard sign which contradicts or detracts from the meaning of the required sign. All lead hazard signs will be kept illuminated and cleaned as necessary so that the legend is readily visible. The signs will contain the following or other appropriate wording/warning:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Employee Training

All affected employees will participate in the company Lead Safety Training program. All affected employees will be trained prior to the time of initial job assignment and at least annually.

Employee training will consist of:

- specific OSHA requirements contained in
    - 1910.1025 - OSHA Lead Standard
    - 1910.1025 App A - Substance data sheet for occupational exposure to lead
    - 1910.1025 App B - Employee standard summary
- specific nature of the operations which could result in exposure to lead above the action level
- purpose, proper selection, fitting, use, and limitations of respirators;
- purpose and a description of the medical surveillance program, and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females);
- engineering controls and work practices associated with the employee's job assignment;
- contents of the company compliance plan
- instructions that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician
- materials pertaining to the Occupational Safety and Health Act201
    - A copy of the OSHA standard 1910.1025 and its appendices will be readily available to all affected employees.

Medical Surveillance

The company has instituted a medical surveillance program for all employees who are or may be exposed above the action level for more than 30 days per year. This medical surveillance program and all medical examinations and procedures are performed by or under the supervision of a licensed physician. The program functions under the requirements of OSHA Standard 1910.1025. Elements of the program include:

- Biological monitoring
- Employee notification
- Medical examinations and consultations
- Medical removal protection
- Medical removal protection benefits

Recordkeeping

All records relating to the company lead safety program are to be maintained for at least 40 years or for the duration of employment plus 20 years, whichever is longer. The following records will be established and maintained:

Exposure monitoring:

- Date(s), number, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable
- Description of the sampling and analytical methods used and evidence of their accuracy
- Type of respiratory protective devices worn, if any
- Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent
- Environmental variables that could affect the measurement of employee exposure

Medical surveillance:

- The name, social security number, and description of the duties of the employee;
- A copy of the physician's written opinions;
- Results of any airborne exposure monitoring done for that employee and the representative exposure levels supplied to the physician
- Any employee medical complaints related to exposure to lead.
- A copy of the medical examination results including medical and work history
- A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;
- A copy of the results of biological monitoring.

Medical removals:

- Name and social security number of the employee;
- Date on each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his or her former job status;
- Brief explanation of how each removal was or is being accomplished; and
- Statements with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.

Lead Health Hazard Information for Employees

Prevention of adverse health effects for most workers from exposure to lead throughout a working lifetime requires that worker blood lead (PbB) levels be maintained at or below forty micrograms per one hundred grams of whole blood (40 ug/100g). The blood lead levels of workers (both male and female workers) who intend to have children should be maintained below 30 ug/100g to minimize adverse reproductive health effects to the parents and to the developing fetus.

The measurement of your blood lead level is the most useful indicator of the amount of lead being absorbed by your body. Blood lead levels (PbB) are most often reported in units of milligrams (mg) or micrograms (ug) of lead (1 mg=1000 ug) per 100 grams (100g), 100 milliliters (100 ml) or deciliter (dl) of blood. These three units are essentially the same. Sometime PbB's are expressed in the form of mg% or ug%. This is a shorthand notation for 100g, 100 ml, or dl.

PbB measurements show the amount of lead circulating in your blood stream, but do not give any information about the amount of lead stored in your various tissues. PbB measurements merely show current absorption of lead, not the effect that lead is having on your body or the effects that past lead exposure may have already caused. Past research into lead-related diseases, however, has focused heavily on associations between PbBs and various diseases. As a result, your PbB is an important indicator of the likelihood that you will gradually acquire a lead-related health impairment or disease.

Once your blood lead level climbs above 40 ug/100g, your risk of disease increases. There is a wide variability of individual response to lead, thus it is difficult to say that a particular PbB in a given person will cause a particular effect. Studies have associated fatal encephalopathy with PbBs as low as 150 ug/100g. Other studies have shown other forms of diseases in some workers with PbBs well below 80 ug/100g. Your PbB is a crucial indicator of the risks to your health, but one other factor is also extremely important. This factor is the length of time you have had elevated PbBs. The longer you have an elevated PbB, the greater the risk that large quantities of lead are being gradually stored in your organs and tissues (body burden). The greater your overall body burden, the greater the chances of substantial permanent damage.

The best way to prevent all forms of lead-related impairments and diseases-both short term and long term- is to maintain your PbB below 40 ug/100g. The company lead safety program is designed with this end in mind. You as a worker have a responsibility to assist in complying with the company program. You play a key role in protecting your own health by learning about the lead hazards and their control, learning what the company program requires and following management and supervisor requirements where they govern your own actions.

Reporting signs and symptoms of health problems - You should immediately notify your supervisor if you develop signs or symptoms associated with lead poisoning or if you desire medical advice concerning the effects of current or past exposure to lead on your ability to have a healthy child. You should also notify your supervisor if you have difficulty breathing during a respirator fit test or while wearing a respirator. In each of these cases the company will make available to you appropriate medical examinations or consultations. These must be provided at no cost to you and at a reasonable time and place.

Exposure Levels

The company program sets a permissible exposure limit (PEL) of fifty micrograms of lead per cubic meter of air (50 ug/m (3)), averaged over an 8-hour work-day. This is the highest level of lead in air to which you may be permissibly exposed over an 8-hour workday. Since it is an 8-hour average it permits short exposures above the PEL so long as for each 8-hour work day your average exposure does not exceed the PEL.

This company recognizes that your daily exposure to lead can extend beyond a typical 8-hour workday as the result of overtime or other alterations in your work schedule. To deal with this, our program contains the below formula which reduces your permissible exposure when you are exposed more than 8 hours. For example, if you are exposed to lead for 10 hours a day, the maximum permitted average exposure would be 40 ug/m (3).

Formula: Maximum permissible limit (in ug/m (3)) =400 divided by hours worked in the day.

LEAD AWARENESS

Lead awareness training is required for employees whose work activities may contact lead containing materials but do not disturb the material during their work activities. Lead awareness training is required at time of hire, during orientation, or before assignment to areas containing lead. Refresher training must be given annually.

LOCKOUT TAGOUT

Purpose

Control of Hazardous energy is the purpose of the Lockout- Tagout Program. This program establishes the requirements for isolation of both kinetic and potential electrical, chemical, thermal, hydraulic and pneumatic and

gravitational energy prior to equipment repair, adjustment or removal. Reference: OSHA Standard 29 CFR 1910 the control of hazardous energy.

Hazards - Improper or failure to use Lockout - Tagout procedures may result in:

* Electrical shock
* Chemical exposure
* Skin burns
* Lacerations & amputation
* Fires & explosions
* Chemical releases
* Eye injury
* Death

Hazard Controls:

* Only authorized and trained employees may engage in tasks that require use of lockout-tagout procedures
* All equipment has single sources of electrical power
* Lockout procedures have been developed for all equipment and processes
* Restoration from Lockout is a controlled operation

Definitions

Authorized (Qualified) Employees - are the only ones certified to lock and tagout equipment or machinery. Whether an employee is considered to be qualified will depend upon various circumstances in the workplace. It is likely for an individual to be considered "qualified" with regard to certain equipment in the workplace, but "unqualified" as to other equipment. An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person, is considered to be "qualified" for the performance of those duties.

Affected Employees - are those employees who operate machinery or equipment upon which lockout or tagging out is required under this program. Training of these individuals will be less stringent in that it will include the purpose and use of the lockout procedures.

Other Employees - are identified as those that do not fall into the authorized, affected or qualified employee category. Essentially, it will include all other employees. These 100 employees will be provided instruction in what the program is and not to touch any machine or equipment when they see that it has been locked or tagged out.

Training

Authorized Employees Training:

All Maintenance Employees, Department Supervisors and Janitorial employees will be trained to use the lock and tag out Procedures. The training will be conducted by the Maintenance Supervisor or Safety Coordinator at time of initial hire. Retraining shall be held at least annually. The training will consist of the following:

1. Review of General Procedures
2. Review of Specific Procedures for machinery, equipment and processes
3. Location and use of Specific Procedures
4. Procedures when questions arise

Affected LPGIE Employee Training:

1. Only trained and authorized Employees will repair, replace or adjust machinery, equipment or processes
2. Affected Employees may not remove Locks, locking devices or tags from machinery, equipment or circuits.
3. Purpose and use of the lockout procedures.

4. All training and/or retraining must be documented, signed and certified by either a Supervisor or Safety Director.

Other Employee Training:

1. Only trained and authorized LP Gas Industrial Equipment Co. employees will repair, replace or adjust machinery or equipment.
2. Other Employees may not remove Locks, locking devices or tags from machinery, equipment or circuits

Preparation for Lock and Tag Out Procedures

A Lockout - Tagout survey has been conducted to locate and identify all energy sources to verify which switches or valves supply energy to machinery and equipment. Dual or redundant controls have been removed.

A Tagout Schedule has been developed for each piece of equipment and machinery. This schedule describes the energy sources, location of disconnects, type of disconnect, special hazards and special safety procedures. The schedule will be reviewed each time to ensure employees properly lock and tag out equipment and machinery. If a Tagout Schedule does not exist for a particular piece of equipment, machinery and process, one must be developed prior to conducting a Lockout - Tagout. As repairs and/or renovations of existing electrical systems are made, standardized controls will be used.

Routine Maintenance & Machine Adjustments

Lock and Tag Out procedures are not required if equipment must be operating for proper adjustment. This rare exception may be used only by trained and authorized Employees 101when specific procedures have been developed to safely avoid hazards with proper training. All consideration shall be made to prevent the need for an employee to break the plane of a normally guarded area of the equipment by use of tools and other devices.

Locks, Hasps and Tags

All Qualified Maintenance Personnel will be assigned a lock with one key, hasp and tag.
All locks will be keyed differently, except when a specific individual is issues a series of locks for complex lockout-tagout tasks. In some cases, more than one lock, hasp and tag are needed to completely de-energize equipment and machinery. Additional locks may be checked out from the Department or Maintenance Supervisor on a shift-by-shift basis. All locks and hasps shall be uniquely identifiable to a specific employee.

SOP: General Lock and Tag Out Procedures

Before working on, repairing, adjusting or replacing machinery and equipment, the following procedures will be utilized to place the machinery and equipment in a neutral or zero mechanical state.

Preparation for Shutdown. Before authorized or affected employees turn off a machine or piece of equipment, the authorized employee will have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the means to control the energy.

Notify all affected Employees that the machinery, equipment or process will be out of service.

Machine or Equipment Shutdown. The machine or equipment will be turned or shut down using the specific procedures for that specific machine. An orderly shutdown will be utilized to avoid any additional or increased hazards to employees as a result of equipment de-energization.

If the machinery, equipment or process is in operation, follow normal stopping procedures (depress stop button, open toggle switch, etc.).

Move switch or panel arms to "Off" or "Open" positions and close all valves or other energy isolating devices so that the energy source(s) is disconnected or isolated from the machinery or equipment.

Machine or Equipment Isolation:
All energy control devices that are needed to control the energy to the machine or equipment will be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.

Lockout or Tagout Device Application:
Lockout or tagout devices will be affixed to energy isolating devices by authorized employees. Lockout devices will be affixed in a manner that will hold the energy isolating devices from the "safe" or "off" position.

Where tagout devices are used they will be affixed in such a manner that will clearly state that the operation or the movement of energy isolating devices from the "safe" or "off" positions is prohibited.

The tagout devices will be attached to the same point a lock would be attached. If the tag cannot be affixed at that point, the tag will be located as close as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.

Lock and tag out all energy devices by use of hasps, chains and valve covers with an assigned individual locks.

Stored Energy:
Following the application of the lockout or tagout devices to the energy isolating devices, all potential or residual energy will be relieved, disconnected, restrained, and otherwise rendered safe.

Where the re-accumulation of stored energy to a hazardous energy level is possible, verification of isolation will be continued until the maintenance or servicing is complete.

Release stored energy (capacitors, springs, elevated members, rotating fly wheels, and hydraulic/air/gas/steam systems) must be relieved or restrained by grounding, repositioning, blocking and/or bleeding the system.

Verification of Isolation:
Prior to starting work on machines or equipment that have been locked or tagged out, the authorized employees will verify that isolation or de-energization of the machine or equipment have been accomplished.

After assuring that no Employee will be placed in danger, test all lock and tag outs by following the normal start up procedures (depress start button, etc.).

Caution: After Test, place controls in neutral position.

Extended Lockout – Tagout

Should the shift change before the machinery or equipment can be restored to service, the lock and tag out must remain. If the task is reassigned to the next shift, those Employees must lock and tag out before the previous shift may remove their lock and tag.

SOP: Release from LOCKOUT/TAGOUT:
Before lockout or tagout devices are removed and the energy restored to the machine or equipment, the following actions will be taken:

1. The work area will be thoroughly inspected to ensure that nonessential items have been removed and that machine or equipment components are operational.
2. The work will be checked to ensure that all employees have been safely positioned or removed. Before the lockout or tagout devices are removed, the affected employees will be notified that the lockout or tagout devices are being removed.
3. Each lockout or tagout device will be removed from each energy isolating device by the employee who applied the device.

SOP: LOTO Procedure for Electrical Plug-Type Equipment:
This procedure covers all Electrical Plug-Type Equipment such as Battery Chargers, some Product Pumps, Office Equipment, Powered Hand Tools, Powered Bench Tools, Lathes, Fans, etc.

When working on, repairing, or adjusting the above equipment, the following procedures must be utilized to prevent accidental or sudden startup:

1. Unplug Electrical Equipment from wall socket or in-line socket.
2. Attach "Do Not Operate" Tag and Plug Box & Lock on end of power cord.
   An exception is granted to not lock & tag the plug is the cord & plug remain in the exclusive control of the Employee working on, adjusting or inspecting the equipment.
3. Test Equipment to assure power source has been removed by depressing the "Start" or On" Switch.
4. Perform required operations.
5. Replace all guards removed.
6. Remove Lock & Plug Box and Tag.
7. Inspect power cord and socket before plugging equipment into power source.
   Any defects must be repaired before placing the equipment back in service.

NOTE: *Occasionally used equipment may be unplugged from power source when not in use.*

SOP: LOTO Procedures Involving More Than One Employee: In the preceding SOPs, if more than one Employee is assigned to a task requiring a lock and tag out, each must also place his or her own lock and tag on the energy isolating device(s).

SOP: Management's Removal of Lock and Tag Out: Only the Employee that locks and tags out machinery, equipment or processes may remove his/her lock and tag. However, should the Employee leave the facility before removing his/her lock and tag, the Maintenance Manager may remove the lock and tag.

The Maintenance Manager must be assured that all tools have been removed, all guards have been replaced and all Employees are free from any hazard before the lock and tag are removed and the machinery, equipment or process are returned to service.

Notification of the employee who placed the lock is required prior to lock removal.

Contractors

Contractors, working on company property and equipment must use this Lockout - Tagout procedure while servicing or maintaining equipment, machinery or processes.

NFPA 70E

Purpose

The purpose of this program is to set forth procedures for the safe use of electrical equipment, tools, and to comply with NFPA 70E requirements.

Scope

This program applies to all *LP GAS INDUSTRIAL EQUIPMENT CO.* employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator’s program shall take precedence, however, this document covers LP GAS INDUSTRIAL EQUIPMENT CO. employees and contractors and shall be used on owned premises, or when an operator’s program doesn’t exist or is less stringent.

LP GAS INDUSTRIAL EQUIPMENT CO. shall advise the host employer of:

- Any unique hazards presented by the contract employer’s work,
- Any unanticipated hazards found during work by *LP GAS INDUSTRIAL EQUIPMENT CO.* that the host employer did not mention, and

- The measures *LP GAS INDUSTRIAL EQUIPMENT CO.* took to correct any hazards reported by the host employer to prevent such hazards from recurring in the future.

Responsibilities

Managers/Supervisor
The LPGIE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.

Operations Managers and Supervisors are responsible for ensuring that only qualified employees and or qualified contractors perform electrical repairs or installations. Unqualified persons shall not be permitted to enter spaces that are required to be accessible to qualified employees only, unless the electric conductors and equipment involved are in an electrically safe work condition.

Operations Managers and Supervisors shall ensure a documented job briefing is held before starting each job and will include all employees involved. The briefing will cover hazards associated with the job, work procedures involved, special precautions, energy source controls and PPE requirements.

Operations Managers are also responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.

Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their supervisor immediately.

Only qualified employees may work on electric circuit parts or equipment that has not been de-energized. Such employees shall be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools.

Safe Work Practices

Prior to any work being done within the Limited Approach Boundary a hazard risk analysis shall be performed. The analysis shall contain event severity, frequency, probability and avoidance to determine the level of safe practices employed.

Safe Work Practices for Working within the Limited Approach Boundary

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The limited approach boundary is the distance from an exposed live part within which a shock hazard exists.

The restricted approach boundary is the closest distance to exposed live parts a qualified person can approach with without proper PPE and tools. Inside this boundary, accidental movement can put a part of the body or conductive tools in contact with live parts or inside the prohibited approach boundary. To cross the restricted approach boundary, the qualified person must:

- Have an energized work permit that is approved by the supervisor or manager responsible or the safety plan.
- Use PPE suitable for working near exposed lived parts and rated for the voltage and energy level involved.
- Be certain that no part of the body enters the prohibited space.
- Minimize the risk from unintended movement, by keeping as much of the body as possible out of the restricted space; body parts in the restricted space should be protected.

The prohibited approach boundary is the minimum approach distance to exposed live parts to prevent flashover or arcing. Approaching any closer is comparable to making direct contact with a live part. To cross the prohibited approach boundary, the qualified person must:

- Have specified training to work on exposed live parts.
- Have a permit with proper written work procedures and justifying the need to work that close.
- Do a risk analysis.
- Have (2) and (3) approved by the appropriate supervisor.
- Use PPE appropriate for working near exposed live parts and rated for the voltage and energy level
- involved.

The Flash Protection Boundary is the approach limit at a distance from exposed live parts within which a person could receive a second degree burn if an electrical arc flash were to occur.
Use PPE appropriate for working near exposed live parts and rated for the voltage and energy level involved.

- For systems of 600 volts and less, the flash protection boundary is 4 feet, based on an available bolted fault current of 50 kA and a clearing time of 6 cycles for the circuit breaker to act, or any combination of fault currents and clearing times not exceeding 300 kA cycles.
- When working on de-energized parts and inside the flash protection boundary for nearby live exposed parts - If the parts cannot be de-energized, use barriers such as insulted blankets to protect against accidental contact or wear proper PPE.

Arc flash risk assessments include determining appropriate safety related work practices, the arc flash boundary requirements, and the PPE required to minimize the risk of electric shock. LP Gas Industrial Equipment Company employees much document assessments and equipment field marked with a label. These assessments must be reviewed prior to beginning work.

All PPE used must meet the requirements in Table 130.7(C)(14). PPE requirements in the table apply to many different kinds of PPE: arc rated apparel, insulating aprons, general eye and face protection, arc rated face protection, fall protection, testing methods and specifications for footwear, glove and sleeve testing and care, hard hats, arc rated rainwear, visual inspections of rubber protective products and sleeves. The related standards for each kind of PPE are found in their ASTM or ANSI document in the table.

Alerting techniques include safety signs and tags, barricades, and attendants. Safety signs must meet the requirements of ANSI Z535 Table 130.7(F). Barricades must be used in conjunction with safety signs and never by themselves. Any technique used must not increase the potential for LP Gas Industrial Equipment Company employee injury.

An audit must be performed every year to ensure the requirements in the written program are being performed by the LP Gas Industrial Equipment Company employees. The written program must be updated if auditing determines that employees are not following it or if another issue is identified with potential hazardous exposure.

NOISE EXPOSURE/HEARING CONSERVATION

Purpose

Conservation of hearing is achieved through preventative measures. To reduce occupational hearing loss, all employees, who work in potentially noisy areas, are provided hearing protection, training and annual hearing tests. OSHA's hearing conservation standard is covered in 29 CFR 1910.95. Engineering controls are applied to reduce noise from equipment and operations.

Management

- Use Engineering and Administrative controls to limit employee exposure
- Provide adequate hearing protection for employees
- Post signs and warnings for all high noise areas

- Conduct noise surveys annually or when new equipment is added
- Conduct annual hearing tests for all employees
- Conduct hearing conservation training for all new employees
- Conduct annual hearing conservation training for all employees

Employees

- Use company provided, approved hearing protection in designated high noise areas
- Request new hearing protection when needed
- Exercise proper care of issues hearing protection

Training

At time of hire and annually thereafter, all affected Employees must attend Hearing Conservation Training. The initial training is conducted as part of the New Hire Orientation Program by the Human Resource Department and consists of:

- Rules and procedures
- Where hearing protection is required
- How to use and care for hearing protectors
- How noise affects hearing and hearing loss

Engineering Controls

After it is determined that noise exposure above 85 dB (A) are present, engineering controls should be evaluated and implemented to reduce the noise exposure before administrative controls are initiated. Some examples of engineering controls include:

- Noise reducing baffles
- Compartmentalization
- Installing noise reducing gears
- Installing rubber pads under machinery

When new equipment or machinery is evaluated for purchase, the Safety Manager should be consulted to conduct an evaluation from a safety and health standpoint. One criteria of the evaluation should include the amount of noise the equipment will produce and how it will affect the overall noise exposure.

Administrative Controls

After engineering controls are evaluated for effectiveness or feasibility, administrative controls should be considered to reduce noise exposure. Administrative controls include restricting exposure time or using personal protective equipment (PPE).

Personal Protective Equipment, such as ear plugs or muffs, may be used to reduce the amount of noise exposure. Each plug or muff has a noise reductions factor (NR) as evaluated by ANSI Standards (S3.19 - 1974 or Z24.22 - 1957). For example, if a work area has an ambient noise exposure of 96 dB (A), the hearing protectors should be rated 6 NR or better to be effective.

If a threshold shift has occurred, use of hearing protection shall be re-evaluated and/or refitted and if necessary a medical evaluation may be required.

According to OSHA Regulations, each location with noise exposures of 85 to 89 dB (A) will provide hearing protectors for the Employee's optional use. Noise exposures at 90 dB
(A) or above require the mandatory use of hearing protection. Further, OSHA requires that a variety of hearing protectors be available for Employees to choose (both a variety of plug and muff type hearing protectors).

Types of Hearing Protectors

Hearing protection devices are the first line of defense against noise in environments where engineering controls have not reduced employee exposure to safe levels. Hearing protective devices can prevent significant hearing loss, but only if they are used properly.

The most popular hearing protection devices are earplugs which are inserted into the ear canal to provide a seal against the canal walls. Earmuffs enclose the entire external ears inside rigid cups. The inside of the muff cup is lined with acoustic foam and the perimeter of the cup is fitted with a cushion that seals against the head around the ear by the force of the headband.

Use of Hearing Protectors

Management, Supervision and Employees shall properly wear the prescribed hearing protectors while working in or traveling through any section of a Location that is designated a High Noise Area (excluding offices, break rooms, and rest facilities). The following rules will be enforced:

- Personal stereos, such as Walkman's, etc., will not be permitted in any operating area of company property.
- Hearing protectors, at least two types of plugs and one type of muffs, will be provided and maintained by Company
- Hearing protectors and replacements will be provided free of charge
- Hearing protectors will be properly worn at all times, except in offices, break rooms, and rest facilities.

Preformed earplugs and earmuffs should be washed periodically and stored in a clean area, and foam inserts should be discarded after each use. It is important to wash hands before handling pre-formed earplugs and foam inserts to prevent contaminants from being placed in the ear which may increase your risk of developing infections.

NITROGREN AWARENESS

Purpose

The purpose of this procedure is to advise employees in areas where nitrogen is being used and to supply on an awareness level basis about the properties and hazards of nitrogen, general guidelines and training requirements.

Scope

This procedure applies to LP GAS INDUSTRIAL EQUIPMENT CO. operations where employees whose work activities may involve working with or around nitrogen. When work is performed on a non-owned or operated site, the operator's program shall take precedence; however, this document covers LP GAS INDUSTRIAL EQUIPMENT CO. employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Responsibilities

Managers and Supervisors

- In coordination with the Safety Manager, develop and implement nitrogen awareness training.
- Ensure personnel are aware of work that has the potential of exposure to nitrogen.
- Identify possible locations where nitrogen in the workplace may be used.
- Inform the Safety Manager of upcoming work involving nitrogen, allowing the Safety Manager to provide any necessary monitoring or other required actions.
- Ensure employees comply with the nitrogen awareness requirements.

Safety Manager:

- Coordinate annual nitrogen awareness training activities.

Employees:

- Comply with the nitrogen awareness requirements and direct any questions or concerns to the Safety Manager.
- Attend required annual training.

Procedure

Hazards of Nitrogen

Nitrogen is an inert gas, which means that it does not react with other chemicals under most normal circumstances. Nitrogen is often used in industrial settings to displace other gases that are toxic, corrosive, reactive or prevent fire or explosion hazards, making processes safer. Using nitrogen to remove oxygen from process equipment decreases the chances of a fire or explosion, but it also can make the atmosphere in and around the equipment hazardous for humans to breathe.

Hazard Identification

- Oxygen-deficient atmospheres in confined spaces can be deadly in only a few breaths. An oxygen-deficient atmosphere rapidly overcomes the victim. There is no warning before being overcome.
- An oxygen-deficient atmosphere might exist outside a confined space opening.
- Entering oxygen-deficient atmospheres should never be attempted under any circumstances without training and proper air-supplied breathing equipment.
- Pre-job planning and walk downs with the entire work team should emphasize confined space entry restrictions, especially when unsecured confined space access points are in the work area.
- Confined space hazard warnings must be maintained at all times while the access opening is not secured.
- Pre-job walk downs should accurately identify all equipment where inert gas purging may be venting into the work area.
- Barriers and warnings should be maintained around open purge vents at all times during purging activities.
- Rescuers must strictly follow safe rescue procedures.

Pre-Job Planning for Nitrogen Related Work

Pre-job planning or a site assessment will be conducted prior to starting work and that the assessment will documented. Documented planning will be conducted for those operations involving potential nitrogen exposure and this includes anytime an active purge is being applied to a system in or around equipment associated with work. Some planning or assessment elements include:

- All proposed work requires a jobsite visit by the requestor and a unit operator to identify special precautions, equipment status, and personal safety equipment requirements.
- The conditions for marking a “nitrogen purge or inerted” (Yes/No/NA) status box.
- The permit must clearly identify all hazards and special personal protective equipment requirements.
- “Fresh Air” work restrictions apply to “Set up only” permits whenever an IDLH atmosphere is suspected or known to be present in the work area.
- The requirements to maintain posted warnings at all access points to confined space temporary openings.
- Appropriate barricades will be utilized if determined by the site assessment. As determined by the hazard assessment, nitrogen vent / purge points will be labeled and barricaded. Barricades will provide a safe zone of 3' in diameter or greater if determined by oxygen monitoring results. As determined by the

hazard assessment, nitrogen vent / purge points will be labeled and barricaded with a 3' diameter or as determined by oxygen monitoring (must be greater than 19.5% outside of the barrier.)

- Appropriate signage will be utilized and adhered to. Appropriate signage will include adequate warning by stating Danger, Inert Gas Present or Possible Oxygen Deficient Environment.

Safe Rescue Awareness

- The powerful human instinct to help someone in distress, especially a friend or co-worker, all too frequently results in multiple confined space incident victims.
- Workers suddenly involved in emergency activities must not allow emotions to override safe work procedures and training. Only qualified and trained personnel equipped with the necessary safety equipment should attempt a rescue.

Cylinder Handling and Storage

- All nitrogen cylinders shall contain an identifying label. Nitrogen cylinders shall contain an identifying label UN1066. See below as an example:
- Proper handling and storage of nitrogen cylinders includes the requirements that the cylinder(s) shall be upright, properly supported and stored outdoors or in a well-ventilated area. Cylinder(s) shall be chained or otherwise secured to prevent movement.
- Data sheets must be available for nitrogen.
- A protective cap must be in place when the cylinder is not in use.
- The correct size and type of trolley or cart should always be used for the safe transportation of gas cylinders.
- Nitrogen must not be used to power pneumatic tools or blowers. Nitrogen must not be used to power pneumatic tools or blowers except when they are used in an inert atmosphere.

Training

Employees will be trained in nitrogen hazards. LP GAS INDUSTRIAL EQUIPMENT CO. shall provide training for all affected employees including any LP GAS INDUSTRIAL EQUIPMENT CO. employee working with or near nitrogen and the training shall emphasize:

- An oxygen-deficient atmosphere rapidly overcomes the victim.
- There is no warning before being overcome.
- An oxygen-deficient atmosphere might exist outside a confined space opening.
- Rescuers must strictly follow safe rescue procedures.

Documentation of training - Nitrogen awareness training shall be documented including dates of training, location of training, employee name and trainer name.

Training records shall be provided upon request all materials relating to the employee information and training program to regulatory agencies.

NOISE AWARENESS AND HEARING CONSERVATION PROGRAM

Introduction:

Evidence is well established that worker exposure to noise of sufficient intensity and duration can result in hearing damage. Noise-induced hearing loss rarely results from just one exposure; it can progress unnoticed over a period

of years. Initial noise-induced hearing loss occurs at the higher frequencies where the consonant portion of speech is found, making communications difficult.

Engineering controls such as mufflers on heavy equipment exhausts or on air release valves are required where possible. If engineering solutions cannot reduce the noise, administrative controls such as increasing the distance between the noise source and the worker or rotation of jobs between workers in the high noise area should be used if possible. Noise exposure is often not constant and is difficult to control with either engineering or administrative solutions. Hearing protection is often the only choice available.

Employees will be given the opportunity to select hearing protective devices from a variety of suitable ones provided by the Safety and Health Manager. In all cases the chosen hearing protectors shall have a Noise Reduction Ratio (NRR) high enough to reduce the noise at the ear drum to 85 dB(A) or lower. Audiometric testing will be provided by LP Gas Industrial Equipment Co. physician to all employees with exposure to noise levels of 80 dB(A) or greater.

Area noise monitoring will be conducted by the Safety and Health Manager using a sound level meter to determine the need for personnel monitoring or engineering controls. If any work areas register levels of 80 dB(A) or greater, personnel monitoring will be conducted. Personnel monitoring is accomplished by using noise dosimeters which are worn by employees for their full work shift. The cumulative noise dose for the employee is then read at the end of their work shift.

Policy:
It is the policy of LP Gas Industrial Equipment Co.to provide employees with a safe and healthful working environment. This is accomplished by utilizing facilities and equipment that have all feasible safeguards incorporated into their design. When effective engineering controls are not feasible, or when they are being initiated, administrative controls will be used when and where possible followed by the use of personal protective equipment.

LP Gas Industrial Equipment Co. shall address and has instituted a Noise Awareness training program for employees before initial assignment and on an annual basis. This training program is designed for all employees who are exposed to a noise action level or work in high noise areas. The training shall be repeated annually for each employee.

The primary goal of LP Gas Industrial Equipment Co. Hearing Conservation Program is to reduce, and eventually eliminate hearing loss due to workplace noise exposures. The program includes the following elements:

a. Work environments will be surveyed to identify potentially hazardous noise levels and personnel at risk.
b. Environments that contain or equipment that produces potentially hazardous noise should, wherever it is technologically and economically feasible, be modified to reduce the noise level to acceptable levels.
c. Where engineering controls are not feasible, administrative controls and/or the use of hearing protective devices will be employed.
d. Periodic hearing testing will be conducted to monitor the effectiveness of the hearing conservation program. Early detection of temporary threshold shifts will allow further protective action to be taken before permanent hearing loss occurs.
e. Education is vital to the overall success of a hearing conservation program. An understanding by employees of the permanent nature of noise-induced hearing loss, LP Gas Industrial Equipment Co. hearing conservation program, and the employee's responsibilities under the program are all essential for program effectiveness.

Hearing Conservation Program

LP Gas Industrial Equipment Co. shall administer a continuing, effective hearing conservation program, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent.

Monitoring Program.
When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, LP Gas Industrial Equipment Co. shall develop and implement a monitoring program.

The sampling strategy shall be designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.
Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, LP Gas Industrial Equipment Co. shall use representative personal sampling to comply with the monitoring requirements of this paragraph unless LP Gas Industrial Equipment Co. can show that area sampling produces equivalent results.

All continuous, intermittent and impulsive sound levels from 85 decibels to 130 decibels shall be integrated into the noise measurements.

Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.

Responsibilities

Safety and Health Manager-
The Safety and Health Manager is responsible for developing, implementing, and administering LP Gas Industrial Equipment Co. Hearing Conservation Program. Additional responsibilities include:

1. Identification of work areas and equipment within LP Gas Industrial Equipment Co. facilities where noise levels equal or exceed 80 dBA.
2. Identification, through personnel monitoring, of LP Gas Industrial Equipment Co. employees whose noise exposure level equals or exceeds an 8-hour TWA (Time-Weighted Average) of 80 dBA. Notification of employee exposure measurements is sent to the Safety and Health Manager to be included in employees' medical files.
3. Annual remonitoring of identified at-risk employees.
4. Resurvey of work areas and equipment where noise levels exceed 80 dBA every 2 years.
5. Training of employees in the need for, proper use and care of hearing protection devices.
6. Identification of noise control measures (including engineering and administrative controls) and recommendations.

The Safety and Health Manager is also responsible for coordinating and scheduling health and safety training courses and seminars. The Safety and Health Manager also maintains documentation of the training courses presented in accordance with the Safety Program requirements.

Supervisors

It is the responsibility of Supervisors to ensure that all of their employees exposed to noise levels equal to or greater than 80 dBA have access to appropriate hearing protective devices in the work area. Supervisors are also responsible for enforcing the use of hearing protective devices and engineering and administrative controls in designated noise hazardous areas.

Employees

Employees are responsible for wearing and maintaining hearing protective devices as instructed. Employees exposed to excessive levels of noise must also participate in annual training programs and the medical surveillance program which includes audiometric testing.

NOISE EVALUATION AND SURVEILLANCE PROCEDURES

Identification of Hazardous Noise Areas-
The Safety and Health Manager will identify work areas within LP Gas Industrial Equipment Co. facilities where noise levels equal or exceed 80 dBA. Records shall be maintained by the Safety and Health Manager and updated at least every two years to determine if any alteration in noise levels has occurred. Those areas where the noise levels are below 80 dBA will not be routinely monitored. Identification of hazardous noise areas and equipment and any subsequent noise monitoring will be conducted by the Safety and Health Manager.
Signs will be posted at the entrance to any work area where noise levels exceed 80 dBA, requiring anyone entering the area to wear proper hearing protection. Personnel who work in these areas shall have hearing protection supplied to them, shall be instructed in its proper use, and be required to wear this equipment when in these identified areas. It is the responsibility of the area supervisor to ensure that these precautions are maintained. Hearing protection will be worn by all employees working in areas exposed to an 8-hour time-weighted average of 85 decibels or greater. Employees will wear hearing protection in signed areas while on an owner client facility.

Equipment which produces noise levels greater than 85 dBA, or 120 dB peak sound pressure levels shall also be appropriately labeled.

Noise Measurements and Exposure Assessments
In order to effectively control noise it is necessary that the noise be accurately measured according to standard procedures and that the measurements be properly evaluated against accepted criteria. All noise monitoring will be conducted in accordance with established standard operating procedures.

The monitoring of employees for noise exposure is made up of two parts, area and personal monitoring. Area measurements are generally obtained first. If noise levels are at or above 85 dBA, personal monitoring using dosimeters is then performed. Sample data sheets will be used to record monitoring data for both area and personal noise monitoring results.

Area Measurements
In an area survey, measurements of environmental noise levels are recorded using a sound level meter to identify work areas where employees' exposures may be above hazardous levels, and where more thorough exposure monitoring may be needed. Area monitoring is conducted using a calibrated sound level meter set to the A scale, slow response. Within the area of interest, several different locations will be measured. Typical measurement locations would include:

- In the hearing zone at the employee's normal work location.
- Next to the noise source(s).
- At the entrance(s) to the work area.
- At other locations within the area where the employee might spend time working.

A rough sketch of the area will be included with the results showing the locations where the noise readings were obtained.

If the noise levels are below 80 dBA on a time-weighted average basis in the area, no further routine monitoring will be required for that area. Should any of the noise measurements equal or exceed 80 dBA, records shall be maintained as to the noise levels recorded, where they were taken, and the source(s) of the noise. These records shall be updated at least once every two years to determine if any changes have occurred that would warrant remonitoring of exposed personnel. If any of the measurements equal or exceed a noise level of 80 dBA, employees who work in or near the high noise area or equipment shall have their noise exposure determined through personnel monitoring using dosimeters.

Personnel Monitoring

Determination of the noise exposure level will be accomplished using calibrated noise dosimeters. Each employee to be monitored will have a dosimeter placed on him/her at the beginning of his/her normal work shift with the microphone placed in the "hearing zone". The dosimeter will be worn for the full duration of the work shift while the employee performs his/her normal work routine. At the end of the work shift, the dosimeter will be removed and information printed out as soon as possible. Background information will be collected from each employee detailing job description, unusual job activities, etc., for the time period sampled. Those employees whose noise exposure equals or exceeds 80 dBA on an 8-hour TWA (Time-Weighted Average) will be referred to the Safety and Health Manager for inclusion in the Hearing Conservation Medical Surveillance Program.

Remonitoring of Hazardous Noise Areas

All areas where noise levels equal or exceed 85 dBA shall be remonitored at least every two years. Employees who work for extended periods of time (>2 hours) in the high noise areas and where their 8-hour TWA (Time-Weighted Average) equals or exceeds 85 dBA will be monitored every year to determine their personal noise exposure. Whenever an employee exhibits a standard threshold shift, as determined by the Safety and Health Manager, the employee's work place shall be remonitored to identify and ameliorate the cause.

Remonitoring Due to Changes

Any area with noise levels that equal or exceed 85 dBA shall also be remonitored whenever a change in production process, equipment, or controls increase the noise exposure such that additional employees are exposed to noise levels at or above 85 dBA on a time-weighted average basis. Areas where the noise levels have dropped below 85 dBA due to alterations in equipment, controls or process changes shall be eliminated from the monitoring program.

NOISE CONTROL METHODS

Engineering and Administrative Controls

The primary means of reducing or eliminating personnel exposure to hazardous noise is through the application of engineering controls. Engineering controls are defined as any modification or replacement of equipment, or related physical change at the noise source or along the transmission path that reduces the noise level at the employee's ear. Engineering controls such as mufflers on heavy equipment exhausts or on air release valves are required where possible.

Administrative controls are defined as changes in the work schedule or operations which reduce noise exposure. If engineering solutions cannot reduce the noise, administrative controls such as increasing the distance between the noise source and the worker or rotation of jobs between workers in the high noise area should be used if possible.

The use of engineering and administrative controls should reduce noise exposure to the point where the hazard to hearing is eliminated or at least more manageable.

Personal Protective Equipment

LP Gas Industrial Equipment Co. shall make hearing protectors available to all employees exposed to an 8-hour time-weighted average of 85 decibels or greater at no cost to the employees. Hearing protectors shall be replaced as necessary. Employees shall be properly trained in the use, care and fitting of protectors.

Hearing protective devices (ear plugs, muffs, etc.) shall be the permanent solution only when engineering or administrative controls are considered to be infeasible or cost prohibitive. Hearing protective devices are defined as any device that can be worn to reduce the level of sound entering the ear. Hearing protective devices shall be worn by all personnel when they must enter or work in an area where the operations generate noise levels of:

- Greater than 85 dBA sound levels, or
- 120 dB peak sound pressure level or greater

Types of Hearing Protective Devices Hearing protective devices include the following:

a. Insert Type Earplugs

A device designed to provide an air-tight seal with the ear canal. There are three types of insert earplugs – premolded, formable, and custom earplugs.

1. Premolded Earplugs

Premolded earplugs are pliable devices of fixed proportions. Two standard styles, single flange and triple flange, come in various sizes, and will fit most people. Personnel responsible for fitting and dispensing earplugs will train users on proper insertion, wear, and care. While premolded earplugs are reusable, they may deteriorate and should be replaced periodically.

2. Formable

Formable earplugs come in just one size. Some are made of material which, after being compressed and inserted, expands to form a seal in the ear canal. When properly inserted, they provide noise attenuation values that are similar to those from correctly fitted premolded earplugs.

Individual units may procure approved formable earplugs. Supervisors must instruct users in the proper use of these earplugs as part of the annual education program.

Each earplug must be held in place while it expands enough to remain firmly seated. A set of earplugs with a cord attached is available. These earplugs may be washed and therefore are reusable, but will have to be replaced after two or three weeks or when they no longer form an airtight seal when properly inserted.

3.Custom Molded Earplugs

A small percentage of the population cannot be fitted with standard premolded or formable earplugs. Custom earplugs can be made to fit the exact size and shape of the individual's ear canal. Individuals needing custom earplugs will be referred to an audiologist.

b. Earmuffs

Earmuffs are devices worn around the ear to reduce the level of noise that reaches the ear. Their effectiveness depends on an air tight seal between the cushion and the head.

Selection of Hearing Protective Devices

Employees will be given the opportunity to select hearing protective devices from a variety of suitable ones provided by LP Gas Industrial Equipment Co. Office of Health and Safety. In all cases the chosen hearing protectors shall have a Noise Reduction Ratio (NRR) high enough to reduce the noise at the ear drum to 85 dBA or lower.

Issuance of Hearing Protective Devices

"Hearing Protector Attenuation."

LP Gas Industrial Equipment Co. shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. Please refer to OSHA Regulations 29 CFR 1910.95 Appendix B: "Methods for Estimating the Adequacy of Hearing Protection Attenuation" for evaluation methods that are available. Attenuation rate can be determined by the equation: NRR – 7 = Attenuation Rate.

The issuance of hearing protective devices is handled through the Safety and Health Manager. The Safety and Health Manager will issue and fit the initial hearing protective devices (foam inserts, disposables). Instruction on the proper use and care of earplugs and earmuffs will be provided whenever HPDs (hearing protective devices) are dispensed. Personnel requiring earmuffs in addition to earplugs will be informed of this requirement and educated on the importance of using proper hearing protection. The Safety and Health Manager will dispense ear muffs when necessary and will maintain a supply of disposable earplugs.

Use of Hearing Protective Devices

a. Always use and maintain HPDs as originally intended and in accordance with instructions provided.
b. Earmuff performance may be degraded by anything that compromises the cushion-to-circumaural flesh seal. This includes other pieces of personal protective equipment such as eyewear, masks, faceshields, and helmets.

Maintenance of Hearing Protective Devices

a. Reusable earplugs, such as the triple flange or formable devices should be washed in lukewarm water using hand soap, rinsed in clean water, and dried thoroughly before use. Wet or damp earplugs should not be placed in their containers. Cleaning should be done as needed.
b. Earmuff cushions should be kept clean. The plastic or foam cushions may be cleaned in the same way as earplugs, but the inside of the muff should not get wet. When not n use, ear muffs should be placed in open air to allow moisture that may have been absorbed into the cups to evaporate.

Hearing Protection Performance Information

The maximum of sound attenuation one gets when wearing hearing protection devices is limited by human body and bone conduction mechanisms. Even though a particular device may provide outstanding values of noise attenuation the actual noise reductions may be less because of the noise surrounding the head and body bypasses the hearing protector and is transmitted through tissue and bone pathways to the inner ear.

The term “double hearing protection” is misleading. The attenuation provided from any combination earplug and earmuff is not equal to the sum of their individual attenuation values.

MEDICAL SURVEILLANCE

Notification

Upon identification of employees whose 8-hour TWA (Time-Weighted Average) equals or exceeds 85 dBA, the Safety and Health Manager will recommend to the employee’s Supervisor, in writing, of the need to enroll certain employee(s) in the Hearing Conservation Medical Surveillance Program. Information supplied to the Safety and Health Manager will include the employee(s) name, supervisor’s name, telephone number, and the noise levels recorded in the employee’s work area, including dosimetry data.

It will be the responsibility of the Supervisor to enroll his/her employee in the Hearing Conservation Medical Surveillance Program.

In work locations where either through administrative or engineering controls, noise levels are found to have fallen such that the employee’s 8-hour TWA is below 80 dBA, the Safety and Health Manager shall notify the employee’s Supervisor, by memo, that the employees working in that area are no longer required to be enrolled in the Hearing Conservation Program. The final decision as to an employee’s enrollment status will be left with Pagoda Electrical, Inc.. Physician.

The results of area and personal remonitoring shall be forwarded to the Clinic upon completion of the noise surveys.

Any personnel experiencing difficulty in wearing assigned hearing protection (i.e., irritation of the canals, pain) will be advised to immediately report this to their supervisor and make arrangements to go to LP Gas Industrial Equipment Co. Physician for evaluation as soon as possible.

Audiometric Testing

LP Gas Industrial Equipment Co. Physician has the responsibility for administering the Audiometric Testing Program portion of LP Gas Industrial Equipment Co. Hearing Conservation Program. The object of the audiometric testing program is to identify workers who are beginning to lose their hearing and to intervene before the hearing loss becomes worse. Audiometric testing will be provided to all employees with exposure to noise levels of 85 dBA or greater. Annual retesting will be performed for all personnel enrolled in the Hearing Conservation Medical Surveillance Program.

Baseline Audiogram

Within 6 months of an employee's first exposure at or above the action level, LP Gas Industrial Equipment Co. shall establish a valid baseline audiogram against which subsequent audiograms can be compared.

"Mobile test van exception." Where mobile test vans are used to meet the audiometric testing obligation, LP Gas Industrial Equipment Co. shall obtain a valid baseline audiogram within 1 year of an employee's first exposure at or above the action level. Where baseline audiograms are obtained more than 6 months after the employee's first exposure at or above the action level, employees shall wear hearing protectors for any period exceeding six months after first exposure until the baseline audiogram is obtained.

Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise.

LP Gas Industrial Equipment Co. shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

Annual audiogram.

At least annually after obtaining the baseline audiogram, LP Gas Industrial Equipment Co. shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.

Evaluation of audiogram

Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred.

If the annual audiogram shows that an employee has suffered a standard threshold shift, LP Gas Industrial Equipment Co. may obtain a retest within 30 days and consider the results of the retest as the annual audiogram. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift has occurred, the employee shall be informed of this fact in writing, within 21 days of the determination.

LP Gas Industrial Equipment Co. shall ensure that the following steps are taken when a standard threshold shift occurs:

- Employees not using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them.
- Employees already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.

- The employee shall be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if LP Gas Industrial Equipment Co. suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.
- The employee is informed of the need for an otological examination if a medical pathology of the ear that is unrelated to the use of hearing protectors is suspected.

TRAINING

The training and education program will provide information about the adverse effects of noise and how to prevent noise-induced hearing loss. At a minimum, all training will cover the following topics:

a. Noise-induced hearing loss;

b. Recognizing hazardous noise;

c. Symptoms of overexposure to hazardous noise;

d. Hearing protection devices – advantages and limitations.

e. Selection, fitting, use, and maintenance of HPDs.

f. Explanation of noise measurement procedures.

g. Hearing conservation program requirements.

Employees will also be provided with copies of the OSHA noise standard (29 CFR 1910.95) and other handouts describing LP Gas Industrial Equipment Co. Hearing Conservation Program.
LP Gas Industrial Equipment Co. employees shall be encouraged to use hearing protective devices when they are exposed to hazardous noise during activities at home; e.g., from lawn mowers, chain saws, etc.

Noise awareness training shall be updated to be consistent with changes in personal protective equipment (PPE) and work processes and will include instruction, proper techniques of wearing and on the proper use and fit of hearing protectors.

All personnel identified for inclusion in the hearing conservation program should receive a minimum of one hour of initial instruction in the requirements of the program. Ideally this will be done when hearing protection is dispensed. Appropriate refresher training annually thereafter and will be provided by the immediate supervisor. Supervisors will be provided annual training by the Office of Health and Safety.

Supervisors must contact the OHS Training Activity to schedule training for new personnel assigned to work in noisy environments and for retraining of current personnel.

LP Gas Industrial Equipment Co. shall train each employee who is exposed to noise at or above an 8-hour time weighted average of 85 decibels in accordance with the requirements of this section. LP Gas Industrial Equipment Co. shall institute a training program and ensure employee participation in the program.

The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes.

LP Gas Industrial Equipment Co. shall ensure that each employee is informed of the following:

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

Access to information and training materials.

LP Gas Industrial Equipment Co. shall make available to affected employees or their representatives copies of the OSHA standard 29 CFR 1910.95 (l) (1, 2, 3) and shall also post a copy in the workplace.

LP Gas Industrial Equipment Co. shall provide to affected employees any informational materials pertaining to the OSHA standard that are supplied to LP Gas Industrial Equipment Co.by the Assistant Secretary.

LP Gas Industrial Equipment Co. shall provide, upon request, all materials related to Pagoda Electrical, Inc.'s training and education program pertaining to the OSHA standard to the Assistant Secretary and the Director.

PROGRAM EVALUATION

Periodic program evaluations will be conducted to assess compliance with federal and state regulations and LP Gas Industrial Equipment Co. Program requirements. Both the monitoring and audiometric testing portions of LP Gas Industrial Equipment Co. Hearing Conservation Program will be reviewed annually to assure its quality and effectiveness.

An evaluation of the Program, including wearer acceptance, appraisal of protection afforded, and field audits of hearing protection use and record keeping will be conducted at least annually. Items to be considered include:

a. Standard operating procedures

b. Training records and course content for supervisors and employees.

c. Maintenance of HPDs (hearing protection devices)

d. Field audits of HPD use

e. Review of recorded threshold shifts on OSHA log.

The findings of LP Gas Industrial Equipment Co. Hearing Conservation Program evaluation will be documented, and this documentation will list plans to correct faults in the program and set target dates for the implementation of the plans.

RECORDKEEPING

All non-medical records (ex., work area and equipment surveys) will be maintained for a period of five years. Results of hearing tests and medical evaluations performed for hearing conservation purposes as well as noise exposure documentation shall be recorded and shall be a permanent part of an employee’s health record.
All personnel who routinely work in designated hazardous noise areas shall be identified and a current roster of such personnel shall be maintained and by the Safety and Health Manager, and updated periodically.

"Transfer of records." If LP Gas Industrial Equipment Co. ceases to do business, LP Gas Industrial Equipment Co. shall transfer to the successor employer all records required to be maintained by this section, and the successor employer shall retain them for the remainder of the period prescribed:

"Record retention." The successor employer shall retain records required in this paragraph for at least the following periods.

- o Noise exposure measurement records shall be retained for two years.
- o Audiometric test records shall be retained for the duration of the affected employee's employment.

NOISE

Supervisors and exposed workers must become aware of and understand about the adverse effects of noise and how to prevent noise-induced hearing loss. People exposed to hazardous noise must take positive action, if progressive permanent hearing loss is to be prevented. Each exposed worker and supervisor should know the following.

A. Noise exposure may result in permanent damage to the auditory system and there is no medical or surgical treatment for this type of hearing loss. Though the use of a hearing aid may provide some benefit, normal hearing will not be restored. Many people don't realize loud sounds can cause hearing loss. Furthermore, in its initial stages, the person may not notice a problem since noise-induced hearing loss is invisible, painless, and occurs in the high frequencies. It is dangerous to ignore the temporary characteristics of noise-induced hearing loss (such as ringing or buzzing in the ears, excessive fatigue, etc.).

B. Each person should know how to recognize hazardous noise even if a noise survey has not been conducted an/or warning signs posted. Recognizing and understanding the adverse effects of off-duty noise exposures is also important. The best rule to follow is: "If you have to shout at arms length (approximately three feet) to talk face-to-face, you are probably being exposed to hazardous levels of noise."

C. Preventing noise-induced hearing loss is accomplished by reducing both the time and intensity of exposure. Reducing exposure time is accomplished by avoiding any unnecessary exposure to loud sound. Reducing intensity is usually accomplished by wearing personal hearing protection. LP Gas Industrial Equipment Co. requires hearing protection to be worn by employees. Each person must be able to properly wear and care for the particular type of hearing protection selected. Speech communication is difficult in high intensity noise. However, most people don't realize it's easier to understand speech if hearing protection is worn in a hazardous noise environment. Hearing protection reduces the noise and the level of speech, resulting in a more favorable listening level. Hearing protection reduces the intensity of frequencies above the speech range; thus, reducing the noise and accentuating speech. People who claim wearing hearing protection makes it difficult to hear speech are probably in noise levels less than 85 dBA or have already developed a hearing loss.

D. Each person must know how to tell if they have been overexposed to loud sound. Overexposure may occur even while wearing hearing protection. Earplugs and/or earmuffs alone may not be enough protection. Each time a temporary threshold shift (TSS) occurs, a certain degree of permanent loss results. The recognizable symptoms of overexposure are described as "dullness in hearing or ringing in the ears."

NON-DOT DRUG & ALCOHOL POLICY

LP Gas Industrial Equipment Co. will require all applicants it intends to hire for any position to be tested for the use of controlled substances as a pre-qualification condition. Testing will be given before initial assignment.

Drug and alcohol testing will be administered at random times. LP Gas Industrial Equipment Co. employees will be chosen through an unbiased selection process.

If a company official or competent person has determined that there is reasonable cause or suspicion that an individual is performing work under the influence, then that individual will be required to submit to a drug and alcohol test.

All LP Gas Industrial Equipment Co. employees involved in a work-related incident will be required to submit to a drug and alcohol test.

Any LP Gas Industrial Equipment Co. employee that receives unacceptable drug and alcohol test results will not be allowed to work on a Client/Host site or facility.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Purpose

The Company provides all Employees with required PPE to suit the task and known hazards. This Chapter covers the requirements for Personal Protective Equipment with the exception of PPE used for hearing conservation and respiratory protection or PPE required for hazardous material response to spills or releases, which are covered under separate programs.

General Policy

Engineering controls shall be the primary methods used to eliminate or minimize hazard exposure in the workplace. When such controls are not practical or applicable, personal protective equipment shall be employed to reduce or eliminate personnel exposure to hazards. Personal protective equipment (PPE) will be provided, used, and maintained when it has been determined that its use is required and that such use will lessen the likelihood of occupational injuries and/or illnesses.

Management

- Conduct hazard assessments to identify specific PPE for specific tasks
    - Train employees in the selection, use, inspection, storage, cleaning, and limitations of specific PPE

Supervisors:

- Monitor use of PPE
- Provide replacement PPE when needed
- Identify any new hazards that would require the use of PPE

Employees:

- Properly use and care for assigned PPE
- Immediately inform supervisor if PPE is damaged or not effective

General Rules

Design:
All personal protective clothing and equipment will be of safe design and construction for the work to be performed. Only those items of protective clothing and equipment that meet National Institute of Occupational Safety and Health (NIOSH) or American National Standards Institute (ANSI) standards will be procured or accepted for use.

Hazard assessment and equipment selection

Hazard analysis procedures shall be used to assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the following actions will be taken:

- Select, and have each affected Employee use, the proper PPE
- Communicate selection decisions to each affected Employee
- Select PPE that properly fits each affected employee.

Defective and damaged equipment

Defective or damaged personal protective equipment shall not be used.

Training

All Employees who are required to use PPE shall be trained to know at least the following:

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, remove, adjust, and wear PPE;

- The limitations of the PPE
- The proper care, maintenance, useful life and disposal of the PPE.

Each affected Employee shall demonstrate an understanding of the training and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

Certification of training for PPE is required by OSHA and shall be accomplished by using the Job Safety Checklist to verify that each affected Employee has received and understood the required PPE training.

PPE Selection

Controlling hazards:
PPE devices alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing practices.

Selection guidelines:
The general procedure for selection of protective equipment is to:

A. Become familiar with the potential hazards and the type of protective equipment that is available, and what it can do; i.e., splash protection, impact protection, etc.
B. Compare the hazards associated with the environment; i.e., impact velocities, masses, projectile shape, radiation intensities, with the capabilities of the available protective equipment;
C. Select the protective equipment which ensures a level of protection greater than the minimum required to protect employees from the hazards
D. Fit the user with the protective device and give instructions on care and use of the PPE. It is very important that end users be made aware of all warning labels for and limitations of their PPE.

Fitting the Device:
Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the device is more likely if it fits the wearer comfortably. Protective devices are generally available in a variety of sizes.
Care should be taken to ensure that the right size is selected.

Devices with adjustable features:
Adjustments should be made on an individual basis for a comfortable fit that will maintain the protective device in the proper position. Particular care should be taken in fitting devices for eye protection against dust and chemical splash to ensure that the devices are sealed to the face. In addition, proper fitting of helmets is important to ensure that it will not fall off during work operations. In some cases a chin strap may be necessary to keep the helmet on an employee's head. (Chin straps should break at a reasonably low force, however, so as to prevent a strangulation hazard). Where manufacturer's instructions are available, they should be followed carefully.

Eye and Face Protection:
The majority of occupational eye injuries can be prevented by the use of suitable/approved safety spectacles, goggles, or shields. Approved eye and face protection shall be worn when there is a reasonable possibility of personal injury.

- Each employee shall use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.
- Each employee shall use eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors are acceptable.
- Each employee who wears prescription lenses while engaged in operations that involve eye hazards shall wear eye protection that incorporates the prescription in its design, or shall wear eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.
- Eye and face PPE shall be distinctly marked to facilitate identification of the manufacturer.
- Each employee shall use equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation.

Typical hazards that can cause eye and face injury are:

- Splashes of toxic or corrosive chemicals, hot liquids, and molten metals;
- Flying objects, such as chips of wood, metal, and stone dust;
- Fumes, gases, and mists of toxic or corrosive chemicals; and
- Aerosols of biological substances.

Prevention of eye accidents requires that all persons who may be in eye hazard areas wear protective eyewear. This includes employees, visitors, contractors, or others passing through an identified eye hazardous area. To provide protection for these personnel, activities shall procure a sufficient quantity of heavy duty goggles and/or plastic eye 110 protectors which afford the maximum amount of protection possible. If these personnel wear personal glasses, they shall be provided with a suitable eye protector to wear over them.

Eye / Face Protection Specifications:

Eye and face protectors procured, issued to, and used by employees, contractors and visitors must conform to the following design and performance standards:

A) Provide adequate protection against the particular hazards for which they are designed

B) Fit properly and offer the least possible resistance to movement and cause minimal discomfort while in use.

C) Be durable

D) Be easily cleaned or disinfected for or by the wearer

E) Be clearly marked to identify the manufacturer

F) Persons who require corrective lenses for normal vision, and who are required to wear eye protection, must wear goggles or spectacles of one of the following types:

1) Spectacles with protective lenses which provide optical correction.

2) Goggles that can be worn over spectacles without disturbing the adjustment of the spectacles.

3) Goggles that incorporate corrective lenses mounted behind the protective lenses.

Eye & Face Protector Use:

Safety Spectacles - Protective eye glasses are made with safety frames, tempered glass or plastic lenses, temples and side shields which provide eye protection from moderate impact and particles encountered in job tasks such as carpentry, woodworking, grinding, scaling, etc.

Single Lens Goggles - Vinyl framed goggles of soft pliable body design provide adequate eye protection from many hazards. These goggles are available with clear or tinted lenses, perforated, port vented, or non-vented frames. Single lens goggles provide similar protection to spectacles and may be worn in combination with spectacles or corrective lenses to insure protection along with proper vision.

Welders/Chippers Goggles - These goggles are available in rigid and soft frames to accommodate single or two eye piece lenses.

1) Welders goggles provide protection from sparking, scaling or splashing metals and harmful light rays. Lenses are impact resistant and are available in graduated shades of filtration.

2) Chippers/grinders goggles provide eye protection from flying particles. The dual protective eye cups house impact resistant clear lenses with individual cover plates.

Face Shields - These normally consist of an adjustable headgear and face shield of tinted/transparent acetate or polycarbonate materials, or wire screen. Face shields are available in various sizes, tensile strength, impact/heat resistance and light ray filtering capacity. Face shields will be used in operations when the entire face needs protection and should be worn to protect eyes and face against flying particles, metal sparks, and chemical/ biological splash.

Welding Shields - These shield assemblies consist of vulcanized fiber or glass fiber body, a ratchet/button type adjustable headgear or cap attachment and a filter and cover plate holder.

These shields will be provided to protect workers' eyes and face from infrared or radiant light burns, flying sparks, metal spatter and slag chips encountered during welding, brazing, soldering, resistance welding, bare or shielded electric arc welding and oxyacetylene welding and cutting operations.

Filter Lenses for Protection Against Radiant Energy			
Operations	Electrode Size 1/32 in	Arc Current	Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11112
Torch brazing			3
Torch soldering			2
Note: as a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxy fuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.			

Selection chart guidelines for eye and face protection		
The following chart provides general guidance for the proper selection of eye and face protection to protect against hazards associated with the listed hazard "source" operations.		
Source	Hazard	Protection
IMPACT - Chipping, grinding machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips, particles, sand, dirt, etc.	Spectacles with side protection, goggles, face shield For severe exposure, use face shield
HEAT-Furnace operation and arc welding	Hot sparks	Faceshields, spectacles with side. For severe exposure use faceshield.
CHEMICALS-Acid and chemical handling, degreasing, plating	Splash	Goggles, eyecup and cover types. For severe exposure, use face shield.
DUST - Woodworking, buffing, general buffing, general dusty conditions.	Nuisance dust	Goggles, eye cup and cover type

Head Protection

Hats and caps have been designed and manufactured to provide workers protection from impact, heat, electrical and fire hazards. These protectors consist of the shell and the suspension combined as a protective system. Safety hats and caps will be of nonconductive, fire and water resistant materials. Bump caps or skull guards are constructed of lightweight materials and are designed to provide minimal protection against hazards when working in congested areas.

Head protection will be furnished to, and used by, all employees and contractors engaged in construction and other miscellaneous work in head-hazard areas. Head protection will also be required to be worn by engineers, inspectors, and visitors at construction sites.
Bump caps/skull guards will be issued to and worn for protection against scalp lacerations from contact with sharp objects. They will not be worn as substitutes for safety caps/hats because they do not afford protection from high impact forces or penetration by falling objects.

Selection guidelines for head protection:
All head protection is designed to provide protection from impact and penetration hazards caused by falling objects. Head protection is also available which provides protection from electric shock and burn. When selecting head protection, knowledge of potential electrical hazards is important. Class A helmets, in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors (they are proof tested to 2,200 volts). Class B helmets, in addition to impact and penetration resistance, provide electrical protection from high-voltage conductors (they are proof tested to 20,000 volts). Class C helmets provide impact and penetration resistance (they are usually made of aluminum which conducts electricity), and should not be used around electrical hazards.

Where falling object hazards are present, helmets must be worn. Some examples include: working below other workers who are using tools and materials which could fall; working around or under conveyor belts which are carrying parts or materials; working below machinery or processes which might cause material or objects to fall; and working on exposed energized conductors.

Foot Protection

General requirements:
Each affected employee shall wear protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where employee's feet are exposed to electrical hazards.

Selection guidelines for foot protection:
Safety shoes and boots provide both impact and compression protection. Where necessary, safety shoes can be obtained which provide puncture protection. In some work situations, metatarsal protection should be provided, and in other special situations electrical conductive or insulating safety shoes would be appropriate. Safety shoes or boots with impact protection would be required for carrying or handling materials such as packages, objects, parts or heavy tools, which could be dropped; and, for other activities where objects might fall onto the feet. Safety shoes or boots with compression protection would be required for work activities involving skid trucks (manual material handling carts) around bulk rolls (such as paper rolls) and around heavy pipes, all of which could potentially roll over an employee's feet. Safety shoes or boots with puncture protection would be required where sharp objects such as nails, wire, tacks, screws, large staples, scrap metal etc., could be stepped on by employees causing a foot injury.

Hand Protection

General Requirements:

Hand protection is required when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

Skin contact is a potential source of exposure to toxic materials; it is important that the proper steps be taken to prevent such contact. Gloves should be selected on the basis of the material being handled, the particular hazard involved, and their suitability for the operation being conducted. One type of glove will not work in all situations.

Most accidents involving hands and arms can be classified under four main hazard categories: chemicals, abrasions, cutting, and heat. There are gloves available that can protect workers from any of these individual hazards or combination of hazards.

Gloves should be replaced periodically, depending on frequency of use and permeability to the substance(s) handled. Gloves overtly contaminated should be rinsed and then carefully removed after use.

Gloves should also be worn whenever it is necessary to handle rough or sharp-edged objects, and very hot or very cold materials. The types of glove materials to be used in these situations include leather, welder's gloves, aluminum-backed gloves, and other types of insulated glove materials.

Careful attention must be given to protecting your hands when working with tools and machinery. Power tools and machinery must have guards installed or incorporated into their design that prevent the hands from contacting the point of operation, power train, or other moving parts. To protect the hands from injury due to contact with moving parts, it is important to:

* Ensure that guards are always in place and used.
* Always lock out machines or tools and disconnect the power before making repairs.
* Treat a machine without a guard as inoperative; and
* Do not wear gloves around moving machinery, such as drill presses, mills, lathes, and grinders.

Selection guidelines for hand protection:
Selection of hand PPE shall be based on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified. Gloves are often relied upon to prevent cuts, abrasions, burns, and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure. There is no glove that provides protection against all potential hand hazards, and commonly available glove materials provide only limited protection against many chemicals. Therefore, it is important to select the most appropriate glove for a particular application and to determine how long it can be worn, and whether it can be reused. It is also important to know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., chemical hazards, cut hazards, flame hazards, etc. Before purchasing gloves, request documentation from the manufacturer that the gloves meet the appropriate test standard(s) for the hazard(s) anticipated. Other factors to be considered for glove selection in general include:

A. As long as the performance characteristics are acceptable, in certain circumstances, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types.
B. The work activities of the employee should be studied to determine the degree of dexterity required, the duration, frequency, and degree of exposure of the hazard, and the physical stresses that will be applied.

Selection of gloves for chemical hazards
The first consideration in the selection of gloves for use against chemicals is to determine, if possible, the exact nature of the substances to be encountered. Read instructions and warnings on chemical container labels and SDSs before working with any chemical. Recommended glove types are often listed in the section for personal protective equipment.

All glove materials are eventually permeated by chemicals. However, they can be used safely for limited time periods if specific use and glove characteristics (i.e., thickness and permeation rate and time) are known. The safety office can assist is determining the specific type of glove material that should be worn for a particular chemical.

A) The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects.
B) Generally, any "chemical resistant" glove can be used for dry powders;
C) For mixtures and formulated products (unless specific test data are available), a glove should be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric materials.

D) Employees must be able to remove the gloves in such a manner as to prevent skin contamination.

PROCESS SAFETY MANAGEMENT

The purpose of Process Safety Management (PSM) is to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals in various industries such as refineries. The requirements of a Process Safety Management Program are outlined in 29 CFR 1910.119. *LP Gas Industrial Equipment Co.* employees will perform work at job sites that are covered by this standard. Therefore, the purpose of this written program is to ensure our employees are trained in the practices necessary to conduct their work at PSM covered work sites and to ensure they abide by the safe work practices of the employers that hire us to perform various jobs.

General

Contractors under the Process Safety Management program are those who are involved in the installation or maintenance of equipment and systems at a facility that has one of the following:

(i) A process which involves a chemical at or above the specified threshold quantities listed in Appendix A to this section.

(ii) A process which involves a flammable liquid or gas (as defined in 1910.1200) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more except for:

(A) Hydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating, gasoline for vehicle refueling), if such fuels are not a part of a process containing another highly hazardous chemical covered by this standard;

(B) Flammable liquids stored in atmospheric tanks or transferred which are kept below their normal boiling point without benefit of chilling or refrigeration. As contractors covered under the PSM Program, we will be provided necessary information concerning the hazardous process, equipment, and procedures of the particular job site our employees are working at.

Specific Requirements

Pre-Work Review

Prior to allowing *LP Gas Industrial Equipment Co.* employees to commence work in a process covered under PSM, the following requirements must be completed by the PSM Company we will be doing work for:

LP Gas Industrial Equipment Co.

- Obtain and evaluate information regarding *LP Gas Industrial Equipment Co.'s* safety performance and programs (written documentation required).
- Inform *LP Gas Industrial Equipment Co.* Site Foremen or other designated *LP Gas Industrial Equipment Co.* employee of the known potential fire, explosion, or toxic release hazards related to the work area and processes of the Company.
- Explain the applicable provisions of the emergency action plan to *LP Gas Industrial Equipment Co. employees*.
- Provide the Site Foremen with copies of local safety programs, safety and emergency procedures and a copy of the PSM program.
- Complete all the requirements of the Company's Contractors Liability Agreement.
- Inform *LP Gas Industrial Equipment Co.* that a periodic performance evaluation will be conducted to ensure our employees are fulfilling our obligations.
- Inform *LP Gas Industrial Equipment Co.* that a contract employee injury and illness log related to our work in process areas must be maintained on site for the duration of the contract work.

LP Gas Industrial Equipment Co. will provide information to the Contract Employer relating to any unique hazards presented by our employee's work or any hazards found by our employees.

Training

Prior to the start of any work at a facility covered under the PSM standard, *LP Gas Industrial Equipment Co.* will assure that each employee is trained in the work practices necessary to safely perform his or her job. LP Gas Industrial Equipment Co. will provide the following documentation to each PSM covered facility that we will be performing work at:

• Our safety program information and other documentation required by the Company's Contractors Liability and Safety Agreement.

• Certification that we have informed our employees of potential fire, explosion, or toxic release hazards may that exist at or near their work area at the facility, and that we have explained the Company's Emergency Action Plan to our employees.
Safety Data Sheets will be used to discuss process safety information for the particular site we will be working at.
• Training documentation concerning training provided to our employees to ensure they understand the safe work practices necessary to safely perform tasks.

• Certification that we have explained the Hot Works Permit Program of the Company we are working for and other permits the Company uses that will be needed during their time on company property.

• Agreement to advise the Company we are working for of any unique hazards presented by our work and found during our work.
• Certification that materials, parts and equipment to be installed meet industry and engineering standards for the application used.

LP Gas Industrial Equipment Co. will assure that our employees have been instructed in known potential fire, explosion, or toxic release hazards related to his/her job. The Site Foreman will be responsible for ensuring that each employee has received and understood the required training. Training will be documented and will consist of the employee's name, the date of training, and the means used to verify that the employee understood the training.

Safe Work Practices

LP Gas Industrial Equipment Co. employees will be required to abide by PSM employer's safety work practices during operations such as lockout/tagout, confined space entry, opening process equipment or piping, and controls over entrance to the facility. Safe work practices will be covered during site-specific training courses. Training will be documented.

Hot Work

Before cutting or welding is permitted at a work site, the area must be inspected by the individual responsible for authorizing cutting and welding operations at the Company we are performing work for. *LP Gas Industrial Equipment Co.* employees will not be allowed to perform hot work until a hot work permit is obtained from the employer's designated representative. The permit shall document that provisions of CFR 1910.252 (a) have been met. See the Hot Work written program for more information about safe work practices.

Incident Investigations

Employees must immediately report all accidents, injuries and near misses to their Site Foreman, who will then notify the correct Company individuals. An incident investigation must be initiated within 48 hours. Resolutions and corrective actions must be documented and maintained for five years.

Trade Secrets

LP Gas Industrial Equipment Co. employees must respect the confidentiality of trade secret information when any Process Safety Information is released to them.

RESPIRATORY PROTECTION

General

In the Respiratory Protection program, hazard assessment and selection of proper respiratory protective equipment (RPE) is conducted in the same manner as for other types of personal protective equipment (PPE). In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used. References: OSHA Standards Respiratory Protection (29 CFR 1910.134)

Responsibilities

All Employees shall follow the requirements of the Respiratory Protection Program.

Management:

- implement the requirements of this program
- provide a selection of respirators as required
- enforce all provisions of this program
- appoint a specific designated individual to conduct the respiratory protection program
- Respiratory equipment will be provided at no cost to all affected employees

Program Administrator:

- review sanitation/storage procedures
- ensure respirators are properly, stored, inspected and maintained
- monitor compliance for this program
- provide training for affected employees
- review compliance and ensure monthly inspection of all respirators
- provide respirator fit testing

Designated Occupational Health care Provider:

- conduct medical aspects of program

Program Administrator

Each Facility will designate a 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.

Voluntary Use of Respirators is prohibited:
OSHA requires that voluntary use of respirators, when not required by the company, must be controlled as strictly as under required circumstances. To prevent violations of the Respiratory Protection Standard Employees are not allowed voluntary use of their own or company supplied respirators of any type. Exception: Employees whose only use of respirators involves the voluntary use of filtering (non-sealing) face pieces (dust masks).

Program Evaluation

Evaluations of the workplace are necessary to ensure that the written respiratory protection program is being properly implemented; this includes consulting with employees to ensure that they are using the respirators properly. Evaluations shall be conducted as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

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

Record Keeping

The Company will retain written information regarding medical evaluations, fit testing, and the respirator program. This information will facilitate employee involvement in the respirator program, assist the Company in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

Training and Information

Effective training for employees who are required to use respirators is essential. The training must be comprehensive, understandable, and recur annually and more often if necessary. Training will be provided prior to requiring the employee to use a respirator in the workplace. The training shall ensure that each employee 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
- Limitations and capabilities of the respirator
- 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 medical signs and symptoms that may limit or prevent the effective use of respirators
- The general requirements of this program

Retraining shall be conducted annually and when:

- 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
- other situation arises in which retraining appears necessary to ensure safe respirator use

Basic Respiratory Protection Safety Procedures

- Only authorized and trained Employees may use Respirators. Those Employees may use only the Respirator that they have been trained on and properly fitted to use.
- Only Physically Qualified Employees may be trained and authorized to use Respirators. A pre-authorization and annual certification by a qualified physician will be required and maintained. Any changes in an Employees health or physical characteristics will be reported to the Occupational Health Department and will be evaluated by a qualified physician.
- Only the proper prescribed respirator or self-contained breathing apparatus (SCBA) may be used for the job or work environment. Air cleansing respirators may be worn in work environments when oxygen levels are between 19.5 percent to 23.5 percent and when the appropriate air cleansing canister, as

determined by the Manufacturer and approved by the National Institute for Occupational Health (NIOSH) or the Mine Safety & Health Administration (MSHA), for the known hazardous substance is used.

- SCBAs will be worn in oxygen deficient and oxygen rich environments (below 19.5 percent or above 23.5 percent oxygen).
- Employees working in environments where a sudden release of a hazardous substance is likely will wear an appropriate respirator for that hazardous substance (example:
- Employees working in an ammonia compressor room will have an ammonia APR respirator on their person.).
- Only SCBAs will be used in oxygen deficient environments, environments with an unknown hazardous substance or unknown quantity of a known hazardous substance or any environment that is determined "Immediately Dangerous to Life or Health" (IDLH).
- Employees with respirators loaned on "permanent check out" will be responsible for the sanitation, proper storage and security. Respirators damaged by normal wear will be repaired or replaced by the Company when returned.
- The last Employee using a respirator and/or SCBA that are available for general use will be responsible for proper storage and sanitation. Monthly and after each use, all respirators will be inspected with documentation to assure its availability for use.
- All respirators will be located in a clean, convenient and sanitary location.
- In the event that Employees must enter a confined space, work in environments with hazardous substances that would be dangerous to life or health should an RPE fail (a SCBA is required in this environment), and/or conduct a hazardous material
- (HAZMAT) entry, a "buddy system" detail will be used with a Safety Watchman with constant voice, visual or signal line communication. Employees will follow the established Emergency Response Program and/or Confined Space Entry Program when applicable.
- Management will establish and maintain surveillance of jobs and work place conditions and degree of Employee exposure or stress to maintain the proper procedures and to provide the necessary RPE.
- Management will establish and maintain safe operation procedures for the safe use of RPE with strict enforcement and disciplinary action for failure to follow all general and specific safety rules. Standard Operation Procedures for General RPE use will be maintained as an attachment to the Respiratory Protection Program and Standard Operation Procedures for RPE use under emergency response situations will be maintained as an attachment to the Emergency Response Program.

Respirator User Policies

Adherence to the following guidelines will help ensure the proper and safe use of respiratory equipment:

- Wear only the respirator you have been instructed to use. For example, do not wear a self-containing breathing apparatus if you have been assigned and fitted for a half-mask respirator.
- Wear the correct respirator for the particular hazard. For example, some situations, such as chemical spills or other emergencies, may require a higher level of protection than your respirator can handle. Also, the proper cartridge must be matched to the hazard (a cartridge designed for dusts and mists will not provide protection for chemical vapors)
- Check the respirator for a good fit before each use. Positive and negative fit checks should be conducted.
- Check the respirator for deterioration before and after use. Do not use a defective respirator.
- Recognize indications that cartridges and canisters are at their end of service. If in doubt, change the cartridges r canisters before using the respirator.
- Practice moving and working while wearing the respirator so that you can get used to it.
- Clean the respirator after each use, thoroughly dry it and place the cleaned respirator in a sealable plastic bag.
- Store respirators carefully in a protected location away from excessive heat, light, and chemicals.

Selection of Respirators

The Company has evaluated the respiratory hazard(s) in each workplace, identified relevant workplace and user factors and has based respirator selection on these factors.
Also included are estimates of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. This selection has included appropriate protective respirators for use in IDLH atmospheres, and has limited the selection and use of air-purifying respirators. All selected respirators are NIOSH certified.

Filter Classifications - These classifications are marked on the filter or filter package

N-Series: Not Oil Resistant

- Approved for non-oil particulate contaminants
- Examples: dust, fumes, mists not containing oil

R-Series: Oil Resistant

- Approved for all particulate contaminants, including those containing oil
- Examples: dusts, mists, fumes
- Time restriction of 8 hours when oils are present

P-Series: Oil Proof

- Approved for all particulate contaminants including those containing oil
- Examples: dust, fumes, mists
- See Manufacturer's time use restrictions on packaging

Respirators for IDLH atmospheres:

- The following respirators will be used in IDLH atmospheres:
- A full face piece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
- Respirators provided only for escape from IDLH atmospheres shall be NIOSH certified for escape from the atmosphere in which they will be used.

Respirators for atmospheres that are not IDLH

The respirators selected shall be 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 contaminant.

Identification of Filters & Cartridges

All filters and cartridges shall be labeled and color coded with the NIOSH approval label and that the label is not removed and remains legible. A change out schedule for filters and canisters has been developed to ensure these elements of the respirators remain effective.

Respirator Filter & Canister Replacement

An important part of the Respiratory Protection Program includes identifying the useful life of canisters and filters used on air-purifying respirators. Each filter and canister shall be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or
If there is no ESLI appropriate for conditions a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

Filter & Cartridge Change Schedule

Stock of spare filers and cartridges shall be maintained to allow immediate change when required or desired by the employee

Cartridges shall be changed based on the most limiting factor below:

- Prior to expiration date
- Manufacturer's recommendations for use and environment
- After each use
- When requested by employee
- When contaminate odor is detected
- When restriction to air flow has occurred as evidenced by increase effort by user to breathe normally

- Cartridges shall remain in their original sealed packages until needed for immediate use

Filters shall be changed based on the most limiting factor below:

- Prior to expiration date
- Manufactures recommendations for the specific use and environment
- When requested by employee
- When contaminate odor is detected
- When restriction to air flow has occurred as evidenced by increase effort by user to breathe normally
- When discoloring of the filter media is evident
- Filters shall remain in their original sealed package until needed for immediate use.

Respiratory Protection Schedule by Job and Working Condition:

The Company maintains a Respiratory Protection Schedule by Job and Working Condition. This schedule is provided to each authorized and trained Employee. The
Schedule provides the following information:

1. Job/Working Conditions
2. Work Location
3. Hazards Present
4. Type of Respirator or SCBA Required
5. Type of Filter/Canister Required
6. Location of Respirator or SCBA
7. Filter/Cartridge change out schedule.

The schedule will be reviewed and updated at least annually and whenever any changes are made in the work environments, machinery, equipment, or processes or if respirator different respirator models are introduced or existing models are removed.

Permanent respirator schedule assignments are:

Each person who engages in welding will have their own company provided dust-mist fume filter APR. This respirator will be worn during all welding operations.

Assigned Protection Factors:

No respirator can provide 100% effectiveness. OSHA has implemented Assigned Protection
Factors (APFs) for various types of respirators. The purpose of APFs is to ensure use of respirators does not cause over-exposure to specific contaminants. Maximum permissible exposure levels (PEL) are generally based on specific concentrations over an 8 hour daily period without using a respirator. As an example if a respirator has 90% effectiveness, then a respirator wearer would reach the maximum permissible exposure level in 10 hours IF the atmospheric conditions were 10 times the PEL.

Our company selects respirators by comparing the exposure level and the maximum concentration of the contaminant in which a particular type of respirator can be used. Known as the Maximum Use Concentration or MUC, this is generally determined by multiplying the respirator's APF by the contaminant's exposure limit. If the level of contaminant is expected to exceed the MUC, the company will select a respirator with a higher APF.

Physical and Medical Qualifications:

Records of medical evaluations must be retained and made available in accordance with 29 CFR 1910.1020.

Medical evaluation required:

Using a respirator may place a physiological burden on employees that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee. The company provides 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.

Medical evaluation procedures:

The employee will be provided a medical questionnaire by the designated Occupational
Health Care Provider

Follow-up medical examination:

The company shall ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question among questions in Part B of the questionnaire or whose initial medical examination

demonstrates the need for a follow-up medical examination. The follow-up medical examination shall include any medical tests, consultations, or diagnostic procedures that the Physician deems necessary to make a final determination.

Administration of the medical questionnaire and examinations:
The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.
The medical questionnaire shall be administered in a manner that ensures that the employee understands its content. The company shall provide the employee with an opportunity to discuss the questionnaire and examination results with the Physician.

Supplemental information for the Physician:
The following information must be provided to the Physician before the Physician 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
- Temperature and humidity extremes that may be encountered
- Any supplemental information provided previously to the Physician regarding an employee need not be provided for a subsequent medical evaluation if the information and the Physician remain the same

The Company has provided the Physician with a copy of the written respiratory protection program and a copy of the OSHA Standard 1910.134

Medical determination

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 Physician. 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
- A statement that the Physician has provided the employee with a copy of the
- Physician's written recommendation
- If the respirator is a negative pressure respirator and the Physician finds a medical condition that may place the employee's health at increased risk if the respirator is used, the Company shall provide a APR if the Physician'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 the Company is no longer required to provide a APR

Additional Medical Evaluations

At a minimum, 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 Physician, supervisor, or the respirator program administrator informs the
- Company 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
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Respirator Fit Testing

Before an employee is required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. The Company shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.

The Company has established a record of the qualitative and quantitative fit tests administered to employees including:

- The name or identification of the employee tested
- Type of fit test performed
- Specific make, model, style, and size of respirator tested
- Date of test
- The pass/fail results for Qualitative Fit Test (QLFT) or the fit factor and strip chart recording or other recording of the test results for Quantitative Fit Test (QNFT)

Additional fit tests will be conducted whenever the employee reports, or the Company,
Physician, 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.
If after passing a QLFT or QNFT, the employee notifies the Company, program administrator, supervisor, or Physician that the fit of the respirator is unacceptable; the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.

Types of Fit Tests:
The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The
OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of OSHA Standard 1910.134.

- QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less.
- If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full face pieces, the QNFT has been passed with that respirator.
- Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.
- Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.
- Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.
- Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH approved configuration, before that face piece can be used in the workplace.

Fit test records shall be retained for respirator users until the next fit test is administered.
Written materials required to be retained shall be made available upon request to affected employees.

Respirator Operation and Use:
Respirators will only be used following the respiratory protection safety procedures established in this program. The Operations and Use Manuals for each type of respirator will be maintained by the Program Administrator and be available to all qualified users.

Surveillance by the direct supervisor 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, the
Company shall reevaluate the continued effectiveness of the respirator.

For continued protection of respirator users, the following general use rules apply:

- Users shall not remove respirators while in a hazardous environment
- Respirators are to be stored in sealed containers out of harmful atmospheres
- Store respirators away from heat and moisture
- Store respirators such that the sealing area does not become distorted or warped
- Store respirator such that the face piece is protected

Face piece seal protection:

The Company does not permit respirators with tight-fitting face pieces to be worn by employees who have:

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

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

Continuing Effectiveness of Respirators

The Company shall ensure the following that employees leave the respirator use area:

- To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece
- To replace the respirator or the filter, cartridge, or canister elements.
- If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece, the Company will replace or repair the respirator before allowing the employee to return to the work area.

Procedures for IDLH atmospheres

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 Company or designee is notified before the employee(s) located outside the
- IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue
- The Company or designee authorized to do so by the Company, once notified, provides necessary assistance appropriate to the situation

Employee(s) located outside the IDLH atmospheres will be equipped with:

- Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either
- Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or
- Equivalent means for rescue where retrieval equipment is not required.

Cleaning and Disinfecting:

The Company shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The Company shall ensure that respirators are cleaned and disinfected using the Standard Operating Procedure SOP: Cleaning and Disinfecting.

The respirators shall be cleaned and disinfected when:

- 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
- Respirators used in fit testing and training shall be cleaned and disinfected after each use.
- Cleaning and Storage of respirators assigned to specific employees is the responsibility of that Employee.

Procedures for Cleaning Respirators:

A. Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
B. Wash components in warm (43ºC [110ºF] 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.
C. C. Rinse components thoroughly in clean, warm (43ºC [110ºF] maximum), preferably running water. Drain.
D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
    1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43ºC (110ºF); or,
    2. 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 43ºC (110ºF); or,
    3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
E. Rinse components thoroughly in clean, warm (43ºC [110ºF] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
F. Components should be hand-dried with a clean lint-free cloth or air-dried.
G. Reassemble face piece, replacing filters, cartridges, and canisters where necessary.
H. Test the respirator to ensure that all components work properly.

Respirator Inspection:

All respirators/SCBAs, both available for "General Use" and those on "Permanent Checkout", will be inspected after each use and at least monthly. Should any defects be noted, the respirator/SCBA will be taken to the program Administrator. Damaged Respirators will be either repaired or replaced. The inspection of respirators loaned on "Permanent
Check-out" is the responsibility of that trained Employee.

Respirators shall be inspected as follows:

- All respirators used in routine situations shall be inspected before each use and during cleaning
- 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
- Emergency escape-only respirators shall be inspected before being carried into the workplace for use

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 face piece, head straps, valves, connecting tube, and cartridges, canisters or filters
- Check of elastomeric parts for pliability and signs of deterioration.

- Self-contained breathing apparatus shall be inspected monthly. 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
- Company shall determine that the regulator and warning devices function properly

For Emergency Use Respirators the additional requirements apply:

- Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.
- 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.

Respirator Storage

Respirators are to be stored as follows:

- 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 face piece and exhalation valve.

Emergency Respirators shall be:

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

Repair of Respirators:

Respirators that fail an inspection or are otherwise found to be defective will be removed from service to be discarded, 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 a technician trained by the manufacturer.

Breathing Air Quality and Use:

The Company shall ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

- Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and
- Compressed breathing air shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
    1. Oxygen content (v/v) of 19.5-23.5%;
    2. Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
    3. Carbon monoxide (CO) content of 10 ppm or less;
    4. Carbon dioxide content of 1,000 ppm or less; and
    5. Lack of noticeable odor.
        - compressed oxygen will not be used in atmosphere-supplying respirators that have previously used compressed air
        - oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution
        - cylinders used to supply breathing air to respirators meet the following requirements
        - cylinders are tested and maintained as prescribed in the Shipping Container
        - Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178)
        - cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air
        - moisture content in breathing air cylinders does not exceed a dew point of -50

- deg.F (-45.6 deg.C) at 1 atmosphere pressure
- breathing air couplings are incompatible with outlets for non-respirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.
- breathing gas containers shall be marked in accordance with the NIOSH respirator certification standard, 42 CFR part 84.

SCAFFOLD SAFETY PROGRAM

Purpose

The purpose of this safety policy and procedure is to establish guidelines for the protection of LP Gas Industrial Equipment Co. employees who work on scaffold work surfaces.

Applicability

Scaffolding has a variety of applications. It is used in new construction, alteration, routine maintenance, renovation, painting, repairing, and removal activities. Scaffolding offers a safer and more comfortable work arrangement compared to leaning over edges, stretching overhead, and working from ladders. Scaffolding provides employees safe access to work locations, level and stable working platforms, and temporary storage for tools and materials for performing immediate tasks. Scaffolding accidents mainly involve personnel falls and falling materials caused by equipment failure, incorrect operating procedures, and environmental conditions.

Additionally, scaffolding overloading is a frequent single cause of major scaffold failure. This safety policy and procedure provides guidelines for the safe use of scaffolds. It includes training provisions and guidelines for scaffold erection and use.

Reference

This safety policy and procedure is established in accordance with Occupational Safety and Health Standards for General Industry (29 CFR 1910.28) and Occupational Safety and Health Standards for Construction Industry (29 CFR 1926.451).

Policy

Scaffolds shall be erected, moved, dismantled, or altered only under the supervision of a competent person and will have guardrails and toe boards installed. When scaffolding hazards exist that cannot be eliminated, then engineering practices, administrative practices, safe work practices, Personal Protective Equipment (PPE), and proper training regarding Scaffolds will be implemented. These measures will be implemented to minimize those hazards to ensure the safety of employees and the public.

Responsibilities

It is the responsibility of each manager/unit head, supervisor, and employee to ensure implementation of LP Gas Industrial Equipment Co.'s safety policy and procedure on Scaffolds. It is also the responsibility of each LP Gas Industrial Equipment Co. employee to report immediately any unsafe act or condition to his or her supervisor. Specific responsibilities are found in Section 6.3.

Procedure

This section provides applicable definitions, establishes general provisions, and identifies specific responsibilities required by LP Gas Industrial Equipment Co.'s safety policy and procedure on Scaffolds.

Definitions

Brace - A tie that holds one scaffold member in a fixed position with respect to another member. Brace also means a rigid type of connection holding a scaffold to a building or structure.

Coupler - A device for locking together the component tubes of a tube and coupler scaffold.

Harness - A design of straps which is secured about the employee in a manner to distribute the arresting forces over at least the thighs, shoulders, and pelvis, with provisions for attaching a lanyard, lifeline, or deceleration device.

Hoist - A mechanical device to raise or lower a suspended scaffold. It can be mechanically powered or manually operated.

Maximum Intended Load: The total load of all employee, equipment, tool, materials, transmitted, wind, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.

Mechanically Powered Hoist - A hoist which is powered by other than human energy.
Outriggers - The structural member of a supported scaffold used to increase the base width of a scaffold in order to provide greater stability for the scaffold.

Platform - The horizontal working surface of a scaffold.

Safety Belt - A strap with means for securing about the waist or body and for attaching to a lanyard, lifeline, or deceleration device.
Scaffold - Any temporary elevated or suspended platform and its supporting structure used for supporting employees or materials or both, except this term does not include crane or derrick suspended personnel platforms.

Training: Affected employees will receive instruction on the particular types of scaffolds which they are to use. Training should focus on proper erection, handling, use, inspection, and care of the scaffolds. Training must also include the installation of fall protection, guardrails, and the proper use and care of fall arrest equipment.
This training should be done upon initial job assignment. Retraining shall be done when job conditions change. Periodic refresher training shall be done at the discretion of the supervisor.
Company designated "competent person(s)" will receive additional training regarding the selection of scaffolds, recognition of site conditions, recognition of scaffold hazards, protection of exposed personnel and public, repair and replacement options, and requirements of standards.

Safe Scaffold Erection and Use: Safe scaffold erection and use is important in minimizing and controlling the hazards associated with their use. Scaffold work practices and rules should be based on:

- Sound design
- Selecting the right scaffold for the job
- Assigning personnel
- Fall protection
- Guidelines for proper erection
- Guidelines for use
- Guidelines for alteration and dismantling
- Inspections
- Maintenance and storage

Types of Scaffolds:
There are many different types of scaffolds used in LP Gas Industrial Equipment Co.. The three major categories are:

- Self-supporting scaffolds
- Suspension scaffolds
- Special use scaffolds

Self-supporting scaffolds - are one or more working platforms supported from below by outriggers, brackets, poles, legs, uprights, posts, frames, or similar supports. The types of self-supporting scaffolds include:

- Fabricated Frame
- Tube and Coupler
- Mobile
- Pole

Suspension scaffolds - are one or more working platforms suspended by ropes or other means from an overhead structure(s). The types of suspension scaffolds include:

- Single-Point Adjustable (Boatswain's Chairs)
- Two-Point Adjustable (Swing Stage)
- Multiple-Point Adjustable
- Multi-Lend
- Category
- Float (Ship)
- Interior Hung
- Needle Beam

Special use scaffolds - and assemblies are capable of supporting their own weight and at least 4 times the maximum intended load. The types of special use scaffolds include:

- Form and Carpenter Bracket
- Roof Bracket
- Outrigger
- Pump Jack
- Ladder Jack
- Window Jack
- Horse
- Crawling Boards
- Step, Platforms, and Trestle Ladder

Responsibilities

Managers/Unit Heads:
Managers/Unit Heads will ensure adequate funds are available and budgeted for the purchase of scaffolds in their areas. They will also identify the employees affected by this safety policy and procedure. Managers/Unit Heads will obtain and coordinate the required training for the affected employees. Managers/Unit Heads will also ensure compliance with this safety policy and procedure through their auditing process.

Supervisors:
Supervisors will not allow any employee who has not received the required training to perform any of the tasks or activities related to scaffold erection and/or dismantling.
Supervisors will communicate appropriate needs to managers/unit heads and/or supervisors.
Supervisors will ensure that employees are provided with PPE as necessary for their job.
Supervisors will ensure that a competent person is in charge of scaffold erection according to the manufacturer's specifications.

Competent Person:
The competent person will oversee the scaffold selection, erection, use, movement, alteration, dismantling, maintenance, and inspection. The competent person will be knowledgeable about proper selection, care, and use of the fall protection equipment. Additionally, the competent person shall assess hazards.

Employees:
Employees shall comply with all applicable guidelines contained in this safety policy and procedure. Employees will report damaged scaffolds, accessories, and missing or lost components. Employees will assist with inspections as requested.

Safety Department:
Safety and Loss Control will provide prompt assistance to managers/unit heads, supervisors, or others as necessary on any matter concerning this safety policy and procedure. Safety and Loss Control will assist in developing or securing required training. Safety and Loss Control will also work with Purchasing and Central Equipment Unit to ensure that all newly purchased scaffolds comply with current safety regulations and this safety policy and procedure. Safety Engineers will provide consultative and audit assistance to ensure effective implementation of this safety policy and procedure.

Purchasing Department:
Purchasing Department is responsible for ensuring that purchased scaffolds and related material and equipment meet or exceed current safety regulations.

Safety Requirements for Scaffolds

- The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
- No scaffold shall be erected, moved, dismantled, or altered except under the supervision of competent persons or as requested for corrective reasons by Safety and Loss Control Personnel.
- Guardrails and toe boards shall be installed on all open sides and ends of platforms more than 10 feet above the ground or floor, except needle beam scaffolds and floats. Scaffolds 4 feet to 10 feet in height having a minimum horizontal dimension in either direction of less than 45 inches shall have standard guardrails installed on all open sides and ends of the platform.

- Guardrails must be 2 X 4 inches, or the equivalent, not less than 36 inches or more than approximately 42 inches high, with a midrail when required, of 1 X 4 inch lumber, or the equivalent. Supports must be at intervals not to exceed 8 feet. Toe board and the guardrail shall extend along the entire opening.
- Scaffolds and their components must be capable of supporting without failure at least 4 times the maximum intended load.
- Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders, couplers, etc., damaged or weakened from any cause must be repaired or replaced immediately, and shall not be used until repairs have been completed.
- All load-carrying timber members of scaffold framing shall be a minimum of 1,500 fiber (Stress Grade) construction grade lumbers
- All planking must be Scaffold Grades, or equivalent, as recognized by approved grading rules for the species of wood used. The maximum permissible span for 2 X 9 inch or wider planks is shown in the following:
- The maximum permissible span for 1-1/4 X 9 inches or wider plank of full thickness shall be 4 feet with medium duty loading of 50 psf.
- All planking or platforms must be overlapped (minimum 12 inches) or secured from movement.
- An access ladder or equivalent safe access must be provided.
- Scaffold plank must extend over their end supports not less than 6 inches nor more than 18 inches.
- The poles, legs, or uprights of scaffolds must be plumb and securely and rigidly braced to prevent swaying and displacement.
- Overhead protection must be provided for men on a scaffold exposed to overhead hazards.
- Slippery conditions on scaffolds shall be eliminated immediately after they occur.
- No welding, burning, riveting, or open flame work shall be performed on any staging suspended by means or fiber of synthetic rope. Only treated or protected fiber or synthetic ropes shall be used for or near any work involving the use of corrosive substances or chemicals.
- Wire, synthetic, or fiber rope used for scaffold suspension shall be capable of supporting at least 6 times the intended load.
- Scaffolds shall be provided with a screen between the toe board and guardrail, extending
- along the entire opening, consisting of No. 18 gauge U.S. Standard wire one-half inch mesh or the equivalent, when personnel are required to work or pass underneath the scaffolds.
- A safe distance from energized power lines shall be maintained.
- Tag lines shall be used to hoist materials to prevent contact.
- Suspension ropes shall be protected from contact with heat sources (welding, cutting, etc.) and from acids or other corrosive substances.
- Scaffolds shall not be used during high wind and storms.
- Ladders and other devices shall not be used to increase working heights on scaffold platforms.
- Scaffolds shall not be moved while employees are on them.
- Loose materials, debris, and/or tools shall not be accumulated to cause a hazard.
- Employees working on suspended scaffolds shall employ a fall-arrest system.
- Scaffold components shall not be mixed or forced to fit which may reduce design strength.
- Scaffolds and components shall be inspected at the erection location. Scaffolds shall be inspected before each work shift, after changing weather conditions, or after prolonged work interruptions.
- Casters and wheel stems shall be pinned or otherwise secured in scaffold legs. Casters and wheels must be positively locked if in a stationary position.
- Tube and coupler scaffolds shall be tied to and securely braced against the building at intervals not to exceed 30 feet horizontally and 26 feet vertically.

SILICA EXPOSURE CONTROL

Purpose

The purpose of the silica exposure control plan (ECP) is to set out our approach to protecting workers from harmful exposure to respirable crystalline silica.

A combination of control measures will be required to achieve this objective. We commit to being diligent in our efforts to select the most effective control technologies available, and to ensure that the best practices, as described in this Exposure Control Plan (ECP), are followed at our worksites.

The work procedures we establish will protect not only our workers but all workers on our worksites.

Key Responsibilities

Due to the significant risk posed by respirable crystalline silica, it is critical that all personnel involved in operations that could potentially create silica dust take specific action to ensure that, as much as possible, a hazard is not created.

LP GAS INDUSTRIAL EQUIPMENT CO. is responsible for:

- Substitution of less hazardous products for those that contain crystalline silica is required.
- Ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this exposure control plan (ECP) are readily available where and when they are required.
- Providing a job-specific ECP for each project, which outlines in detail the work methods and practices that will be followed on each site. Considerations will include
    - Availability and delivery of all required tools/equipment
    - Scope and nature of grinding work to be conducted
    - Control methods to be used and level of respiratory protection required
    - Coordination plan
- Conducting a periodic review of the effectiveness of the ECP. This would include a review of the available dust-control technologies to ensure these are selected and used when practical.
- Initiating sampling of worker exposure to concrete dust when there are non-standard work practices for which the control methods to be used have not been proven to be adequately protective.
- Ensuring that all required tools, equipment, and personal protective equipment are readily available and used as required by the ECP.
- Ensuring supervisors and workers are educated and trained to an acceptable level of competency.
- Maintaining records of training, fit-test results, crew talks, and inspections (equipment, PPE, work methods/practices).
- Coordinating the work with the prime contractor and other employers to ensure a safe work environment.
- Ensuring that a copy of the written exposure control plan is available to all employees. The written exposure control plan must be available for examination and copying by each employee. Copies may be available electronically or physically, depending on location needs and requirements.

The supervisor (foreman and lead hand) is responsible for:

- Obtaining a copy of the ECP from LP GAS INDUSTRIAL EQUIPMENT CO. and making it available at the worksite
- Selecting, implementing, and documenting the appropriate site-specific control measures
- Providing adequate instruction to workers on the hazards of working with silica-containing materials (e.g., concrete) and on the precautions specified in the job-specific plan covering hazards at the location
- Ensuring that workers are using the proper respirators and have been fit-tested, and that the results are recorded
- Directing the work in a manner that ensures the risk to workers is minimized and adequately controlled
- Communicating with the prime contractor and other sub-contractors to ensure a safe work environment

The worker is responsible for:

- Knowing the hazards of silica dust exposure

- Using the assigned protective equipment in an effective and safe manner
- Setting up the operation in accordance with the site-specific plan
- Following established work procedures as directed by the supervisor
- Reporting any unsafe conditions or acts to the supervisor
- Knowing how and when to report exposure incidents

Crystalline Silica Properties

Crystalline silica is a common mineral found in many naturally occurring materials and used in many industrial products and at construction sites. Materials like sand, concrete, stone and mortar contain crystalline silica. Crystalline silica is also used to make products such as glass, pottery, ceramics, bricks, concrete and artificial stone. Industrial sand used in certain operations, such as foundry work and hydraulic fracturing (fracking), is also a source of crystalline silica exposure. Amorphous silica, such as silica gel, is not crystalline silica.

Inhaling very small ("respirable") crystalline silica particles, causes multiple diseases, including silicosis, an incurable lung disease that can lead to disability and death. Respirable crystalline silica also causes lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease.

List of Tasks That Expose Employees to Respirable Crystalline Silica
A list or description of tasks in the workplace that expose employees to respirable crystalline silica must be in place. Tasks include activities like the below and anything else that is likely to expose employees to respirable crystalline silica:

- Sawing
- Drilling
- Grinding
- Abrasive blasting (e.g., of concrete structures)
- Jackhammering, chipping, or drilling rock or concrete
- Cutting brick or tiles
- Sawing or grinding concrete
- Tuck point grinding
- Road construction
- Loading, hauling, and dumping gravel
- Demolition of structures containing concrete
- Sweeping concrete dust

The list of tasks shall be included in the job hazard assessment or any other form of prework hazard assessment.

Health Hazards
Exposure to respirable crystalline silica has been shown to cause silicosis, lung cancer, pulmonary tuberculosis, and other airway diseases. Crystalline silica dust can cause a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening, and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- Chronic silicosis—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations

- Accelerated silicosis—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations
- Acute silicosis—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, a worker may experience:

- Shortness of breath
- Severe cough
- Weakness

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

Exposure Assessments

Exposure assessments must be conducted for those employees who are expected to be exposed to respirable crystalline silica at or above the action level. The exposure of each employee who is or is expected to be exposed to respirable crystalline silica at or above the action level (8-hour TWA of 25μg/m³) must be assessed. This assessment can be performed by monitoring employees individually or taking a representative sample from employees.

Key step in developing a silica exposure control plan is to identify the work activities that would put workers at risk of exposure.

- Work activities — that may generate airborne silica dust—for silica, the route of exposure is through the inhalation of airborne dust. The employer should have a qualified person review the planned work activities to identify those that may generate airborne silica.
- Identify workers at risk of exposure—For example, workers who finish concrete would be at greater risk of exposure than plumbers or electrical workers.
- Amount of exposure—some work activities generate more dust than others, and the amount of exposure should be estimated. Published resources are available that provide air sampling data and compare silica dust levels from various construction activities.
- Duration of exposure—Workers who grind concrete for a full shift would be at greater risk than workers jackhammering for an hour.

Engineering and Work Practice Controls
Engineering and work practice controls shall be used to reduce and maintain employee exposure to respirable crystalline silica to the lowest feasible level and maintain it at that level when required.

The following hierarchy of control measures must be followed:

- Elimination/substitution (e.g., using products with less silica or using work methods that would eliminate the need for surface grinding)
- Engineering controls (e.g., water, local exhaust ventilation, enclosure)
- Administrative controls (e.g., coordination of tasks with subcontractors, signage)
- The use of proper PPE such as gloves, coveralls and eye protection when exposed to silica. Personal protective equipment such as gloves, coveralls and eye protection will be used to control silica exposures.

Our firm commits to developing knowledge and expertise about these controls, and to establishing policies/procedures to protect workers from harmful exposure and to minimize reliance on respirators. Effective

engineering controls such as HEPA vacuum attachments and wetting methods, which control silica dust at its source, are readily available. These controls have been proven to reduce airborne dust levels significantly when selected and operated in accordance with best practices. We know that engineering controls alone do not reduce airborne silica to safe levels; so, in most cases other control measures, including respiratory protection, will be necessary.

If we take on a job that could release an unusually high amount of dust, and we are unsure of the adequacy of our control measures, we will conduct air sampling to ensure that control methods are protective.

We will reduce or eliminate worker exposure to silica dust by selecting a combination of the following controls listed in order of preference:

- Elimination and substitution - Engineering
- Administrative - Personal protective equipment

Elimination and Substitution

We recognize the importance of planning the work to minimize the amount of silica dust generated. During the project planning phase, we will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces (e.g., formwork planning). Whenever possible, we will schedule work when concrete is still wet, because we know that much less dust is released at that time.

Engineering Control of Dust

Selecting an appropriate control measure depends on the specifics of the operation. In some cases, local exhaust ventilation (LEV) is more effective at controlling exposure (e.g., during grinding operations) than wetting methods. In a different application, wetting may be more effective (e.g., during cutting operations) than LEV. However, using LEV may reduce the amount of final cleaning required, as the silica dust is captured.

Our dust control systems may employ three well-established techniques:

- Local exhaust ventilation (LEV)
- Wet dust suppression (WDS)
- Restricting or isolating the work activity with barriers or full enclosures (this may be the only option where LEV or WDS is not practical or effective)

Local Exhaust Ventilation (LEV)

When LEV is used in our work, we will employ the following systems and safe work practices:

- Vacuum attachment systems to capture and control the dust at its source whenever possible.
- Dust control systems (used regularly and well maintained).
- Grinding wheels operated at the manufacturers' recommended rpm (operating more than this can generate significantly higher airborne dust levels).
- Retrofit shrouds or exhaust cowlings for corner grinding; use manufacturer-specified rpm speeds and a well-maintained HEPA vacuum.
- Diamond stone grinders, which allow for the use of a more efficient suction casing on the grinder, whenever practicable.
- HEPA or good quality, multi-stage vacuum units approved for use with silica dust. [The vacuum units should can create a target airflow of at least 70 cfm. This should achieve a face velocity at the shroud of about 1.3 m/s (260 fpm)—the higher the face velocity, the more dust captured at source.]
- Work planning, so that concrete grinding can be completed when wet (dust release can be significantly reduced).
- Train workers and supervisors on how to properly use and maintain the equipment.

Wet methods for Dust Control

When water spray systems are used in our work, we will follow these safe work practices:

- Pneumatic grinders will be used instead of electric-powered grinders if water is the method of control.
- Pressure and flow rate of water will be controlled in accordance with tool manufacturers' specifications (for cutting saws, a minimum of 0.5 liters of water per minute should be used).
- When sawing concrete or masonry, we will use only saws that provide water to the blade.
- Wet slurry will be cleaned from work surfaces when the work is completed, using a wet vacuum or wet sweeping.
- *Barriers and Enclosures* - When barriers or enclosures are used in our work the site foreman will determine the type and design of barrier or enclosure (based on the work activity and the work area) and ensure it is constructed in accordance with the work plan. Barriers may be simple hazard-flagging ribbon or more restrictive barriers.

Administrative Controls

We will follow these safe work practices:

- Exposure control plans and the site risk assessment/work plan will be submitted to the general contractor prior to the start of work.
- Housekeeping Measures Put in Place to Limit Employee Exposure to Respirable Crystalline Silica – A description of housekeeping measures used to limit exposure to respirable crystalline silica must be in place (and included in the prework hazard assessment). This can include vacuuming, sweeping, wetting and other techniques used to limit the amount of respirable crystalline silica exposure during housekeeping activities. Vacuums with high-efficiency particulate air (HEPA) filters are required.
- We will establish procedures for housekeeping, restricting work areas, personal hygiene, worker training, and supervision.
- As part of our project planning, we will assess when silica dust may be generated and plan to eliminate or control the dust at the source. We recognize that awareness and planning are key factors in the prevention of silicosis.
- Warning signs will be posted to warn workers about the hazards of silica and to specify any protective equipment required (for example, respirators).
- Work schedules will be posted at the boundaries of work areas contaminated with silica dust.
- Work that generates silica dust will be conducted after hours, when access to other unprotected workers cannot be restricted.
- We will develop a site-specific exposure control plan to cover project-specific issues (e.g., scope of work, project location and site-specific hazards) and to be kept available at the worksite.

Personal Protective Equipment

Respiratory Protection

- When required, respirators must be provided to employees that are exposed to respirable crystalline silica.
- Respirators must be provided to employees who are or will be exposed to actionable levels of respirable crystalline silica. If an employee is performing a task listed in Table 1 of 1926.1153 (c) that does not require the use of a respirator then they are not required. All other tasks not covered by Table 1 must be accounted for by providing respirators if necessary.
- All workers who wear respirators will do so in adherence with our respiratory protection program.
- Respirators must be selected based upon measured exposure levels and the assigned protection factor of respirators.
- Only approved respirators will be used.
- Workers who wear respirators will be clean-shaven. Filtering face piece respirators give little or no protection to workers with beards, and even a minor growth of stubble can severely reduce the effectiveness of respiratory protection.

- All workers who wear respirators will be fit-tested.
- Workers will be properly trained in the use of respirators, and a high standard of supervision, inspection, and maintenance will be followed.

Protective clothing

LP GAS INDUSTRIAL EQUIPMENT CO. will provide workers in a restricted area with protective clothing that protects other clothing worn by the worker from silica contamination, ensure that silica does not contaminate workers' street clothing, and ensure that a worker does not leave a restricted area until the worker has been decontaminated.

Documentation

Records must be kept of the following:

- All workers who are exposed to respirable silica dust while on the job
- Worker education and training sessions
- Respirator fit-testing
- Equipment maintenance and repair
- Worksite inspections
- Medical surveillance when required

Annual Assessment

The written program's effectiveness must be reviewed at least annually. The written exposure control plan must be evaluated at least once per year and as necessary. Situations where reevaluation may be necessary include regulatory updates, changes in equipment and exposure incidents.

Medical Surveillance

A medical surveillance program for all employees whose exposure is equal to or exceeds the action level for 30 or more days per year is required. A medical surveillance program must be established for employees who are exposed to the action level of 8-hour TWA of 25µg/m³ of respirable crystalline silica. A baseline medical assessment must be available to exposed employees within 30 days of initial assignment unless they have previously received a suitable medical examination in the past three years. This applies to employees who would be required to wear a respirator more than 30 days per year or who are exposed to action level respirable crystalline silica for more than 30 days per year. A suitable prescreen that meets the same requirements is also acceptable.

The basics of the medical examination include:

LP GAS INDUSTRIAL EQUIPMENT CO. must bear the cost. The employee needs to go to a qualified health care professional, have an exam, and obtain a written medical opinion which is shared with LP GAS INDUSTRIAL EQUIPMENT CO. This written opinion needs to contain:

- The date of the exam
- A statement that the exam has specifically checked for silica exposure per the requirements of the standard.
- Any recommended limitations on the employee's exposure to respirable crystalline silica as a result of the exam's findings

The employee may learn other medical information from his or her physician during the visit, but this is private and not required to be shared with LP GAS INDUSTRIAL EQUIPMENT CO...

The exam conducted by the qualified healthcare provider must include the following:

- A review of the patient's medical and work history.
- A physical examination with special emphasis on the respiratory system.
- A chest x-ray.
- A pulmonary function test administered by a certified spirometry.
- Testing for latent tuberculosis.
- Any other tests deemed appropriate by the healthcare provider.

Information required to be given to the healthcare provider:

- A copy of the OSHA respirable crystalline silica rule.
- Construction Standard - https://www.osha.gov/silica/SilicaConstructionRegText.pdf
- Construction Medical - https://www.osha.gov/silica/AppendixBtosect1926.1153.pdf
- General Industry/Maritime Standard https://www.osha.gov/silica/SilicaGeneralIndustryRegText.pdf
- General Industry/Maritime Medical https://www.osha.gov/silica/AppendixBtosect1910.1053.pdf
- A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica.
- The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica.
- A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment.
- Information from records of employment-related medical examinations previously provided to the employee and currently within the control of LP GAS INDUSTRIAL EQUIPMENT CO.

Records

Applicable records must be kept. Accurate records of all air monitoring data, objective data, and medical surveillance shall be maintained as required by the regulation.

Training

Employees must be provided with training.

A training program shall be provided for all employees who are exposed to action level respirable crystalline silica. The training shall ensure that employees covered by the written exposure control plan can demonstrate knowledge and understanding of the health hazards associated with respirable crystalline silica, the specific tasks in the workplace that could result in exposure to respirable crystalline silica, the specific measures taken to protect employees from exposure to crystalline silica, the contents of the respirable crystalline silica rule, and the purpose of the medical surveillance program.

STOP WORK AUTHORITY

Purpose

The Stop Work Authority process involves a stop, notify, correct and resume approach for the resolution of a perceived unsafe condition, act, error, omission or lack of understanding that could result in an undesirable event. All LP Gas Industrial Equipment Co. employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of health, safety or environmental risks exist.

Scope

This program applies to all LP Gas Industrial Equipment Co. projects and operations.

Key Responsibilities

- Employees are responsible to initiate a Stop Work Intervention when warranted and management is responsible to create a culture where SWA is exercised freely.
- Supervisors are responsible to ensure a culture is created where SWA is exercised and honored freely to resolve issues before operations resume and recognize proactive participation.
- Management must establish and support clear expectations to exercise SWA, create a culture where SWA is exercised freely and hold those accountable that chose not to comply with established SWA policies.

Stop Work Authority Procedure

- When an unsafe condition is identified the Stop Work Intervention will be initiated, coordinated through the supervisor, initiated in a positive manner, notify all affected personnel and supervision of the stop work issue, correct the issue and resume work when safe to do so.
- No work will resume until all stop work issues and concerns have been adequately addressed.
- Any form of retribution or intimidation directed at any individual or company for exercising their right to issue a stop work authority will not be tolerated by the host nor by LP Gas Industrial Equipment Co.

Follow-Up

- All Stop Work Interventions shall be documented for lessons learned and corrective measures to be put into place.
- Stop Work reports shall be reviewed by supervision order to measure participation, determine quality of interventions and follow-up, trend common issues, identify opportunities for improvement, and facilitate sharing of learning.
- It is the desired outcome of any Stop Work Intervention that the identified safety concern(s) have been addressed to the satisfaction of all involved persons prior to the resumption of work. Most issues can be adequately resolved in a timely manner at the job site, occasionally additional investigation and corrective actions may be required to identify and address root causes.

Training

Employees shall receive Stop Work Authority training before their initial assignment. The training will be documented including the employee name, the dates of training and subject matter.

SUBCONTRACTOR MANAGEMENT PLAN (SMP)

Purpose

The purpose of this program is to ensure that LP Gas Industrial Equipment Co. continues to improve subcontractor health, safety and environmental performance and to establish a standard for pre-qualification, evaluation/selection and development of our subcontractors.

Scope

This program applies to all subcontractors and all LP Gas Industrial Equipment Co. locations.

General Requirements

All LP Gas Industrial Equipment Co. subcontractors are to be managed in accordance with this program.

The use of subcontractors must be pre-approved by LP Gas Industrial Equipment Co. Approval requirements include:

- A formal safety review of the subcontractor being performed by LP Gas Industrial Equipment Co. safety department.
- The scope of the review was commensurate with the hazards and risk exposure.
- Subcontractor has been/will be oriented to the safety policies, expectations and requirements of LP Gas Industrial Equipment Co.
- The subcontractor agrees to abide by our Drug and Alcohol policy and onsite safety rules throughout the duration of the work.

Any subcontractor that has a "Non-Approved" safety status will not be used on any LP Gas Industrial Equipment Co. site.

Procedure

Pre-Qualification of Subcontractors
Subcontractors will be pre-qualified by reviewing their safety programs, safety training documents and safety statistics.

How Acceptable Safety Metrics Will be Used as a Criteria for Selecting Subcontractors
Acceptable safety metrics will be used as criteria for prequalifying and selecting subcontractors in the following manner. The safety metrics and scoring will consider:

- LP Gas Industrial Equipment Co. Subcontractor Safety Pre-Qualification Form responses and subcontractor safety program documents review 60% (Rated from 0-60 total points)
- Subcontractor safety training documents review 20% (Rated from 0-20 total points)
- Subcontractor safety statistics review 20% (Rated from 0-20 total points)

Evaluation Rating and Acceptance
The subcontractor rating system will have five designations:

- Equal to or Greater than 90 points = A – no restrictions.
- Between 85 and 89 points = B – Mitigation plan must be documented and approved by LP Gas Industrial Equipment Co. Safety.

- Between 81 and 84 points = C – Mitigation plan must be documented and approved by LP Gas Industrial Equipment Co. Safety; management approval in writing.
- Between 71 and 80 points = D – Mandatory commitment meeting with senior subcontractor management present; mitigation plan documented and approved by LP Gas Industrial Equipment Co. Safety; management approval in writing; trained subcontractor safety personnel on site during work regardless of number of workers.
- Less than 70 points = F – not to be used.

Once each subcontractor has been evaluated and scored, LP Gas Industrial Equipment Co. safety will provide management the scores/ranking.

LP Gas Industrial Equipment Co. reserves the right to change a subcontractor's status to "Non-Approved" if the subcontractor shows insufficient progress towards accepted mitigation plan or other agreed upon criteria.

Subcontractor Involvement

Contractors are required to follow or implement the work practices and systems described below while performing work at LP Gas Industrial Equipment Co. worksites:

- Attend an safety orientation, pre-job meeting or kick-off meeting provided by LP Gas Industrial Equipment Co. prior to any work beginning
- Monitor employees for substance abuse and report nonconformities to LP Gas Industrial Equipment Co.
- Ensure personnel have the required training and competency for their work
- Participate in LP Gas Industrial Equipment Co. tailgate safety meetings, job safety analysis or hazard assessments and on the job safety inspections.
- Perform a pre-job safety inspection that includes equipment
- Participate in the BBS hazard reporting system
- Report all injuries, spills, property damage incidents and near misses
- Comply with onsite and Owner Client safety rules
- Implement LP Gas Industrial Equipment Co. safety practices and processes as applicable
- Clean up and restore the worksite after the job is over
- Ensure compliance with regulations at all times
- Post job safety performance reviews shall be conducted for subcontractors.

TRENCHING/SHORING/EXCAVATION

PURPOSE

This program outlines procedures and guidelines for the protection of employees working in and around excavations and trenches. This program requires compliance with OSHA Standards described in Subpart P (CFR 1926.650) for the construction industry.

Compliance is mandatory to ensure employee protection when working in or around excavations. The programs in this manual on confined space, hazard communication, lock-out/tag-out, respiratory protection, and any other safety programs or procedures deemed essential for employee protection, are to be used in conjunction with this program.

SCOPE

This program pertains to all company projects that require any excavations or trenches.

REFERENCES

* 29 CFR 1926.650, Subpart P - Excavations
* Excavation Equipment Manufacturer Safety Procedures

RESPONSIBILITIES

It is the responsibility of each superintendent and supervisor to implement and maintain the procedures and steps set forth in this program. Each employee involved with excavation and trenching work is responsible to comply with all applicable safety procedures and requirements of this program.

DEFINITIONS

BENCHING - A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels.

CAVE-IN - The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by failing or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

COMPETENT PERSON - One who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

DURATION OF EXPOSURE - The longer an excavation is open, the longer the other factors have to work on causing it to collapse.

EXCAVATION - Any man-made cut, trench, or depression in an earth surface, formed by earth removal.

HAZARDOUS ATMOSPHERE - An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

PROTECTIVE SYSTEM - A method of protecting employees from cave-ins, from material that could fall or roll from an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide necessary protection.

SHIELD - A structure that is capable of withstanding the forces imposed on it by a cave-in and thereby protects employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. All shields must be in accordance with 29 CFR 1926.652(c)3 or (c)4.

SLOPING - A method of protecting workers from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences such as soil type, length of exposure, and application of surcharge loads.

SURCHARGE LOADS - Generated by the weight of anything in proximity to the excavation, push starts for a cave-in (anything up top pushing down).
Common surcharge loads:

* weight of spoil pile
* weight of nearby buildings, poles, pavement, or other structural objects.
* weight of material and equipment

TRENCH - A narrow excavation below the surface of the ground, less than 15 feet wide, with a depth no greater than the width.

UNDERMINING - Undermining can be caused by such things as leaking, leaching, caving or over-digging. Undermined walls can be very dangerous.

VIBRATION - A force that is present on construction sites and must be considered. The vibrations caused by backhoes, dump trucks, compactors and traffic on job sites can be substantial.

Hazards

One of the reasons the company requires a competent person on-site during excavation & trenching are the numerous potential hazardous that may be encountered or created. Hazards include:

- Entrapment
- Electrocution
- Gas Explosion
- Struck by equipment
- Suffocation

Hazard Controls

Before any work is performed and before any employees enter the excavation, a number of items must be checked and insured:

- Before any excavation, underground installations must be determined. This can be accomplished by either contacting the local utility companies or the local "one call' center for the area. All underground utility locations must be documented on the proper forms. All overhead hazards (surface encumbrances) that create a hazard to employees must be removed or supported to eliminate the hazard.
- If the excavation is to be over 20 feet deep, it must be designed by a registered professional engineer who is registered in the state where work will be performed.
- Adequate protective systems will be utilized to protect employees. This can be accomplished through sloping, shoring, or shielding.
- The worksite must be analyzed in order to design adequate protection systems and prevent cave-ins. There must also be an excavation safety plan developed to protect employees.
- Workers must be supplied with and wear any personal protective equipment deemed necessary to assure their protection.
- All spoil piles will be stored a minimum of four (4) feet from the sides of the excavation. The spoil pile must not block the safe means of egress.
- If a trench or excavation is 4 feet or deeper, stairways, ramps, or ladders will be used as a safe means of access and egress. For trenches, the employee must not have to travel any more than 25 feet of lateral travel to reach the stairway, ramp, or ladder.
- No employee will work in an excavation where water is accumulating unless adequate measures are used to protect the employees.
- A competent person will inspect all excavations and trenches daily, prior to employee exposure or entry, and after any rainfall, soil change, or any other time needed during the shift. The competent person must take prompt measures to eliminate any and all hazards.
- Excavations and trenches 4 feet or deeper that have the potential for toxic substances or hazardous atmospheres will be tested at least daily. If the atmosphere is inadequate, protective systems will be utilized.
- If work is in or around traffic, employees must be supplied with and wear orange reflective vests. Signs and barricades must be utilized to ensure the safety of employees, vehicular traffic, and pedestrians.

COMPETENT PERSON RESPONSIBILITIES

The OSHA Standards require that the competent person must be capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and have authorization to take prompt corrective measures to eliminate them and, if necessary, to stop the work.

A competent person is required to:

- Have a complete understanding of the applicable safety standards and any other data provided.
- Employees should not work under loads of digging equipment where loads may fall.
- Assure the proper locations of underground installations or utilities, and that the proper utility companies have been contacted.
- Conduct soil classification tests and reclassify soil after any condition changes.
- Determine adequate protective systems (sloping, shoring, or shielding systems) for employee protection.
- Conduct all air monitoring for potential hazardous atmospheres.
- Conduct daily and periodic inspections of excavations and trenches by a competent person.
- Approve design of structural ramps, if used.

EXCAVATION SAFETY PLAN

An excavation safety plan is required in written form. This plan is to be developed to the level necessary to insure complete compliance with the OSHA Excavation Safety Standard and state and local safety standards.

Excavation safety plan factors:

- Utilization of the local one-call system
- Provide handrails and/or guardrails to prevent falls
- Determination of locations of all underground utilities
- Consideration of confined space atmosphere potential
- Proper soil protection systems and personal protective equipment and clothing
- Determination of soil composition and classification
- Determination of surface and subsurface water
- Depth of excavation and length of time it will remain open
- Proper adherence to all OSHA Standards, this excavation and trenching safety program, and any other coinciding safety programs.

SOIL CLASSIFICATION AND IDENTIFICATION

The OSHA Standards define soil classifications within the Simplified Soil Classification Systems, which consist of four categories: Stable rock, Type A, Type B, and Type C. Stability is greatest in stable rock and decreases through Type A and B to Type C, which is the least stable. Appendix A of the Standard provides soil mechanics terms and types of field tests used to determine soil classifications.

Stable rock is defined as natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Type A soil is defined as:
- Cohesive soils with an unconfined compressive strength of 1.5 tons per square foot (TSF) or greater.
- Cemented soils like caliche and hardpan are considered Type A.

Soil is NOT Type A if:
- It is fissured.
- The soil is subject to vibration from heavy traffic, pile driving or similar effects.
- The soil has been previously disturbed.
- The material is subject to other factors that would require it to be classified as a less stable material.
- The exclusions for Type A most generally eliminate it from most construction situations.

Type B soil is defined as:
- Cohesive soil with an unconfined compressive strength greater than .5 TSF, but less than 1.5 TSF.
- Granular cohesion less soil including angular gravel, silt, silt loam, and sandy loam.
- The soil has been previously disturbed except that soil classified as Type C soil.
- Soil that meets the unconfined compressive strength requirements of Type A soil, but is fissured or subject to vibration.
- Dry rock that is unstable.

Type C soil is defined as:
- Cohesive soil with an unconfined compressive strength of .5 TSF or less.
- Granular soils including gravel, sand and loamy sand.
- Submerged soil or soil from which water is freely seeping.
- Submerged rock that is not stable.

Soil Test & Identification
The competent person will classify the soil type in accordance with the definitions in Appendix A on the basis of at least one visual and one manual analysis. These tests should be run on freshly excavated samples from the excavation and are designed to determine stability based on a number of criteria: the cohesiveness, the presence of fissures, the presence and amount of water, the unconfined compressive strength, the duration of exposure, undermining, and the presence of layering, prior excavation and vibration.

The cohesion tests are based on methods to determine the presence of clay. Clay, silt, and sand are size classifications, with clay being the smallest sized particles, silt intermediate and sand the largest. Clay minerals exhibit good cohesion and plasticity (can be molded). Sand exhibits no elasticity and virtually no cohesion unless surface wetting is present. The degree of cohesiveness and plasticity depend on the amounts of all three types and

water. When examining the soil, three questions must be asked: Is the sample granular or cohesive? Fissured or non-fissured? What is the unconfined compressive strength measured in TSF?

Methods of testing soils:

- Visual test: If the excavated soil is in clumps, it is cohesive. If it breaks up easily, not staying in clumps, it is granular.
- Wet manual test: Wet your fingers and work the soil between them. Clay is a slick paste when wet, meaning it is cohesive. If the clump falls apart in grains, it is granular.
- Dry strength test: Try to crumble the sample in your hands with your fingers. If it crumbles into grains, it is granular. Clay will not crumble into grains, only into smaller chunks.
- Pocket penetrometer test: This instrument is most accurate when soil is nearly saturated. This instrument will give unconfined compressive strength in tons per square foot. The spring-operated device uses a piston that is pushed into a coil up to a calibration groove. An indicator sleeve marks and retains the reading until it is read. The reading is calibrated in tons per square foot (TSF) or kilograms per cubic centimeter.
- Thumb penetration teal: The competent person attempts to penetrate a fresh sample with thumb pressure. If the sample can be dented, but penetrated only with great effort, it is Type A. If it can be penetrated several inches and molded by light pressure, it is Type C. Type B can be penetrated with effort and molded.
- Shearvane: Measures the approximate shear strength of saturated cohesive soils. The blades of the vane are pressed into a flat section of undisturbed soil, and the knob is turned slowly until soil failure. The dial is read directly when using the standard vane. The results will be in tons per square foot or kilograms per cubic centimeter.
- The competent person will perform several tests of the excavation to obtain consistent, supporting data along its depth and length. The soil is subject to change several times within the scope of an excavation and the moisture content will vary with weather and job conditions. The competent person must also determine the level of protection based on what conditions exist at the time of the test, and allow for changing conditions.

EXCAVATION PROTECTION SYSTEMS

The three basic protective systems for excavations and trenches are sloping and benching systems, shoring, and shields.

The protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied to or transmitted 237 to the system. Every employee in an excavation shall be protected from cave-ins by an adequate protective system.

- Exceptions to using protective system:
- Excavations are made entirely in stable rock
- Excavations are less than 5 feet deep and declared safe by a competent person

SLOPING AND BENCHING SYSTEMS

There are four options for sloping:

- Slope to the angle required by the Standard for Type C, which is the most unstable soil type.
- The table provided in Appendix B of the Standard may be used to determine the maximum allowable angle (after determining the soil type).
- Tabulated data prepared by a registered professional engineer can be utilized.
- A registered professional engineer can design a sloping plan for a specific job.
- Sloping and benching systems for excavations five (5) to twenty (20) feet in depth must be constructed under the instruction of a designated competent person.

Sloping and benching systems for excavations greater than twenty (20) feet must be designed and stamped by a registered professional engineer.
Sloping and benching specifications can be found in Appendix B of the OSHA Standard (Subpart P).

SHORING SYSTEMS

Shoring is another protective system or support system. Shoring utilizes a framework of vertical members (uprights), horizontal members (whales), and cross braces to support the sides of the excavation to prevent a cave-in. Metal hydraulic, mechanical or timber shoring is a common example.

The different examples of shoring are found in the OSHA Standard under these appendices:

APPENDIX C - Timber Shoring for Trenches

APPENDIX D - Aluminum Hydraulic Shoring for Trenches

APPENDIX E - Alternatives to Timber Shoring

SHIELD SYSTEMS (Trench Boxes)

Shielding is the third method of providing a safe workplace. Unlike sloping and shoring, shielding does not prevent a cave-in. Shields are designed to withstand the soil forces caused by a cave-in and protect the employees inside the structure.
Most shields consist of two flat, parallel metal walls that are held apart by metal cross braces.
Shielding design and construction is not covered in the OSHA Standards. Shields must be certified in design by a registered professional engineer and must have either a registration plate on the shield or registration papers from the manufacturer on file at the jobsite office. **ANY REPAIRS OR MODIFICATIONS MUST BE APPROVED BY THE MANUFACTURER.**

SAFETY PRECAUTIONS FOR SHIELD SYSTEMS

- Shields must not have any lateral movement when installed.
- Employees will be protected from cave-ins when entering and exiting the shield (examples - ladder within the shield or a properly sloped ramp at the end).
- Employees are not allowed in the shield during installation, removal, or during any vertical movement.
- Shields can be 2 ft. above the bottom of an excavation if they are designed to resist loads at the full depth and if there are no indications of caving under or behind the shield.
- The shield must extend at least 18 inches above the point where proper sloping begins (the height of the shield must be greater than the depth of the excavation).
- The open end of the shield must be protected from the exposed excavation wall. The wall must be sloped, shored, or shielded. Engineer designed end plates can be mounted on the ends of the shield to prevent cave-ins.

PERSONAL PROTECTIVE EQUIPMENT

It is company policy to wear a hard hat, safety glasses, and work boots on the jobsite. Because of the hazards involved with excavations, other personal protective equipment may be necessary, depending on the potential hazards present (examples -goggles, gloves, and respiratory equipment).

INSPECTIONS

Daily inspection of excavations, the adjacent areas and protective systems shall be made by the competent person for evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions.

- All inspections shall be conducted by the competent person prior to the start of work and as needed throughout the shift.
- Inspections will be made after every rainstorm or any other increasing hazard.
- All documented inspections will be kept on file in the jobsite safety files and forwarded to the Safety Director weekly.
- A copy of the Daily Excavation Inspection form is located at the end of this program.

TRAINING

The competent person(s) must be trained in accordance with the OSHA Excavation Standard, and all other programs that may apply (examples Hazard Communication, Confined Space, and Respiratory Protection), and must demonstrate a thorough understanding and knowledge of the programs and the hazards associated. All other employees working in and around the excavation must be trained in the recognition of hazards associated with trenching and excavating.

WELDING, CUTTING, HOT WORK SAFETY PROCEDURES

Purpose

Welding and Hot Work, such as brazing or grinding present a significant opportunity for fire and injury. All precautions of this program must be applied prior to commencing any welding or hot work by company employees or contractors. Reference: OSHA 29 CFR 1910.252

Responsibilities

Management:

- Provide training for all employees whose task include heat, spark or flame producing operations such as welding, brazing, or grinding.
- Develop and monitor effective hot work procedures
- Provide safe equipment for hot work
- Provide proper and effective PPE for all hot work

Supervisors:

- Monitor all hot work operations
- Ensure all hot work equipment and PPE are in safe working order
- Allow only trained and authorized employees to conduct hot work
- Ensure permits are used for all hot work outside authorized areas

Employees:

- Follow all hot work procedures
- Properly use appropriate hot work PPE
- Inspect all hot work equipment before use
- Report any equipment problems
- Not use damaged hot work equipment

Definitions

Welding/Hot Works Procedures - any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions.

Examples of Hot Works - Cutting, Brazing, Soldering, Thawing Pipes, Torch Applied Roofing, Grinding and Welding.

Special Hazard Occupancies - Any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

Hazards

- Fires & Explosions
- Skin burns
- Welding "blindness"
- Respiratory hazards from fumes & smoke

Training

Training shall include:

- Review of requirements listed in OSHA 1910.252
- Use of Hot Works Permit System
- Supervisor Responsibilities
- Fire Watch Responsibilities - specifically, the fire watch must know:
    1. That their ONLY duty is Fire Watch
    2. When they can terminate the watch
    3. How to use the provided fire extinguisher
    4. How to activate fire alarm if fire is beyond the incipient stage
- Operator Responsibilities
- Contractors Responsibilities
- Documentation requirements
- Respirator Usage requirements
- Fire Extinguisher training

Hot Works Procedures

OSHA 29 CFR 1910.252 required fire prevention actions for welding/hot works.
Where practicable all combustibles shall be relocated at least 35 feet from the work site. Where relocation is impractical, combustibles shall be protected with flame proof covers, shielded with metal, guards, curtains, or wet down material to help prevent ignition of material.

Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.

Where cutting or welding is done near walls, partitions, ceilings, or a roof of combustible construction, fire-resistant shields or guards shall be provided to prevent ignition.

If welding is to be done on a metal wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation of heat. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.

Welding shall not be attempted on a metal partition, wall, ceiling or roof having a covering or on walls having combustible sandwich panel construction.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Operators of equipment should report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured. Repairs shall be made only by qualified personnel.

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.

Any welding, cutting or burning of lead base metals, zinc, cadmium, mercury, beryllium or exotic metals or paints not listed here shall have proper ventilation or respiratory protection. This includes, and not limited to, wearing proper respiratory protection and proper ventilation when hazardous gases and/or dust is a factor.

Cutting or welding shall not be permitted in the following situations:

- In areas not authorized by management.
- In sprinkled buildings while such protection is impaired.
- In the presence of potentially explosive atmospheres, e.g. a flammable
- In areas near the storage of large quantities of exposed, readily ignitable materials.
- In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot works will be conducted. All dust accumulation should be cleaned up following the housekeeping program of the facility before welding/hot works are permitted.

Suitable extinguishers shall be provided and maintained ready for instant use.

A fire watch person shall be provided during and for 2 hours past the completion of the welding project.

A cutting/welding permit will be issued on all welding or cutting outside of the designated welding area.

Welding & Hot Work fire prevention measures

A designated welding area should be established to meet those following requirements:

a. Floors swept and clean of combustibles within 35 ft. of work area.
b. Flammable and combustible liquids and material will be kept 35 ft. from work area.
c. Adequate ventilation providing 20 air changes per hour, such as a suction hood system should be provided to the work area.
d. At least one 10 lb. dry chemical fire extinguisher should be within access of the 35 ft. of work area.
e. Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible free area.

Requirements for welding conducted outside the designated welding area.

a. Portable welding curtains or shields must be used to protect other workers in the welding area.
b. A hot works permit must be completed and complied with prior to welding operation.
c. Respiratory protection is mandatory unless an adequate monitored air flow away from the welder and others present can be established and maintained.
d. Plastic materials be covered with welding tarps during welding procedures
e. Fire Watch must be provided for all hot work operations.

Welding Standard Operating Procedures

The following pages list the Welding Standard Operating Procedures (SOP) and are applicable for all electric and gas welding. These SOPs are to be posted at each Designated Welding & Hot Work Area for quick reference and review.

SOP - Electric Welding

Perform Safety Check on all equipment:

- Ensure fire extinguisher is charged and available
- Ensure electrical cord, electrode holder and cables are free from defects
- (no cable splices are allowed within 10 feet of the electrode holder.
- Ensure PPE (welding hood, gloves, rubber boots/soled shoes, aprons) are available and have no defects.
- Ensure the welding unit is properly grounded.
- All defective equipment must be repaired or replaced before use.

Remove flammables and combustibles:

- No welding is permitted on or near containers of flammable material, combustible material or unprotected flammable structures.
- Place welding screen or suitable barricade around work area to provide a fire safety zone and prevent injuries to passersby (Do not block emergency exits or restrict ventilation)

Ensure Adequate Ventilation and Lighting

Execute Hot Work Permit procedures

Set Voltage Regulator:

No higher than the following for:

- Manual Alternating Current Welders - 80 volts
- Automatic Alternating Current Welders - 100 volts
- Manual or automatic Direct Current Welders -100 volts

Uncoil and spread out welding cable:

To avoid overheating, ensure proper contact of work leads and connections, remove any metal fragments from magnetic work clamps (to avoid electric shock do not wrap welding cables around a body part and avoid welding in wet conditions)

Fire watch for one hour after welding & until all welds have cooled

Perform final fire watch and terminate permit.

SOP: Gas Welding:
Perform Safety Check on all equipment

- Ensure tanks have gas and fittings are tight
- Ensure fire extinguisher is charged and available
- Ensure hoses have no defects
- Ensure PPE (welding hood, gloves, rubber boots/soled shoes, aprons) are available and have no defects.
- All defective equipment must be repaired or replace before uses.

Remove flammables and combustibles:

- No welding is permitted on or near containers of flammable material, combustible material or unprotected flammable structures.
- Place welding screen or suitable barricade around work area to provide a fire safety zone and prevent injuries to passersby (Do not block emergency exits or restrict ventilation)

WORK ZONE SAFETY

Purpose

LP GAS INDUSTRIAL EQUIPMENT CO. will provide a safe work environment for its employees. In doing so, LP GAS INDUSTRIAL EQUIPMENT CO. will take all reasonable and practical measures to eliminate or minimize injury or incident risks associated with the nature of the work performed when employees work alone.

LP GAS INDUSTRIAL EQUIPMENT CO. shall establish site specific procedures for employees working alone.

Objectives

To minimize risk to employees who may work alone and assistance is not readily available LP GAS INDUSTRIAL EQUIPMENT CO. will:

- Conduct written hazard assessments to identify existing or potential working alone hazards.
- Take measures to eliminate or control the hazards of working alone at LP GAS INDUSTRIAL EQUIPMENT CO. worksites.
- Ensure that affected employees are informed of the hazards and methods used to control or eliminate them.
- Provide an effective system for communication between any employee who work alone and persons capable of assisting the employee.
- Ensure all incidents (working related or otherwise) are reported, investigated and documented.
- Review the Working Alone Plan at least annually or more frequently if there is a change in work arrangements which could adversely affect an employee's well-being or a report that the system is not working effectively.

Key Responsibilities

LP GAS INDUSTRIAL EQUIPMENT CO. Safety Manager

- Conducts a hazard assessment to identify existing or potential hazards related to the nature of the work or the work environment given the circumstances of the work when working alone
- Responsible for the review, implementation, and maintenance of the local worksite Working Alone Plan.
- Communicate this policy and its procedures to employees who work alone
- Annually review the effectiveness of the hazard controls and procedures and make improvements as required

Worksite Project Manager

- Responsible for the implementation and maintenance of the Working Alone Plan for their project and ensuring all assets are made available for compliance with the procedure.
- Take all reasonable and practical steps to minimize or eliminate identified working alone risks.
- Review the hazard assessment results and provide recommendations to management to minimize or eliminate identified working alone risks.
- Review annually the effectiveness of the policy and guidelines and make changes as required by consulting with management staff and employee representatives.
- Respond to employee concerns related to working alone and communicate these to management.
- Report all incidents of work site incidents immediately.
- Participate in work site hazard assessments and the implementing of procedures to eliminate or control hazards of working alone.

Safe Work Procedures

This procedure applies if an employee is working alone at a work site where assistance is not readily available if there is an emergency or the employee is ill or injured.

Worksite Assessment

A hazard assessment for working alone will anticipate work and travel time, weather, communication, type of work, employee medical conditions and training. The hazard assessment shall address hazards and identify control measures in order to minimize risk associated with working alone.

The hazard assessment will be conducted on a project by project or site basis as circumstances vary between locations and conditions. To assess this hazard LP GAS INDUSTRIAL EQUIPMENT CO. should review records, past incidents and identify measures or actions needed to correct any hazards. The assessment should involve:

- Participation by employees through methods such as one-on-one interviews, kick off safety meetings, etc.
- The assessment should utilize information from employees about their experiences working alone, their current concerns and their suggestions for improvement.
- Consideration for the time interval between checks and the procedure to follow in case the employee cannot be contacted, including provisions for emergency rescue.

Plan

LP GAS INDUSTRIAL EQUIPMENT CO. must develop and implement a written procedure for checking the well-being of a worker assigned to work alone or in isolation under conditions which present a risk of disabling injury, if the worker might not be able to secure assistance in the event of injury or other misfortune.

Communication and Regular Contact Person System

Workers must carry a cellular phone or electronic monitoring device at all times while working alone. The use of a radio, cellular/satellite phone, electronic monitoring device or another form of direct, reliable correspondence shall be used to establish an effective means of communication is established between the lone employee and designated check person.

Each site-specific Working Alone Plan shall address a check-in/check-out process where employees are monitored or contacted at regular intervals. Individuals must be monitored at regular intervals, or the individual contacts LP GAS INDUSTRIAL EQUIPMENT CO. at pre-determined intervals based on determinations made in the risk assessment.

Individual(s) by job function responsible for establishing contact with the affected employee, as well as a back-up form of communication will be established for each site-specific plan. The Safety Manager, Project Manager or designee is responsible for check-in with the lone employee at regular intervals.

A backup form of communication in the event primary communication (cell phone or land line) is unavailable will be via satellite phone or if electronic communication is not practicable or readily available at the worksite, LP GAS INDUSTRIAL EQUIPMENT CO. must ensure that a representative of LP GAS INDUSTRIAL EQUIPMENT CO. or another competent employee visits the employee at regular intervals. LP GAS INDUSTRIAL EQUIPMENT CO. shall document communication employee status at the check in intervals.

These visits or contacts shall be at intervals of time appropriate to the nature of the hazards associated with the employee's work.

Procedures to be Followed in the Event That a Worker Working Alone Does Not Respond

Considerations such as length of time missing, weather conditions, physical fitness, etc. must be factored into the site-specific working alone program. The program must specify procedures for emergency response including provisions for contacting appropriate local officials. The program shall identify specific criteria to determine when an employee search is necessary. The minimum requirements include:

- If the working alone employee fails to respond at the scheduled contact time repeated contact efforts will be made for 1 hour.
- If the employee working alone is not contacted with 1 hour of the scheduled contact a designated individual will be dispatched for a search to the working location if within close proximity. If the working alone employee is not found, then the closest police (city) or governmental search and rescue authority shall be notified to conduct a search
- If the employee working alone is not within close proximity and does not respond to repeated contact efforts, then the closest police (city) or governmental search and rescue authority shall be notified to conduct a search.

Limitations on or Prohibitions of Specified Activities

- No heavy equipment will be operated if a worker is alone.
- No hot work will occur if a worker is alone.
- No working at heights will occur if a work is alone and requiring a personal fall arrest system.
- Other limitations will be placed based on the site-specific hazard assessment

Minimum Training or Experience

All employees will be trained (if working alone is a hazard at that location) in:

- Any revision to the written local Working Alone Plan and safe work practices.
- Being informed of working alone hazards at the LP GAS INDUSTRIAL EQUIPMENT CO. worksite and the methods used to control or eliminate them.
- The methods for identification, hazard reduction and prevention when working alone and dealing with situations or individuals that presents a potential risk.
- A worker required to work alone and any person assigned to check on the worker must be trained in the written procedure for checking the worker's well-being.
- All training shall be documented.

Provisions of PPE

- Cold weather clothing shall be worn when appropriate if a worker is alone
- Additional PPE for workers working alone will be identified in the site-specific hazard and PPE assessment process

Safe Work Practices

Controls implemented at LP GAS INDUSTRIAL EQUIPMENT CO. worksites shall, as a minimum:

- Restricted building access to buildings - card keys or regular keys after regular working hours.
- Office doors are to be locked when working alone after hours.
- Have employees check road reports and weather forecast before traveling and NOT allow travel if road conditions are dangerous.
- Develop a travel plan that includes rest breaks, a procedure for tracking overdue employees and emergency contact information.
- Ensure all LP GAS INDUSTRIAL EQUIPMENT CO. vehicles are to be equipped with cell phones or radios and first aid kits.
- Advise employees to travel with another employee when possible.
- Advise employees to park close to the building in the evening.
- Post signage, emergency contact information, and develop a communication system.
- Report suspicious activity to security or a supervisor.

Provision of Emergency Supplies

- All vehicles shall contain the appropriate emergency supplies including flares, marking devices, food, water, warm clothing during winter and other supplies as determined by the hazard assessment.
- Workers working alone shall have spare batteries for communication devices in case of power failure, a radio for local weather conditions and other equipment as determined by the hazard assessment.
- If an employee requires personal medication, they must ensure they have sufficient supplies available.

Review & Updating Working Alone Plan

- The hazard assessment and Working Alone Plan at each LP GAS INDUSTRIAL EQUIPMENT CO. worksite must be reviewed at least on an annual basis or more frequently if there is a change in work processes or arrangements which could adversely affect an employee's well-being are introduced or changed.
- The local Working Alone Plan shall also be revised if there is any indication or report that the plan is not working effectively or needs changing.