HEALTH AND SAFETY PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910 and 29 CFR 1926

STELLRR INSULATION

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Founder

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1. COMPANY OCCUPATIONAL HEALTH AND SAFETY STATEMENT

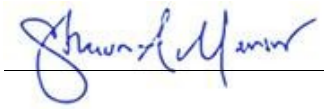
We are committed to providing a safe, accident-free, and healthy work environment for everyone. However, safe and healthy conditions do not occur by chance. They are the result of diligent work and careful attention to all company policies by everyone.

Safety demands cooperation on everyone's part. Thus, it is important that communication be kept open at all times between the management and employees. Workers who notice hazards or other safety problems, or feel that they need additional training, must notify their supervisor. Supervisors and management at all levels must address these concerns and take corrective action when warranted.

Everyone is obligated to know the safety standards for their area or job and to abide by them. Supervisors must instill a positive attitude and safety awareness in their workers through personal adherence, personal contact, training, and regularly scheduled safety meetings. It is the duty of all employees to perform their work with maximum regard for the safety of themselves and co-workers.

Our safety policies are based on past experience and current standards and are also an integral part of the company's personnel policies. This means that compliance with the policies is a condition of employment and must be taken seriously. Failure to comply is sufficient grounds for disciplinary action or termination of employment.

Safety and health are top priorities in this organization and every bit as important as productivity and quality. In fact, they go hand in hand. Of course, the best reason for you to observe these policies is because it's in your own self-interest to do so. Conscientiously following them can help you stay safe, healthy, and able to work, play, and enjoy life to its fullest.



Signature of Shawn Mansur, Founder

STELLRR INSULATION

2. SAFETY AND HEALTH PROGRAM

It is the policy and top priority of this company to provide an accident-free and comfortable work environment by eliminating recognized hazards from the workplace. Our health and safety program, and specific individual programs, have been developed to ensure compliance with federal, state, and local regulations with emphasis on the Occupational Health and Safety Rules and Regulations that apply to our operations.

In order to maintain the safety standards desired by our company, it is necessary to actively pursue an accident prevention program through all levels of our company, from top management to all employees. Health and safety are functional responsibilities of each supervisor.

Health and safety are of vital interest to everyone in the company; each level of our organization is accountable for safe performance. Compliance with this program and safety and health rules is taken very seriously. This means that failure to comply is sufficient grounds for disciplinary action or termination of employment. These policies are an integral part of the company's personnel policies.

a. Occupational Health and Safety Act

The Occupational Health and Safety Act of 1970 requires that every employer engaged in business shall perform the following:

I. Furnish to each employee a place of employment free from recognized hazards that are causing or likely to cause death or serious physical harm.

II. Comply with occupational health and safety standards and rules, regulations, and orders pursuant to the Act that are applicable to company business and operations.

III. Comply with, and require all employees to comply with, occupational health and safety standards and regulations under the Act that are applicable to their actions and situations.

IV. Encourage employees to contact their immediate superior for information that will help them understand their responsibilities under the Act.

b. Administration and Responsibilities

Our goal is to protect employees from injury while working for our company. This must receive top priority from everyone.

Duties and responsibilities of all personnel under our health and safety program are described in the following:

I. Founder

- Administers all aspects of the occupational health and safety program

- Develops programs and technical guidance to identify and remove physical, chemical, and biological hazards from facilities, operations, and sites
- Assists management and supervisors in the health and safety training of employees
- Conducts inspections to identify unhealthy or unsafe conditions or work practices and completes written reports of inspections
- Recommends programs and activities that will develop and maintain incentives for and motivation of employees in health and safety
- Recommends disciplinary action for repeat violators of health and safety rules
- Maintains the state health and safety poster, emergency telephone numbers, OSHA Form 300, and other notices required by OSHA and ensures this information is posted in places where employees can see them on each job
- Develops and maintains accident and incident investigation and reporting procedures and systems; investigates serious or reportable accidents and takes action to eliminate accident causes (reportable incidents consist of fatalities, lost work day cases, and days without lost work requiring medical treatment); and keeps management informed of findings
- Report accidents that result in an occupational fatality or three or more hospitalized workers within eight (8) hours of occurrence

II. Project Manager

- Familiarizes himself or herself with health and safety regulations related to his or her area of responsibility
- Directs, implements, and coordinates health and safety program elements and activities within area of responsibility
- Requires all employees supervised to use individual protective equipment and safety devices
- Ensures that safety equipment is available, maintained, used, and stored correctly
- Ensures that all persons within area of responsibility receive job safety and health training as required
- Conducts quarterly health and safety inspections of work area and directs correction of unsafe conditions

- Conducts monthly safety briefings with all supervisors and workers
- Ensures that supervisors are aware of and comply with requirements for safe practices
- Investigates all accidents within area of responsibility, reviews all accidents and incidents with supervisors and workers involved, ensures accident reports and Workers' Compensation forms are completed and submitted as appropriate, and ensures that corrective action is taken immediately to eliminate the cause of the accident
- Requires all subcontractors and subcontractor personnel working within the company's facilities to comply with health and safety regulations
- Maintains copies of applicable programs and Workers' Safety forms in the work area, in accordance with company practice and policy (for example, the hazard communication program, safety data sheets, OSHA 300 Injury Log if the work area is not located near or with the central office, etc.)

III. Master Installer (Present on Every Jobsite at All Times)

- Learns, explains, and enforces health and safety regulations that apply to company operations within his or her area of responsibility
- Ensures that persons under his or her supervision use safety devices and proper individual protective equipment
- Instructs and trains all persons within area of responsibility in job health and safety requirements, and requires compliance by workers with the safety rules established
- Conducts frequent and regular safety and health inspections of his or her work areas and ensures that no unsafe conditions exist in area of responsibility
- Conducts weekly (or more often if needed) safety briefings with all workers under his or her supervision
- Ensures that injuries are treated promptly and reported properly
- Investigates all accidents and incidents, obtains all pertinent data, and takes corrective action
- Acts on reports of hazards or hazardous conditions made to them by employees

IV. Office and Support Staff

- Maintains all records and reports of accidents that have taken place during company operations (these forms and reports may include the OSHA Form 300 Injury/Illness Log and the OSHA Form 301 Supplementary Record of Occupational Injury and Illnesses)
- Ensures that employee's Report of Occupational Injury or Disease report is filed with the Workers' Compensation office within seven days of employee's notification of an occupational injury or disease
- Processes all paperwork associated with accidents, on-site inspections, and in-house audits and maintains permanent record for company files
- Maintains all medical records, evaluations, and exposure monitoring records for a period of 30 years
- Maintains all training records for a minimum of three (3) years.

V. All Employees

- Be familiar with and comply with proper health and safety practices.
- Use the required safety devices and proper personal protective safety equipment.
- Notify supervisor immediately of unsafe conditions or acts, accidents, and injuries.

3. WORKERS' COMPENSATION CLAIMS MANAGEMENT

a. Required Actions

The following actions will be taken on all accidents and injuries being submitted as a Workers' Compensation claim:

I. Injured employees must report all accidents and injuries to their supervisor immediately (within 72 hours), who in turn will notify other appropriate company officials, such as the Founder. All accidents and incidents will be investigated by the Founder or Project Manager to determine the facts and take corrective action to prevent recurrence.

II. Employees, within ten (10) days after notification to the employer, must complete the Worker Information section only of the Workers' Safety and Compensation Report of the Occupational Injury or Disease forms package.

III. The Project Manager will complete the Employer's Information section of the same report within seven days of the notification.

IV. The claims manager will ensure that the Texas Workforce Commission is notified as appropriate by filing the above report within seven days of the notification.

V. The accident investigation must confirm that the injury was job related for the resultant claim to be valid.

VI. Injured employees will be entered into a modified job program, i.e., light duty, restricted duty, part-time duty, when such is recommended by the attending physician.

4. OSHA FORM 300 INJURY/ILLNESS LOG (If Required)

The OSHA Form 300 log of all recordable occupational injuries and illnesses is maintained for and at the main office. (This involves ensuring the information from the initial accident report is posted onto the master form in the main office within six days after the accident has occurred.) The summary section of the OSHA Form 300 must be posted at each work facility or site by February 1st of the following year and remain in place until March 1st.

5. HAZARD COMMUNICATION PROGRAM (Appendix A)

This company has a Hazardous Communication Program in place because of our work with and exposure to hazardous chemicals in the workplace. Important elements of this program are a written program explaining what the program is about, a master listing of hazardous chemicals in the workplace, safety data sheets (SDS) of those chemicals, labeling requirements of chemicals containers, and training for all employees on the program and its elements. Employees are encouraged to review this program at any time.

6. TRAINING

Training and education cannot be over-emphasized as a means of learning a healthful and safe approach to employee work effort. Knowledge of the safety rules and how and when to function under the rules, supplemented by compliance, is essential to safety.

- Employees scheduled for any safety and health training will attend such training.
- New employees will be provided orientation training and will be furnished information and literature covering the company health and safety policies, rules, and procedures. This orientation training must be provided prior to the employee's exposure to the work environment.

- Individual job and task training will be provided to all employees. Included in this training are the applicable regulations and standards for their job; the recognition, avoidance, and prevention of unsafe conditions; areas and activities that require personal protection equipment; and how to use protective equipment (such as respirators, etc.).
- Quarterly on-going safety training sessions will be conducted to provide information and training on new equipment, new procedures, new chemicals, refresher/remedial training in specific areas, or meet annual requirements. Such training may be held in conjunction with the safety briefings or meetings addressed elsewhere in this program.
- Various individual Workers' Safety programs require that site-specific training be provided to employees. Supervisors will ensure their employees are scheduled and provided this training as required. Examples of specified training include (but are not limited to) the following:
    - Fire extinguisher training
    - Confined space entry
    - Respirator care and use
    - Hazard communication
    - Lock-out/tag-out procedures
    - Industrial truck/forklift operation
    - Electrical work
- The training addressed above will be documented in the employees' personnel records, in a master training record, or both.

NOTE: Employers should review their training requirements and include training timeframes or schedules in this section. Training outlines and guidelines should also be developed to ensure all areas and items are covered in this training.

7. HAZARD IDENTIFICATION, ASSESSMENT, AND CONTROL

Hazard identification and elimination is not only an inherent responsibility of supervision in providing a safe workplace for employees but also requires employee involvement. As such, hazard evaluation and control shall be an on-going concern for all. It is the responsibility of everyone (management, supervisors, and all employees) to identify, report, and correct all possible hazards. Employees are particularly important in this process as they are in the best position to identify hazards in the workplace and day-to-day operations. Reporting hazards is a protected activity, and no action will be taken against anyone for identifying unsafe conditions. Reports should be made to the Safety Manager or Project Manager for appropriate action.

This company has a procedure for conducting inspections of workplaces/jobsites for compliance with health and safety rules. The purpose of the in-house inspection is to identify hazards and unsafe practices before they cause an injury or accident.

a. Formal Health and Safety Inspection Timeline

Formal safety and health inspections will be conducted under the following minimum timelines:

- Founder: Quarterly inspections of all fixed facilities and shops
- Project Manager: Quarterly inspections of his or her area of responsibility
- Master Installer: Quarterly inspections of area of responsibility, not in conjunction with the above inspections
- At least an annual review of the company's health and safety program
- OSHA, Workers' Safety: Annually – Technical assistance, private consultation services, and insurance company representatives conducting on-site consultation and inspections, if desired and requested

b. Post Inspection Actions

After completing jobsite or facility inspections, the person making the inspection will perform the following:

- Discuss findings with employees or persons responsible for creating the condition. Invite their comments, suggestions, and aid.
- Ensure that recommended corrections and changes are transmitted to or discussed with the proper supervisor or other person for correction.
- Follow up on changes, corrections, and other actions necessary.
- Provide a checklist copy to the company health and safety person along with a statement of corrective actions taken or still required.

c. Health and Safety Inspection Guidelines

This listing includes items, areas, and categories that may be looked at during health and safety inspections of the workplace and in the shop. It is generic and not all-inclusive but provides a guideline of areas to be surveyed or developed into a checklist for use during the inspection.

- First aid safety and health equipment
- Posters, signs required by OSHA and Workers' Safety, and health and safety practices

- Accident reporting records
- Employee training provided, such as health and safety talks, worker orientation, etc.; records maintained
- Equipment and tools (e.g., hand, power, welding): condition and use
- Protective guards and devices: availability, use, proper maintenance, and operating condition
- Housekeeping: maintaining clean work areas, free of trash or debris accumulation, tripping, and slipping hazards
- Lighting: adequacy and safety
- Sanitation: water and toilets for cleanliness and proper operation
- Noise: hazards and hearing protection
- Ventilation: gases, vapors, fumes, and dusts
- Availability of personal protective equipment: hard hats and head protection, respirators, safety belts, life lines, safety shoes, eye protection, and gloves
- Fire protection, prevention, and control, as well as use of fire protection equipment
- Temporary buildings, trailers, sheds
- Open yard storage
- Storage of flammable and combustible liquids including service and refueling areas for vehicles
- Temporary heating devices
- Fall protection requirements: in place and in use
- Electrical system and devices, condition and use of cords, ground fault protection, circuit breaker panels, and receptacles and switches
- Openings: floor, wall, and safety railings
- Materials: handling equipment and elevators
- Ladders: condition and use
- Hazard communication program and Safety Data Sheets (SDS)

- Stairways: safety railings and condition
- Scaffolds: safety railings, secured
- Lock-out/tag-out procedures
- Machines and equipment: condition and guards in place
- Forklifts and other vehicles: condition and operation
- Preventive maintenance program: all inclusive and up-to-date
- Other items as appropriate

8. HEALTH AND SAFETY RULES

In order for a health and safety program to be effective, it is vital that it be understood and implemented at all levels from management to all employees.

The following are the primary occupational health and safety rules and regulations applicable to our operations that our company must comply with. A complete set of standards may be found in the OSHA Rules and Regulations for General Industry, Part 1910.

a. General Workplace Safety Rules

The following rules apply at all company facilities and on any jobsite:

- Report unsafe conditions to your immediate supervisor.
- Promptly report all accidents, injuries, and incidents to your immediate supervisor.
- Use eye and face protection where there is danger from flying objects or particles (such as when grinding, chipping, burning, welding, etc.) or from hazardous chemical splashes.
- Dress properly. Wear appropriate work clothes, gloves, and shoes or boots. Loose clothing and jewelry shall not be worn.
- Operate machines or other equipment only when all guards and safety devices are in place and in proper operating condition.
- Keep all equipment in safe working condition. Never use defective tools or equipment. Report any defective tools or equipment to your immediate supervisor.
- Properly care for and be responsible for all personal protective equipment (PPE). Wear or use any such PPE when required.

- Lock-out or tag-out or disconnect the power on any equipment or machines before any maintenance, un-jamming, and adjustments are made.
- Do not leave materials in aisles, walkways, stairways, work areas, or other points of egress.
- Practice good housekeeping at all times.
- Training on equipment is required prior to unsupervised operation.
- Compliance with all governmental regulations and rules and all company safety rules in the following sections is required.

b. Housekeeping

Proper housekeeping is the foundation for a safe work environment. It definitely helps prevent accidents and fires, as well as creating a professional appearance in the work area.

- All work areas, floors, aisles, and stairways will be kept clean, orderly, and free of tripping and slipping hazards. Oils, greases, and other liquids will be immediately cleaned up if spilled.
- Combustible scrap, debris, and garbage shall be removed from the work area at frequent and regular intervals.
- Stairways, walkways, exit doors, the front of electrical panels, or access to fire-fighting equipment will be kept clear of storage, materials, supplies, trash, and other debris at all times.
- Overhead storage areas will be marked with the maximum load rating.

c. Fire Prevention

- All portable fire extinguishers will be conspicuously located, accessible, and maintained in operating condition. Portable fire extinguishers will receive an annual service check and a monthly visual inspection. These will be documented on the tag on the extinguisher or other form.
- All employees must know the location of fire-fighting equipment in the work area and have knowledge of its use and application.
- Exits will be marked as such by a readily visible sign. Other doors likely to be mistaken for an exit will be marked as to their character or "Not an Exit."
- Only approved safety cans shall be used for handling or storing flammable liquids in quantities greater than one gallon. For one gallon or less, only the original container or a safety can may be used.

- When heat-producing equipment is used, the work area must be kept clear of all fire hazards, and all sources of potential fires will be eliminated.
- Fire extinguishers will be available at all times when utilizing heat-producing equipment.

d. Industrial Hygiene and Occupational Health

- When no medical facility is reasonably accessible (time and distance) to the workplace, a person who has a valid certificate of first aid training and first aid supplies will be available at the workplace to render first aid.
- Employees exposed to noise levels above the permissible noise level will be included in the hearing conservation program. Hazardous noise areas will be posted and appropriate hearing protection will be worn in those areas.
- Employees exposed to harmful gases, fumes, dust, and similar airborne hazards will be furnished protection through proper ventilation (engineering controls) and personal respiratory equipment.
- Any demolition, renovation, or self-help work will be assessed for lead and asbestos exposure, particularly if drywall or any painted surfaces or abrasive blasting or grinding is involved.

e. Personal Protective and Related Equipment

Personal protective equipment must be worn as required for each job in all operations where there is an exposure to hazardous conditions. This exposure is determined by a personal protective equipment hazard assessment of the workplace by the supervisor, as described in Appendix B. Equipment selection and wearing requirements are determined from this assessment.

- Safety glasses, goggles, or face shields will be worn in those areas where there is a reasonable probability of injury to the eye from flying particles, molten metal, chemicals/acids/caustics, light radiation, or other eye hazards.
- Head protection (hard hats) will be worn for protection from falling objects or work near energized electrical contact.
- Foot protection will be worn where there is danger to the foot from falling or rolling objects, objects piercing the sole, or electrical hazards.
- Hand protection is required when hands are exposed to severe cuts or abrasions, chemical or thermal burns, or chemical absorption.
- Appropriate gloves, aprons, goggles, and boots will be used when necessary for protection against acids and other chemicals that could injure employees.

- Respiratory equipment in many cases is needed for protection against toxic and hazardous fumes and dusts. Supervisors must verify which equipment meets the need for breathing safety. Only MSHA- or NIOSH-approved equipment will be used.

- The use of safety harnesses and lanyards are required when working more than 10 feet above a floor or ground level and there are no guardrails or other form of fall protection, and on certain suspended scaffolds. Each employee will be on a separate safety line, and this line will be adjusted so that the employee cannot fall more than six feet.

f. Lock-out/Tag-out Program

- Before any work or maintenance is performed on any machine, equipment, tool, or electrical system, it will be made safe by removing any source of energy or power to it, such as electrical, air or hydraulic pressure, spring or stored energy, or thermal (heat or cold).

- The Lock-out/Tag-out Program provides for a safe method of working on, near, or in machinery or equipment that can cause serious injury. This program will be used by all employees to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment, or the release of stored energy, could cause injury.

g. Electrical

- Live electrical parts shall be guarded against accidental contact by cabinets, enclosures, location, or guarding. Open circuit breaker openings or knock-out holes, broken receptacles and switches, missing covering plates, etc., will be reported to supervisors for repair or replacement.

- Working and clear space around electric equipment and distribution boxes will be kept clear and assessable.

- Circuit breakers, switch boxes, etc. will be legibly marked to indicate their purpose.

- All extension cords and electric powered tools (except double insulated) will be grounded. Ground prongs will not be removed.

- Electric cords and their strain relief devices will be in good condition with no splices.

- Electric wiring and cords entering or exiting any panel, control, or junction box will be secured with clamps or other appropriate strain relief device.

- Extension cords and other flexible cords will not be used in lieu of permanent wiring and receptacles. Cords will not be run through holes in doors, walls, windows, nor will they be fastened to walls, poles, equipment, etc.

- All lamps below seven feet used for general illumination will have the bulbs protected against breakage.
- All electrical equipment shall be visually inspected prior to each use.

h. Guarding

- All flywheels, shafting, pulleys, belts, gears, sprockets, chains, and fan blades will be guarded or enclosed when located below seven feet above the floor or work platform.
- Guards installed on machinery and equipment, such as air compressors, conveyors, drill presses, etc., will not be removed during operation. Guards removed for servicing or other work on the machine or equipment will be immediately replaced upon completion of the work.
- Woodworking equipment, such as power saws, radial arm saws, table saws, or portable abrasive grinders, will not be operated unless all required guards are in place. Featherboards and pushboards will be used when necessary.

i. Compressed Gas Cylinders

- All gas cylinders shall have their contents clearly marked on the outside of each cylinder.
- Cylinders must be transported, stored, and secured in an upright position. They will never be left laying on the ground or floor, or used as rollers or supports.
- Cylinder valves must be protected with caps and closed when not in use.
- Oxygen cylinders and fittings will be kept away from oil or grease. Oxygen cylinders will be stored at least 20 feet from any fuel gas cylinder or separated by a fire barrier at least five feet high.
- When cylinders are hoisted, they will be secured in a cradle, sling-board, or pallet. Valve protection caps will not be used for lifting cylinders from one vertical level to another.

j. Ladders

- Ladders will be inspected frequently (prior to use each time) to identify any unsafe conditions. Those ladders that have developed defects will be removed from service and repaired or replaced. They will be tagged or marked as such.
- Portable ladders will be placed as to prevent slipping, or if used on other than stable, level, and dry surfaces, will be tied off or held. A simple rule for setting up a ladder at the proper angle is to place the base from the vertical wall equal to one-fourth the working length of the ladder.

- Portable ladders will extend at least three feet above the upper level to which the ladder is used to gain access.
- The top of a stepladder will not be used as a step.
- Only one person will be on a ladder at a time.

k. Flammable and Combustible Liquids

- Only approved safety cans, original containers, or portable tanks will be used to store flammable or combustible liquids.
- Above ground storage tanks will be separated from each other by a minimum of three feet or 1/6 the sum of their diameters. Dikes or drainage to prevent accidental discharge from reaching adjoining property or waterways will be provided.
- No more than 25 gallons of Class IA and 120 gallons of Class IB, IC, II, or III liquids may be stored outside a storage cabinet or an inside storage room.
- An emergency shut-off switch located 15–75 feet from the pumps and a fire extinguisher will be provided at company fuel servicing areas.

l. Cranes and Hoists

- All cranes and hoists will be inspected prior to each use and during use to make sure they are in safe operating condition.
- A monthly inspection of hooks, running ropes, and hoist chains will be made and a certification record to include date, inspector signature, and hook, rope, or chain identifier will be maintained.
- Inspections of frequent (daily or monthly) and periodic (1–12 months) intervals, depending on severity of use, will be made of all cranes. See 1910.179(j) for inspection requirements.
- The rated load of the crane or hoist will be plainly marked on each side of the crane. If the crane has more than one hoisting unit, each rating will be marked on the unit or its load block.
- Loads will never be swung over the heads of workers in the area.
- Tag lines must be used to control loads and keep workers away.
- Loads, booms, and rigging will be kept at least 10 feet of energized electrical lines rated 50 kV or lower unless the lines are de-energized. For lines rated greater than 50 kV follow Safety Rules and Regulations, 1910.180(j).
- Job or shop hooks or other makeshift fasteners using bolts, wire, etc. will not be used.

- All slings will be inspected each day before use. Damaged or defective slings will be immediately removed from service. In addition, alloy chain slings will receive a thorough inspection periodically (at least annually).
- Alloy steel chain slings, metal mesh slings, and synthetic web slings will have permanently affixed identification, markings, or coding to show rated capacities.

m. Welding and Brazing

- Combustible material will be cleared for a radius of 35 feet from the area around cutting or welding operations. If the combustible material cannot be cleared or the work cannot be moved, then the welding or cutting will not be done.
- Welding helmets and goggles will be worn for eye protection and to prevent flash burns. Eye protection will be worn to guard against slag while chipping, grinding, and dressing welds.
- Welding screens will be used and in proper position to protect nearby workers from welding rays.
- Cables, leads, hoses, and connections will be placed so that they present no fire or tripping hazards. Cables will not be wrapped around the welder's body.
- Oxygen cylinders will be stored at least 20 feet from fuel gas cylinders, or separated by a noncombustible fire wall with a one-half hour rating at least five high.
- Valve protection caps will be in place on cylinders not in use.
- Ventilation is a prerequisite for welding in any confined spaces.
- There shall be no repairs or damaged to the cable within 10 feet of the stinger.

n. Tools

- Hand tools with broken or cracked handles, mushroomed heads, or other defects will not be used. Files will have handles installed.
- Take special precautions when using power tools. Defective tools will be removed from service.
- Power tools will be turned off and motion stopped before setting tools down.
- Tools will be disconnected from power source before changing drills, blades, or bits, or attempting repair or adjustment. Never leave a running tool unattended.
- Power saws, table saws, and radial arm saws will have operational blade guards installed and used. Anti-kickback teeth and spreaders will be used when rip sawing.

- Portable abrasive side-winder grinders will have guards installed covering the upper and back portions of the abrasive wheel. Wheel speed ratings will never be less than the grinder RPM speed.
- Pedestal grinders will be permanently mounted, tool rests installed and adjusted to within 1/8 inch of the wheel, tongue guards installed and adjusted to within 1/4 inch of the wheel, and side spindle and nut guards installed.
- Air compressor receivers will be drained frequently to prevent buildup of water in the tank.
- Compressed air will not be used for cleaning purposes except when pressure is reduced to less than 30 psi by regulating or use of a safety nozzle, and then only with effective chip guarding and proper personal protective equipment.
- Any employee-furnished tools of any nature must meet all OSHA safety regulations and ANSI requirements.

o. Safety Railings and Other Fall Protection

- All open-sided floors and platforms four feet or more above adjacent floor or ground level will be guarded by a standard railing (top and mid rail, toe board if required).
- All stairways of four or more risers will be guarded by a handrail or stair rails on the open side. Handrails or stair rails will be provided on both sides if the stairs are more than 44 inches wide.
- When a hole or floor opening is created during a work activity, a cover or a barricade must be installed immediately.
- Safety harnesses, belts, lanyards, lines, and lifelines may be used in lieu of other fall protection systems to provide the required fall protection.
- Adjustment of lanyards must provide for not more than a six-foot fall, and all tie-off points must be at least waist high.

p. Scaffolds

- Scaffold platforms more than 10 feet above the ground, floor, or lower level will have standard guardrails (consisting of top rail, mid rail, and toe board) installed on all open sides and ends of platforms.
- Planking will be laid tight, overlap at least 12 inches, and extend over end supports by 6–12 inches.
- Mobile scaffolds will be erected no more than a maximum height of four times their minimum base dimension.

- Scaffolds will not be overloaded beyond their design loadings.

q. Forklifts

- Only authorized and trained employees will operate forklifts and other industrial trucks.
- Safe speeds, load handling, turning, and other safe driving practices will be followed at all times.
- Operators will ensure loads are stable and secure before moving.
- Employees will not operate any forklift that is in need of repairs, defective, or unsafe. Such forklifts will be removed from service for repair.

r. Aerial Lifts

- Only trained employees will operate aerial lifts (cherry pickers, scissor lifts, extensible and articulating boom platforms).
- A body belt or harness will be worn and a lanyard attached to the boom or basket when working from an aerial lift.
- Employees will stand firmly on the basket floor, and not sit, stand, or climb on the edge of the basket. Planks, ladders, or other devices will not be used for additional elevation.
- Aerial lift trucks will not be moved with workers in an elevated basket.
- Lift controls will be tested each day prior to use.

s. Excavations and Trenches

- Any excavation or trench five feet or more in depth (or less than five feet and showing potential of cave-in) will be provided cave-in protection through shoring, sloping, benching, or the use of trench shields. Specific requirements of each system are dependent upon the soil classification as determined by a competent person.
- A competent person will inspect each excavation or trench daily prior to start of work, after every rainstorm or other hazard increasing occurrence, and as needed throughout the shift.
- Means of egress will be provided in trenches four feet or more in depth so as to require no more than 25 feet of lateral travel for each employee in the trench.
- Spoil piles and other equipment will be kept at least two feet from the edge of the trench or excavation.

t. Miscellaneous

- Only trained employees will service large truck wheels. A cage or other restraining device plus an airline assembly consisting of a clip-on chuck, gauge, and hose will be used to inflate tires.
- Any inspection, disassembly, or assembly of vehicle brakes or clutches must address the hazard of asbestos exposure. See 1910.1001, Appendix F, for mandatory guidelines and requirements for such work.

9. OSHA WORKERS' SAFETY—INDIVIDUAL SAFETY AND HEALTH PROGRAMS LISTING

The Occupational Health and Safety Rules and Regulations specify various individual programs that are applicable to our company. Highlights of these programs are provided below, and specific written programs or procedures are incorporated as appendices in this document or are available separately.

Health and Safety Program—Containing Specific Company Health and Safety Rules

These rules provide safety guidance for the company and employees to follow in the workplace. They cover various requirements in such areas as housekeeping, fire prevention, electrical, ladders, scaffolds, machine guarding, material handling, etc., that can be encountered in the workplace or on the job site.

a. Hazard Communication Program (Appendix A)

If employees are exposed to or work with hazardous chemicals in the workplace, this program is required. Important elements of the program include a master listing of chemicals, safety data sheets for each chemical, labeling, and training of employees.

b. Personal Protective Equipment Hazard Assessment (Appendix B)

Employers must assess their workplaces to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (eye, face, head, foot, or hand protection). This assessment must be documented through a written certification that identifies the workplace evaluated, the person certifying that the assessment has been completed, and the dates of the assessment. It must also identify itself as a certification of hazard assessment.

c. Confined Space Entry Program (Appendix C)

If employees enter a confined space that contains or has the potential to contain an atmospheric or physical hazard, this program is required. Primary elements of the program are identification of applicable confined spaces, testing and monitoring, control or elimination of hazards, protective equipment, specific written entry authorization, attendants, training, and rescue.

d. Respiratory Protection Program (Appendix D)

If employees are exposed to hazardous or toxic chemical, paint, or other gases, vapors, fumes, dusts, or mists above the permissible exposure limit, or if respirators are worn by employees, this program is required. Program elements are a written program for the selection, maintenance, care, and use of respirators; fit testing; training; and employee physical evaluation for use.

e. Hearing Conservation Program (Appendix E)

If employees are exposed to noise levels above the permissible noise exposures, then both protection against the effects of noise through engineering controls, administrative actions, or personal protective equipment and an effective hearing conservation program are required. Program elements would include a written program, identification and posting of hazardous noise areas, establishment of administrative actions for exposure control, noise monitoring, hearing evaluations and follow-on testing, personal protective equipment (hearing protection), and maintenance of medical records.

f. Lock-out/Tag-out Program (Appendix F)

If employees service or maintain machines or equipment and the unexpected energization or start up of the equipment or release of stored energy could cause injury to the employee, this program is required. Such forms of hazardous energy include electrical, hydraulic, pneumatic, heat, or chemical. Program elements include written energy control procedures delineating specific lock-out/tag-out action for each machine or piece of equipment, employee training, and periodic inspections.

g. Emergency Response Plan (Appendix G)

If employees are engaged in emergency response to a hazardous substance or chemical release, then an emergency response plan must be developed and implemented to handle anticipated emergencies. Program elements include a written response plan, identification and training of responding employees, medical surveillance and consultation, and post-response operations.

h. Fall Protection Plan (Appendix H)

A fall protection plan is needed if any employees work on platforms (ladders, scaffolding, scissor lifts, etc.) or building surfaces more than six feet above the floor or ground. Program elements include a written plan, employee training, and recordkeeping.

i. Jobsite Fire Prevention Plan (Appendix I)

A jobsite fire prevention plan must be completed for each jobsite. The plan includes housekeeping, maintenance, training, and program evaluation.

j. Injury and Illness Prevention Program (Appendix J)

Employers are required to furnish to employees a workplace that is free from recognized hazards. An in-depth hazard evaluation or safety inspection conducted by state agencies, private consultants, insurance companies, or in-house are means of identifying and eliminating workplace hazards. An on-going self-inspection program will help ensure that hazards are identified, eliminated, and controlled.

k. Powered Industrial Truck (Forklift) Safety Program (Appendix K)

Employers that have forklifts or scissor lifts either at their facility or on a jobsite must include this program. The program includes definitions, hazards, as well as training and recordkeeping for all employees using this equipment.

l. Spill Prevention and Response Plan (Appendix L)

Employers that use or handle bulk liquid chemicals, which include SPF chemicals, must include this plan. It includes a program to mitigate spills and an emergency response plan in the event of a chemical spill.

m. Asbestos and Lead Hazard Awareness Program (Appendix M)

Asbestos and lead programs, listed below, are but two programs that may be required due to exposure to hazardous and toxic substances. Employers must refer to the Rules and Regulations for other substances, such as benzene, formaldehyde, ethylene oxide, etc., with exposure programs that may apply to them.

n. Blood-Borne Pathogens Program (Appendix N)

Employees that administer first aid must be aware of the risks and hazards from blood-borne pathogens. Elements of this plan include awareness training, exposure controls, compliance, communication of hazards to employees, and recordkeeping.

o. Assured Equipment Grounding Program (Appendix O)

Employers that use any electrical power tools, including hand and shop power tools, as well as portable generators, must be aware and trained on how to properly ground these tools to prevent electrical shock.

APPENDIX A:

HAZARD COMMUNICATION PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.1200

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

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1. COMPANY HAZARD COMMUNICATION POLICY

To ensure that information about the dangers of all hazardous chemicals used by STELLRR INSULATION is known by all affected employees, the following hazardous information program has been established. Under this program, you will be informed of the contents of the OSHA Hazard Communications standard, the hazardous properties of chemicals with which you work, safe handling procedures, and measures to take to protect yourself from these chemicals.

2. COMPANY HAZARD COMMUNICATION PROGRAM

This program applies to all work operations in our company where you may be exposed to hazardous chemicals under normal working conditions or during an emergency situation. All work units of this company will participate in the Hazard Communication Program. Copies of the Hazard Communication Program are available in the Company Vehicles and Main Office for review by any interested employee.

The Founder is the program coordinator with overall responsibility for the program, including reviewing and updating this plan as necessary.

a. Container Labeling

The Founder will verify that all containers received for use will be clearly labeled with product identification, signal work, hazard statements, precautionary statements, pictograms, supplier's information, and supplemental information.

The Project Manager or Master Installer on each jobsite will ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with labels marked with the identity and the appropriate hazard warning. For help with labeling, see the Founder.

On the following individual stationary process containers, we are using N/A rather than a label to convey the required information:

N/A All materials are kept in the original labeled containers.

We are using an in-house labeling system that relies on the same graphics as typically used with hazard signs.

The Founder will review the company labeling procedures every year and will update labels as required.

b. Safety Data Sheets (SDS)

The Founder is responsible for establishing and monitoring the company SDS program. He or she will ensure that procedures are developed to obtain the necessary SDSs and will review incoming SDSs for new or significant health and safety information. He or she will see that any

new information is communicated to affected employees. The procedure below will be followed when an SDS is not received at the time of initial shipment:

Notify the proper person, and they will create an SDS for attaching to the materials.

Copies of SDSs for all hazardous chemicals to which employees are exposed or are potentially exposed will be kept in the Main Office, Company Vehicles, and/or the Trailers.

SDSs will be readily available to all employees during each work shift. If an SDS is not available, contact the Founder, Project Manager, or Master Installer.

SDSs will be readily available to employees in each work area using the following format:

In a yellow binder. If an alternative to paper copies is issued on the SDSs, it will be hosted on the company intranet.

When revised SDSs are received, the following procedures will be followed to replace old MSDS:

I. Founder will provide copies to all Project Managers.

II. Project Managers will provide these copies to every Master Installer.

c. Employee Training and Information

The Founder is responsible for the Hazard Communication Program and will ensure that all program elements are carried out.

Everyone who works with or is potentially exposed to hazardous chemicals will receive initial training on the hazard communication standard and this plan before starting work. Each new employee will attend a health and safety orientation that includes the following information and training:

- An overview of the OSHA hazard communication standard
- The hazardous chemicals present at his or her work area
- The physical and health risks of the hazardous chemicals
- Symptoms of overexposure
- How to determine the presence or release of hazardous chemicals in the work area
- How to reduce or prevent exposure to hazardous chemicals through use of control procedures, work practices, and personal protective equipment
- Steps the company has taken to reduce or prevent exposure to hazardous chemicals
- Procedures to follow if employees are overexposed to hazardous chemicals

- How to read labels and SDSs to obtain hazard information
- Location of the SDS file and written Hazard Communication Program

For the application of Spray Polyurethane Foam, every employee involved in SPF chemical transport or application will take the American Chemistry Council's Center for the Polyurethanes Industry's Spray Polyurethane Foam Chemical Health and Safety Training online prior to handling SPF chemicals or within one week of employment. A passing score on the accompanying quiz is required, and a certificate of completion will be filed under each employee's record.

Prior to introducing a new chemical hazard into any section of this company, each employee in that section will be given information and training as outlined above for the new chemical hazard. The training format will be in the form of a printed handout or PDF.

d. Hazardous Non-Routine Tasks

Periodically, employees are required to perform non-routine tasks that are hazardous. Examples of non-routine tasks are confined space entry, tank cleaning, and painting reactor vessels. Prior to starting work on such projects, each affected employee will be given information by the Founder about the hazardous chemicals he or she may encounter during such activity. This information will include specific chemical hazards, protective and safety measures the employee should use, and steps the company is taking to reduce the hazards, including ventilation, respirators, the presence of another employee (buddy systems), and emergency procedures.

Examples of non-routine tasks performed by employees of this company are:

Task	*Hazardous Chemical*

e. Informing Other Employers and Contractors

It is the responsibility of the Project Manager to provide other employers and contractors with information about hazardous chemicals that their employees may be exposed to on a job site and about suggested precautions for employees. It is the responsibility of the Project Manager to obtain information about hazardous chemicals used by other employers to which employees of this company may be exposed.

Other employers and contractors will be provided with SDSs for hazardous chemicals generated by this company's operations in the following manner:

- By paper copy to their jobsite supervisor with signature receipt
- By email to their responsible party supervisor with return receipt

In addition to providing a copy of an SDS to other employers, other employers will be informed of necessary precautionary measures to protect employees exposed to operations performed by this company. This includes understanding the “Do Not Enter” signage and safety tapes installed around active spray zones.

Also, other employers will be informed of the hazard labels used by the company. If symbolic or numerical labeling systems are used, the employees of other employers will be provided with information to understand the labels used for hazardous chemicals for which they may be exposed.

f. List of Hazardous Chemicals

A list of all known hazardous chemicals used by our employees is attached to this plan. This list includes the name of the chemical, the manufacturer, the work area in which the chemical is used, dates of use, and quantity used. Further information on each chemical may be obtained from the SDS, located in the Trailer and Main Office.

When new chemicals are received, this list is updated (including the date the chemicals were introduced) within 30 days. To ensure any new chemical is added in a timely manner, the following procedures shall be followed:

The receiving person will notify the Founder of the new chemical and the need for updating all SDS. The Founder will then Approve the printable document and have a responsible party install the document in the appropriate areas.

The hazardous chemical inventory is compiled and maintained by the Founder, 512-520-0044.

g. Chemicals in Unlabeled Pipes

Work activities are sometimes performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee shall contact the Founder for information regarding:

- The chemical in the pipes
- Potential hazards
- Required safety precautions

{Include here the chemical list developed during the inventory. Arrange this list so that you are able to cross-reference it with your SDS file and the labels on your containers. Additional useful information, such as the manufacturer's telephone number, an emergency number, scientific name, CAS number, and the associated task can be included.} CURRENTLY N/A

h. Program Availability

A copy of this program will be made available to employees and their representatives upon request.

APPENDIX B:

PERSONAL PROTECTIVE EQUIPMENT HAZARD ASSESSMENT CHECKLIST

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.132

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Founder

Table B1 – Hazard Assessment Checklist

Col #	Chart/Table	Action
1 & 2	**Personal Protective Equipment Review**	Using this Chart, review the first column on the list (Eye and Face Protection). If employees are exposed to any item listed under that heading, enter "Yes" in Column 2. If the answer is "No," skip this section. Go to the second item on the list (Head Protection). When you enter a "Yes" in Column 2, go to the next step.
3	**Comment**	Use this column to enter information you may need, such as the name of the job or job task that exposes the employee to a hazard.
4	**Source of Hazard**	Enter the source of the hazard (i.e., flying particles, splashing acid, etc.) as an aid to your decision-making process.
5	**Hazard Frequency**	Enter how long the job or task lasts—8 hours, 4 hours, continuous—in order to determine how long the employee is exposed to the hazard.
6	**Hazard Probability**	Using the Hazard Probability and Severity Chart (next page), enter the alpha character (A, B, C, D) that explains the likelihood of an accident occurring. A—Likely to occur immediately or within a short period of time B—Probably will occur in time C—May occur in time D—Unlikely to occur
7	**Hazard Severity**	Using the Hazard Probability and Severity Chart (next page), enter the alpha character (C, M, N) that explains how severe the injury would be if it did occur. C: CRITICAL—May cause severe injury M: MARGINAL—May cause minor injury N: NEGLIGIBLE—Probably would not affect personnel or may cause first aid visit
8	**Hazard Index**	Using the Hazard Probability and Severity Chart (next page), find where the alpha characters intersect in the Index, and enter the numeric character (1-2-3). 1—PPE is required. 2—PPE is strongly recommended. 3—PPE may not be necessary.
9	**Appropriate PPE**	Enter in type of PPE that will be provided and used to protect the employee from the hazard if Hazard Index is 1 or 2. The employer must determine whether or not PPE is to be used.

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

Table B2 – Hazard Severity Checklist

PPE Matrix	Hazard Severity		
Hazard Probability	C—CRITICAL May cause severe injury	M—MARGINAL May cause minor injury	N—NEGLIGIBLE Probably would not affect personnel or may cause first aid visit
A—Likely to occur immediately or within a short period of time	1	1	2
B—Probably will occur in time	1	2	2
C—May occur in time	2	2	3
D—Unlikely to occur	2	3	3

NOTE: In all cases, engineering modifications are strongly recommended. Personal protective equipment (PPE) cannot be used in lieu of feasible engineering controls.

If Hazard Severity Number is:

- (RED): PPE is REQUIRED
- (ORANGE): PPE is STRONGLY RECOMMENDED
- (YELLOW): PPE may not be necessary

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

Table B3 – PPE Equipment Review Checklist

PERSONAL PROTECTIVE EQUIPMENT REVIEW								
1	2	3	4	5	6	7	8	9
ITEM	Yes/No	Comments (Job)	Source of Hazard	Frequency of Exposure (hrs/yr)	Hazard Probability (A B C D)	Hazard Severity (C-M-N)	Hazard Index	Appropriate PPE
FOOT PROTECTION								
The employee handles heavy material or works in an area where there is potential exposure to foot injury due to falling or rolling objects. Handing 55-gallon drums of SPF chemicals provides potential exposure to foot injury.								
The employee works in an area where there is potential exposure to foot injury due to an object piercing the sole of the shoe from sharp edges or points. This risk is typically found on most construction jobsites.								
Employees are working in an area where floor surfaces are such that they may create a slip hazard. Water and spilled chemicals can present this type of slip hazard.								
Employees are working in an area where there is molten metal; not typical in SPF applications.								
Employees are working in an area where they are exposed to electrical wires. This is a typical hazard on most construction jobsites.								
Employees work in an area with wet conditions. This is typical of most construction jobsites.								
Employees work in construction or demolition areas.								
HAND PROTECTION								
The employee's hands are exposed to chemicals that might irritate the skin. This is a normal hazard for SPF applications.								
The employee's hands are exposed to bacteriological agents, blood, or other infectious materials. This is not typical for SPF installation.								
The employee's hands are exposed to extreme vibration from working with vibrating tools. This is common with most power tools.								
The employee's hands are exposed to sharp tools or machine parts that can cause injury (i.e., cuts, lacerations, abrasions).								
The employee's hands are exposed to electrical wires.								
The employee works in material handling activities that can cause injury (cuts, abrasions).								
The employee's hands are exposed to sharp edges or splinters (puncture wounds).								

EYE AND FACE PROTECTION								
Employees are exposed to flying particles, molten metal, liquid chemicals, acids, caustic liquids, chemical gases or vapors, or potentially harmful light radiation.								
HEAD PROTECTION								
The employee works in an area where there is a potential for injury to the head from a falling object.								
The employee works in an area near exposed electrical conductors that could contact the head.								
The employee works in an area where a hazard exists for catching hair.								
FALL PROTECTION								
Employees are working at an elevated work area where a slip or fall to a lower level is a potential hazard.								
CLOTHING PROTECTION								
Employees are exposed to harmful materials, chemicals, temperature extremes, or sources of cuts, lacerations, or punctures.								
HEARING PROTECTION								
Employees are exposed to sound levels in excess of 85 dBA on an 8-hour TWA.								
RESPIRATORY PROTECTION								
Employees are exposed to air contaminates, such as dusts, mists, or fumes. Air monitoring has indicated overexposure.								

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

APPENDIX C:

CONSTRUCTION CONFINED SPACE ENTRY PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.146 and 29 CFR 1926.21

STELLRR INSULATION

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Founder

Purpose

Stellrr Insulation employees entering confined spaces must abide by all aspects of the OSHA requirements and this written confined space entry program.

Scope

The scope of application of this policy is meant to apply to all employees, contractors, inspectors, and all other persons entering any identified confined space at the associated worksite for Stellrr Insulation. No person may enter a permit-required confined space without a confined space entry permit. Entry into non-permitted confined spaces can be made as long as the special procedures for entry into that space are followed. Contractors are responsible for their employees during work in confined spaces.

Definitions

Roles and Responsibilities

Prevention of Unauthorized Entry

Stellrr Insulation will take precautions to prevent unauthorized entry into confined spaces.

- The primary means of deterrent will be through locks, signage and/or training. An Attendant or stand-by person will prevent unauthorized entry during a permit entry event. Appropriate barricades and/or barrier tape will be utilized to identify and isolate confined space areas.
- Entry into non-permit required confined spaces shall be controlled by the entry employer responsible for the area or work project.
- When a permit-required confined space must be entered, a permit shall be completed and authorized by the entry employer representatives prior to entry into the confined space. This permit shall serve as certification that the space is safe for entry.

Training

Training is required prior to initial assignment and at least annually for all confined space Entrants, Attendants, and Entry Supervisors, and is provided at no cost by Stellrr Insulation. The following components are required to be included in Confined Space Entry training:

1. General Awareness
   - Definition of a confined space
   - Definition of a permit-required confined space
   - Overview of the OSHA regulation
   - Responsibilities of bystanders
2. Permit-Required Confined Space
   - OSHA permit-required confined space standard
   - Stellrr Insulation Confined Space Entry Program
   - Hazard recognition and control
   - Communications
   - Personal protective equipment
   - Atmospheric monitoring
   - Safe work practices
   - Work planning and supervision
   - Duties of an Entrant, Attendant, and Entry Supervisor
   - The confined space permit
   - Emergency procedures
   - Confined space rescue
3. Instrumentation

- Calibration of air monitoring equipment
- Reading an air monitor display
- Proper usage of the air monitor
- Limitations of the air monitor

4. Employee training records will be maintained by Stellrr Insulation with training provided as directed below:

- Before the employee is assigned any confined space entry duties.
- Before a change in assigned confined space entry duties.
- Whenever there is a modification to the confined space entry procedures.
- A review that points to confined space entry inadequacies of knowledge or use of procedures.

Reclassifying Permit Spaces to Non-Permit Spaces

Permit-required confined spaces at the Stellrr Insulation worksite may be reclassified as non-permit confined spaces under the following procedures:

- If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space as long as the non-atmospheric hazards remain eliminated.
- Stellrr Insulation shall document the basis for determining that all hazards in a permit space have been eliminated through a certification that includes the date, location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space or to that employee's authorized representative. This certification form can be found in Attachment B.
- If hazards arise within a permit space that has been reclassified to a non-permit space, each employee shall exit the space. Stellrr Insulation personnel shall then reevaluate the space and determine whether it must be reclassified as a permit space.

Equipment

Many different types of safety equipment may be required to safely perform entries into and rescues from confined spaces. These items must be supplied, at no charge, to employees engaged in confined space entry and emergency retrieval. The extent of actual equipment required will depend on hazards present and the category of the confined space being entered. Employee training must include hands-on usage of all required equipment to such an extent that the employees become proficient in their understanding and use of the equipment, including the following:

- Ventilation fans
- Full body harnesses, life lines, rescue rated tripods, and mechanical lifting devices
- Appropriate PPE as required by the hazards present
- Air monitoring equipment
- Intrinsically safe portable lighting

- Communications equipment
- Lockout/tagout devices
- Barricade equipment
- Other safety equipment as required to complete the task

Atmospheric Testing

Air monitoring must be performed by a trained employee prior to entering any confined space to evaluate potential atmospheric hazards and determine if acceptable entry conditions exist, to include if a hazardous condition or oxygen deficiency or enrichment exists. At a minimum, oxygen, combustible gases, carbon monoxide and hydrogen sulfide will be monitored.

1. Air Monitoring

Air testing must be completed prior to entry and must be completed in the following order:

- Oxygen content – Results greater than or equal to 19.5% and less than or equal to 23.5%.
- Flammable/combustible gas content – Results must indicate less than 10% of the LEL (lower explosive limit).
- Toxic gases (carbon monoxide and hydrogen sulfide) – Results must indicate hydrogen sulfide concentrations less than 10 ppm and carbon monoxide concentrations less than 25 ppm.
- If the pre-entry air monitoring shows that there is no hazardous atmosphere or oxygen deficiency/enrichment in the space, there is no reason to believe that there is a chance for onto develop, and other potential hazardous conditions have been removed or controlled, the space may be safely entered to begin work.

2. Monitoring in a Stratified Atmosphere

- Atmospheric measurements shall be taken every 4 feet from the top, middle and bottom, and every 4 feet in the direction of travel and to each side.
- Different gases accumulate at different levels in a given space. For example, methane is lighter than air and will usually be found nearer the top of the space, while hydrogen sulfide is heavier than air and will typically collect at the bottom of the space.

3. Continuous Air Monitoring

Air quality inside the permit-required confined space must be continuously monitored due to the potential for changing atmospheric conditions. These results are to be recorded on the entry permit. To meet this requirement, a four-gas meter is used to continuously monitor the atmosphere inside the space. The preceding shall be completed using one of the following methods:

- Place the monitor inside with the Entrant.
- Place the monitor inside and set up a remote alarm outside with the Attendant.
- Set up the remote sampling tube with the Entrant and place the monitor outside with the Attendant.

4. Calibrating and Maintaining Air Monitoring Equipment

- All monitoring equipment must be properly calibrated and maintained in good working condition.
- All calibrations shall be completed according to the manufacturer's specifications.
- Calibration logs for each instrument shall be kept up to date and inspected regularly to ensure accuracy.

Hazard Elimination and Control

The Entry Supervisor will identify all potential hazards concerning the permit-required confined space. Each hazard will be eliminated or controlled. Hazards may exist in any of the following categories:

1. Atmospheric Hazards/Ventilation

Fresh air ventilation is the first option for correcting an atmospheric hazard.

- Force fresh air into the space.
- Get airflow to bottom of the space.
- Use continuously.

2. Contents and Residues

Contents should be removed from the space when possible. Entrants must assume that residues may be present and protect themselves from contact with harmful materials.

- Remove contents
- Clean and isolate space.
- Wear appropriate PPE to protect against contact with materials.

3. Potential Energy

Potential energy sources must be secured. They include:

- Electrical equipment and circuits.
- Hydraulic equipment and systems.
- Pneumatic equipment and systems.
- Mechanical equipment and systems.
- Thermal energy equipment and systems.

4. Environment in the Space

Entrants will need to address any safety issues, including the following:

- Slippery surfaces
- Extreme temperatures

5. Configuration of the Space

The configuration of the space can make safe operations more difficult. Use particular care when any of the following are present:

- Unusual shape or slope
- Low overhead clearance
- Drop-offs in floors
- Complex layout

6. External Hazards

- External hazards such as vehicle traffic, machinery, equipment, and processes may increase the hazards of the confined space entry.
- External hazards must be controlled prior to entering the confined space.

Confined Space Entry Procedures

When entry into a confined space is necessary, the supervisor shall initiate entry procedures, including the completion of the entry permit or reclassification of the permit-required space to a non-permit space. Entry into a confined space shall follow the standard entry procedures below:

1. Entry into a Permit-Required Confined Space

- The Entry Supervisor physically inspects the space if the entry is at that time a "Permit-Required," "Alternate Procedure," or "Non-Permit" entry. Entry Supervisor then completes all items on the Confined Space Entry Permit.
- Entry Supervisor retains a copy of the Entry Permit, and posts the Entry Permit at the entry site.
- At least one Attendant externally monitors the permit-required confined space being entered for the duration of the entry operation.
- Attendants and Entrants maintain rescue equipment and any other equipment as specified on the permit.
- Attendant verifies acceptable entry conditions by identifying and controlling or eliminating any hazards, and by testing the atmosphere with a four-gas meter at 4-foot intervals.
- Attendant directs the Entrant(s) to enter and exit the space, and conducts periodic checks of hazard controls.
- Attendant orders immediate evacuation of the space if safety equipment fails or if the space becomes, or has the potential to become, immediately hazardous. If necessary, the Attendant summons emergency responders, but NEVER ENTERS the space.
- When the confined space operation is complete, the Entry Supervisor accounts for all Entrants, ensures that the space is secured, and terminates the entry by initialing the Entry Permit.
- Submit terminated permit to the entry employer.

2. Entry into a Permit-Required Confined Space Using Alternate Procedures

- This Alternate Entry Procedure may be used if the only hazard present in the confined space is (as determined by the Entry Supervisor):
    - Atmospheric in nature, and
    - The atmospheric hazard can be controlled by mechanical ventilation alone, and
    - The permit-required confined space will not become immediately dangerous to life and health (IDLH) if the mechanical ventilation fails.
- After evaluating the permit-required confined space and establishing appropriate atmospheric controls, the Entry Supervisor may classify the permit space as an alternate entry confined space by completing the appropriate sections on the Entry Permit.
- Entry Supervisor submits a copy of the permit to the entry company and posts the permit at the entry site.

- The Entrant may enter the confined space without the assistance or use of an Attendant, following the procedure below. When entering the alternate entry confined space, the Entrant will:
    - Establish and ensure that the mechanical ventilation system is operational and providing clean, fresh air to the Entrant's work location within the space during the entire entry.
    - Test the atmosphere of the permit-required space prior to entry into the space.
    - Use and continually operate a gas detector during the entire confined space operation.
    - Immediately evacuate the space if ventilation fails, or if the portable air sampling equipment fails or enters alarm mode.
- Immediately evacuate the space if you discover, or become aware of a previously unrecognized hazard. If this occurs, immediately notify the Entry Supervisor. The Entry Supervisor shall re-evaluate the permit-required space and implements appropriate safety precautions prior to resuming the confined space operation.
- All steps taken to reclassify the permit-required space to an alternate entry space must be written on the Entry Permit.

3. Entry into a Non-Permit Confined Space

- If there are no inherent hazards associated with the space, or if all inherent hazards have been eliminated (not just controlled but eliminated), the space may be classified as a non-permit confined space, and entered using the following guidelines. When entering the non-permit confined space, the Entrant will:
    - Survey the surrounding area before entry for potential hazards and sources of drifting vapors and gases.
    - Always test the non-permit confined space with a four-gas meter before entry, and document pre-entry tests.
    - Follow Stellrr Insulation safety rules and use generally acceptable safe work practices when entering and working in non-permit confined spaces.
    - Never use paints, thinners, chemicals, or weld or create any other atmospheric hazard while working in a non-permit confined space.
    - Never introduce any other atmospheric, mechanical, engulfing, or electrical hazard into the space.
- No Attendant or arrangement for rescue service is necessary when workers into non-permit confined spaces.
- All steps taken to reclassify a permit-required confined space to a non-permit confined space must be written on the Entry Permit.

4. Emergency Rescue Procedures

Non-Entry Rescue

- Retrieval systems are required whenever an authorized Entrant enters a permit-required space.
- Each authorized Entrant shall use a full-body harness, with a retrieval line attached at the center of the Entrant's back near shoulder level.
- The other end of the retrieval lie shall be attached to a mechanical device or fixed point outside the permit-required space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

- A mechanical device shall be available to retrieve personnel from vertical type permit-required spaces more than 5 feet deep.

Entry Rescue

- In the event of any emergency situation requiring rescue from a confined space, Stellrr Insulation employees *shall not* attempt to enter the space to perform a rescue. The Attendant on duty shall immediately implement the predetermined emergency rescue system, and contact 911.
- Rescue services that can be performed safely from outside the confined space (e.g. hoisting a harnessed Entrant) shall be undertaken. Other Entrants in the space shall immediately exit the space and only provide assistance that does not endanger them.
- 911 is the primary emergency rescue service associated with Stellrr Insulation confined space entries.

Procedure Review

This procedure will be reviewed at least annually by Stellrr Insulation and revised as necessary.

Recordkeeping

Records shall be maintained indefinitely.

1. Confined Space Inventory
   - Stellrr Insulation shall maintain an updated inventory of all permit-required and non-permit confined spaces.
2. Confined Space Training
   - Stellrr Insulation shall provide and document training for all employees with duties relating to confined space entry. Any refresher training or retraining shall be documented by Entrant supervisors and forwarded to Stellrr Insulation.
3. Confined Space Permit
   - Each permit for confined space entry shall be maintained by the Entry Supervisor's company, and copies of all permits shall be forwarded to Stellrr Insulation for filing.

Attachment A

Confined Space Entry Permit

Attachment B
Reclassification Form

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1. INTRODUCTION

a. Statement of Need

STELLRR INSULATION is committed to providing a safe and healthful work environment for the entire staff. In pursuit of this endeavor, the following written program is in place to identify all confined spaces and to eliminate or control any hazards associated with entry into these spaces.
The purpose of this Confined Space Entry Program is to set procedures and policies that will ensure workers safe entry into confined spaces and permit-required confined spaces to perform tasks. This procedure is designed to provide the minimum safety requirements in accordance with the Occupational Safety and Health Administration's (OSHA) standard found at 29 CFR 1926.1200. This objective is met by:

- The survey, inspection and evaluation of the workplace to determine if any spaces are permit-required confined spaces.
- Posting appropriate signage and providing training to individuals so that they recognize and will not enter permit-required confined spaces unless authorized.
- Training individuals who will enter permit-required confined spaces.
- Developing written entry practices and procedures.

STELLRR INSULATION must comply with the Texas Confined Spaces Standard and Federal OSHA 29 CFR 1910.146 where appropriate. Additionally, this program will assist STELLRR INSULATION in achieving the overall goal of a safer work place.

b. Scope

The scope of application of this policy is meant to apply to all employees, contractors, inspectors, and all other persons entering any identified confined space at the associated worksite for STELLRR INSULATION . No person may enter a permit-required confined space without a confined space entry permit. Entry into non-permitted confined spaces can be made as long as the special procedures for entry into that space are followed. Contractors are responsible for their employees during work in confined spaces.

c. Anticipated Benefits

Several benefits are anticipated with the implementation of the Confined Space Entry Program:

- Prevention of illnesses and injuries related to entry or work in permit-required confined spaces
- Overall improvement of the company's Safety Program

- Improvement of employer-employee relations by establishing regular lines of communication
- Avoidance of citations, violations, and related problems from the Federal and state regulations

d. Administration

The Confined Space Entry Program administrator is the company's Founder.

e. Location of The Written Program

A copy of this written confined space entry program is available, upon request, to employees, their designated representatives, and directors or designees of the Federal Occupational Health and Safety Administration (OSHA). A copy of this written confined space entry program will be kept at: STELLRR INSULATION

f. Notice

Employees and contractors of STELLRR INSULATION shall not enter a confined space until the following requirements are met:

- Hazards are identified and evaluated.
- Workers entering the space are trained on confined space hazards and entry procedures.
- Workers entering the space are identified and made aware of possible hazards that may be encountered on that particular job.
- Appropriate danger signs have been posted.
- Proper personal protective equipment has been selected and issued to affected employees.

If a confined space is not entered because one of the conditions mentioned above has not been met, the confined space will be restricted to employees and others by erecting barriers, installing locks, and posting warning signs until requirements have been met.

2. PURPOSE

The purpose of this program is to ensure the protection of all employees of STELLRR INSULATION from the hazards associated with confined space entry. This document contains requirements for practices and procedures to protect employees from those hazards of entry into permit-required confined spaces.

It shall be the policy of STELLRR INSULATION to reduce the need for confined space entry. It shall also be the policy of STELLRR INSULATION to eliminate, whenever possible, all confined space hazards in order to reclassify permit-required confined spaces to non-permit-required confined spaces. When confined space entry is necessary, all provisions of this document are to be followed.

3. AUTHORITY

The STELLRR INSULATION Confined Space Entry Program is required by federal and state regulations.

4. SUMMARY

STELLRR INSULATION has the responsibility to establish a written, comprehensive program that includes provisions for working in confined spaces. These provisions entail preventing unauthorized entries, identifying and evaluating hazards, establishing procedures for safe permit space entry, issuing and maintaining proper equipment, using outside attendants, establishing rescue and emergency procedures, identifying duties and job classifications of employees entering or working in confined spaces, establishing a system for issuing entry permits, developing post-entry procedures, and conducting post-illness and injury reviews.

The written plan will be reviewed annually in December for accuracy and completeness. The written plan and its elements will be updated in the following situations:

- When there is reason to believe that provisions of the program may not protect employees
- When new processes or technologies are introduced
- When job duties mentioned in the program are changed
- When locations mentioned in the program are changed
- When requirements for written confined space entry programs have changed in accordance with applicable standards, codes, and regulations
- When any other elements are changed

5. DEFINITIONS

The following table defines key terminology used in this program. It includes all abbreviations and acronyms, and any words or phrases that have a special meaning in the context of this program.

Term	Definition
Acceptable Entry Conditions	The conditions that must exist in a permit space, before an employee may enter that space, to ensure that employees can safely enter into, and safely work within, that space.
Attendant	An individual stationed outside one or more permit spaces who assesses the status of authorized entrants and who must perform the duties specified in §1926.1209.
Authorized Entrant	An employee who is authorized by the entry supervisor to enter a permit space.
Barrier	A physical obstruction that blocks or limits access.
Blanking or Blinding	The absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
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 the authorization to take prompt corrective measures to eliminate them.
Confined Space	A space that: (1) Is large enough and so configured that an employee can bodily enter it; (2) Has limited or restricted means for entry and exit; and (3) Is not designed for continuous employee occupancy.
Control	The action taken to reduce the level of any hazard inside a confined space using engineering methods (for example, by ventilation), and then using these methods to maintain the reduced hazard level. Control also refers to the engineering methods used for this purpose. Personal protective equipment is not a control.
Controlling Contractor	The employer that has overall responsibility for construction at the worksite. Note. If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer.
Double Block and Bleed	The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in

Term	Definition
	the line between the two closed valves.
Early Warning System	The method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include, but are not limited to: alarms activated by remote sensors; and lookouts with equipment for immediately communicating with the authorized entrants and attendants.
Emergency	Any occurrence (including any failure of power, hazard control or monitoring equipment) or event, internal or external, to the permit space that could endanger entrants.
Engulfment	The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, crushing, or suffocation.
Entry	The action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.
Entry Employer	Any employer who decides that an employee it directs will enter a permit space. Note. An employer cannot avoid the duties of the standard merely by refusing to decide whether its employees will enter a permit space, and OSHA will consider the failure to so decide to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.
Entry Permit	The written or printed document that is provided by the employer who designated the space a permit space to allow and control entry into a permit space and that contains the information specified in §1926.1206 of this standard.
Entry Rescue	Occurs when a rescue service enters a permit space to rescue one or more employees.
Entry Supervisor	The qualified person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing

Term	Definition
	entry operations, and for terminating entry as required by this standard. Note. An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this standard for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.
Hazard	A physical hazard or hazardous atmosphere. See definitions below.
Hazardous Atmosphere	An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes: (1) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL); (2) Airborne combustible dust at a concentration that meets or exceeds its LFL; Note: This concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet (1.52 meters) or less. (3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent; (4) Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart D—Occupational Health and Environmental Control, or in Subpart Z—Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of its dose or permissible exposure limit; Note. An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition. (5) Any other atmospheric condition that is immediately dangerous to life or health. Note. For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, §1926.59 of this part, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Term	Definition
Host Employer	The employer that owns or manages the property where the construction work is taking place. Note. If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the information specified in §1203(h)(1), OSHA will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.
Hot Work	Operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating).
Immediately Dangerous to Life or Health (IDLH)	Any condition that would interfere with an individual's ability to escape unaided from a permit space and that poses a threat to life or that would cause irreversible adverse health effects. Note. Some materials—hydrogen fluoride gas and cadmium vapor, for example—may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" after recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.
Inerting	Displacing the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible. Note. This procedure produces an IDLH oxygen-deficient atmosphere.
Isolate or Isolation	The process by which employees in a confined space are completely protected against the release of energy and material into the space, and contact with a physical hazard, by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barriers to eliminate the potential for employee contact with a physical hazard.
Limited or Restricted Means for Entry or Exit	A condition that has a potential to impede an employee's movement into or out of a confined space. Such conditions include, but are not limited to, trip hazards, poor illumination, slippery floors, inclining surfaces and

Term	Definition
	ladders.
Line Breaking	The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.
Lockout	The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
Lower Flammable Limit or Lower Explosive Limit	The minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.
Monitor or Monitoring	The process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.
Non-Entry Rescue	Occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.
Non-Permit Confined Space	A confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space, as defined in this subpart.
Oxygen Deficient Atmosphere	An atmosphere containing less than 19.5 percent oxygen by volume.
Oxygen Enriched Atmosphere	An atmosphere containing more than 23.5 percent oxygen by volume.
Permit-Required Confined Space	A confined space that has one or more of the following characteristics: (1) Contains or has a potential to contain a hazardous atmosphere; (2) Contains a material that has the potential for engulfing an entrant; (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or (4) Contains any other recognized serious safety or health hazard.
Permit-Required Confined Space Program	The employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.
Physical Hazard	An existing or potential hazard that can cause death or serious physical

Term	Definition
	damage. Examples include, but are not limited to: explosives (as defined by 7 paragraph (n) of §1926.914, definition of "explosive"); mechanical, electrical, hydraulic and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces. Physical hazard also includes chemicals that can cause death or serious physical damage through skin or eye contact (rather than through inhalation).
Prohibited Condition	Any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee.
Qualified Person	One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
Representative Permit Space	A mock-up of a confined space that has entrance openings that are similar to, and is of similar size, configuration, and accessibility to, the permit space that authorized entrants enter.
Rescue	Retrieving, and providing medical assistance to, one or more employees who are in a permit space.
Rescue Service	The personnel designated to rescue employees from permit spaces.
Retrieval System	The equipment (including a retrieval line, chest or full body harness, wristlets or anklets, if appropriate, and a lifting device or anchor) used for nonentry rescue of persons from permit spaces.
Serious Physical Damage	An impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional.
Tagout	(1) Placement of a tagout device on a circuit or equipment that has been deenergized, in accordance with an established procedure, to indicate that the circuit or equipment being controlled may not be operated until the tagout device is removed; and (2) The employer ensures that (i) tagout provides equivalent protection to lockout, or (ii) that lockout is infeasible and the employer has relieved, disconnected, restrained and otherwise rendered safe stored (residual)

Term	Definition
	energy.
Test or Testing	The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space. Note. Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.
Ventilate or Ventilation	Controlling a hazardous atmosphere using continuous forced-air mechanical systems that meet the requirements of §1926.57—Ventilation.

References

Document Title	Reference Number
Subpart AA – Confined Spaces in Construction	29 CFR 1926.1200

6. RESPONSIBILITIES

STELLRR INSULATION, the host employer, will oversee the administration of the Confined Space Entry Program, but ultimate responsibility for its implementation rests with the controlling contractor and each entry employer that conducts confined space entry.

a. Host Employer

The host employer shall provide the following to the controlling contractor:

- The location of each known permit-required confined space.
- The hazards or potential hazards in each space or the reason it is a permit space.
- Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space.

b. Controlling Contractor

The controlling contractor shall:

- Obtain the host employer's information about the permit space hazards and previous operations.

- Provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space:
  - The information received from the host employer.
  - The precautions that the host employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.

c. Entry Employer

Each entry employer shall:

- Identify and maintain a list of work locations that are confined spaces, and determine whether they are permit-required.
- Provide confined space training for Entrants, Attendants and Entry Supervisors.
- Provide exposure assessment and/or monitoring of airborne hazards as needed to determine whether work areas are permit-required confined spaces.
- Upon request, assist supervisors with:
  - Identification of permit-required confined spaces.
  - Selection of safety equipment required for confined space work.
- Establish and document a method for communication between Entrants and Attendants.
- Ensure that the openings to permit-required confined spaces are posted with danger signs, and, where possible, have secured doors to prevent unauthorized entry.
- Provide all information, safety equipment, and job tools necessary to safely complete the assigned work in the confined space, and ensure that the equipment and tools are maintained in ready-to-use condition.
- Maintains required calibration of air monitoring equipment.

d. Employees

It is the responsibility of each employee affected by this program to:

- Understand the requirements of this Confined Space Entry Program.
- Annually attend Confined Space Entry training provided by STELLRR INSULATION.
  - Persons who enter confined spaces, and those assigned to the required Attendant position, must complete Confined Space Entrant and Attendant training.
  - Persons who will be assigned the position of Entry Supervisor must attend Confined Space Entry Supervisor training.
- Perform assigned duties according to the procedures listed in this Program.
- Maintain confined space entry equipment in ready-to-use condition, keeping it clean and functional per manufacturer's directions.
- Never perform a confined space entry unless all provisions of this program are observed.
- Immediately notify his or her supervisor of any problem or question regarding confined space work.

e. Entry Supervisor

The Entry Supervisor for each permit-required confined space shall:

- Complete Confined Space Entry Supervisor training prior to assuming Entry Supervisor duties.
- Ensure that the person assigned to be the Attendant has received Confined Space Entrant and Attendant training, and understands confined space hazards and standby procedures.
- Ensure the all persons who will enter the confined space have received Confined Space Entrant and Attendant training.
- Minimize the number of employees permitted to enter confined spaces, and list every involved employee on the Confined Space Entry Permit.
- Review the job duties and entry permit requirements for the permit-required confined space.
- Ensure that all safety equipment and job tools necessary to safely complete the assigned work in the confined space are present and in good working condition.
- Ensure the functionality of the communication method between Entrants and Attendants, and the company's method to summon the Emergency Response Team, if needed.
- Ensure that entry conditions are acceptable:
    - Verify that the confined space has been decontaminated of hazardous materials to the extent feasible prior to entry.
    - Where potential exists for electric shock, ensure that appropriate electrical equipment is used and that any electrical equipment used in hazardous locations meets the appropriate requirements of the National Electrical Code.
- Specify, and include on the entry permit, any pre-entry procedures necessary to eliminate or isolate hazardous energy sources that could be expected to cause injury or illness to entrants if not isolated, including electrical, mechanical, hydraulic, pneumatic, chemical, and thermal sources:
    - Isolation methods may include securing, relieving pressure, blinding, blanking, double block and bleed, and lockout/tagout.
    - In confined spaces where complete isolation is not possible, specify as rigorous as practical, and ensure that a hazard evaluation is conducted prior to entry.
- Specify on the Entry Permit the air monitoring necessary to ensure a continued safe work environment, and ensure that the Attendant understands the monitoring requirements.
- Ensure that all entrants review the air monitoring results prior to entry, and, if a respirator is required, that all entrants have appropriate respiratory equipment and current STELLRR INSULATION certification to wear the respirator they intend to use.
- Complete and sign the entry permit prior to entry, but only after all entry requirements are fully understood and completed.
- Ensure that all employees entering the confined space know and understand their duties, the potential hazards presented by the space, the time required to complete the assigned

work, the required equipment and tools, and the methods of communication with a standby employee.
- Post a copy of the entry permit at the entry site, and submit a copy to entry employer.
- Terminate the entry permit after ensuring all entrants have safely exited the space and the space is secure.
- Refer any questions regarding confined space entry to entry employer.

f. Entry Attendant

The Attendant for each permit-required confined space shall:

- Complete Confined Space Entrant and Attendant training prior to assuming Attendant duties.
- Conduct air monitoring and hazard assessment as specified on the Entry Permit by the Entry Supervisor.
- Prohibit entry whenever monitoring indicates that oxygen, flammability or toxicity levels are not within acceptable limits or until appropriate controls are implemented or appropriate personal protective equipment is provided. Acceptable limits are as follows (in order of testing):
  - Oxygen: 19.5% to 23.5%.
  - Flammability: Less than 10% of the lower explosive limit (LEL).
  - Hydrogen sulfide: Less than 10 parts per million (ppm).
  - Carbon monoxide: Less than 25 ppm.
  - Toxicity (substances listed on the Entry Permit under “other”): Less than the Permissible Exposure Limit (PEL)
- If the source of contaminant cannot be determined, initiate precautions adequate to deal with the worst possible condition that the contaminant could present in the confined space.
- Require ventilation, when feasible, to remove atmospheric contaminants from the confined space until the atmosphere is within the acceptable range.
- Ensure that ventilation is drawn from a clean source and will not increase the hazards in the space.
- When utilizing forced ventilation, periodically test the atmosphere to ensure that the ventilation is preventing the accumulation of a hazardous atmosphere.
- When ventilation is not feasible, establish alternative protective measures prior to authorizing entry.
- Continuously assess activities inside and outside of the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
  - If there is a prohibited condition.
  - If the behavioral effects of hazard exposure are apparent in an authorized entrant.
  - If there is a situation outside the space that could endanger the authorized entrants.

  - If the attendant cannot effectively and safely perform all the required duties.
- Summon rescue and emergency services as soon as necessary.
- Perform non-entry rescue as specified by STELLRR INSULATION rescue procedure.
- Terminate the entry whenever a safety concern arises or an unauthorized person enters the area.

g. Authorized Entrant

The Authorized Entrant for each permit-required confined space shall:

- Complete Confined Space Entrant and Attendant training prior to assuming Authorized Entrant duties.
- Check the confined space inventory to determine the classification, potential hazards and entry requirements for that space prior to beginning the work.
- Understand all the potential hazards associated with working in the identified space.
- Know the signs and symptoms of exposure.
- Wear and utilize the proper safety equipment to include PPE as required by the task.
- Maintain constant communication with the Attendant.
- Alert the attendant whenever:
  - There is any warning sign or symptoms of exposure to a dangerous situation.
  - The entrant detects a prohibited condition.
- Ensure the appropriate methods of hazard control are practiced, including lockout/tagout, hot work permits, and ventilation of the hazardous atmosphere.
- Exit the confined space whenever:
  - An order to evacuate is given by the Attendant or the Entry Supervisor.
  - The Entrant recognizes any warning signs or symptoms of exposure to a dangerous situation.
  - The Entrant detects a prohibited condition.
  - An evacuation alarm is activated.

7. PREVENTION OF UNAUTHORIZED ENTRY

STELLRR INSULATION will take precautions to prevent unauthorized entry into confined spaces.

- The primary means of deterrent will be through locks, signage and/or training. An Attendant or stand-by person will prevent unauthorized entry during a permit entry event. Appropriate barricades and/or barrier tape will be utilized to identify and isolate confined space areas.
- Entry into non-permit required confined spaces shall be controlled by the entry employer responsible for the area or work project.
- When a permit-required confined space must be entered, a permit shall be completed and authorized by the entry employer representatives prior to entry into the confined space. This permit shall serve as certification that the space is safe for entry.

8. TRAINING

Training is required prior to initial assignment and at least annually for all confined space Entrants, Attendants, and Entry Supervisors, and is provided at no cost by STELLRR INSULATION. The following components are required to be included in Confined Space Entry training:

a. General Awareness

- Definition of a confined space
- Definition of a permit-required confined space
- Overview of the OSHA regulation
- Responsibilities of bystanders

b. Permit-Required Confined Space

- OSHA permit-required confined space standard
- STELLRR INSULATION Confined Space Entry Program
- Hazard recognition and control
- Communications
- Personal protective equipment
- Atmospheric monitoring
- Safe work practices
- Work planning and supervision
- Duties of an Entrant, Attendant, and Entry Supervisor
- The confined space permit
- Emergency procedures
- Confined space rescue

c. Instrumentation

- Calibration of air monitoring equipment
- Reading an air monitor display
- Proper usage of the air monitor
- Limitations of the air monitor

d. Employee training records will be maintained by STELLRR INSULATION with training provided as directed below:

- Before the employee is assigned any confined space entry duties.
- Before a change in assigned confined space entry duties.
- Whenever there is a modification to the confined space entry procedures.
- A review that points to confined space entry inadequacies of knowledge or use of procedures.

9. RECLASSIFYING PERMIT SPACES TO NON-PERMIT SPACES

Permit-required confined spaces at the STELLRR INSULATION worksite may be reclassified as non-permit confined spaces under the following procedures:

- If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space as long as the non-atmospheric hazards remain eliminated.
- STELLRR INSULATION shall document the basis for determining that all hazards in a permit space have been eliminated through a certification that includes the date, location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space or to that employee's authorized representative. This certification form can be found in Attachment B.
- If hazards arise within a permit space that has been reclassified to a non-permit space, each employee shall exit the space. STELLRR INSULATION personnel shall then reevaluate the space and determine whether it must be reclassified as a permit space.

10. EQUIPMENT

Many different types of safety equipment may be required to safely perform entries into and rescues from confined spaces. These items must be supplied, at no charge, to employees engaged in confined space entry and emergency retrieval. The extent of actual equipment required will depend on hazards present and the category of the confined space being entered. Employee training must include hands-on usage of all required equipment to such an extent that the employees become proficient in their understanding and use of the equipment, including the following:

- Ventilation fans
- Full body harnesses, life lines, rescue rated tripods, and mechanical lifting devices
- Appropriate PPE as required by the hazards present
- Air monitoring equipment
- Intrinsically safe portable lighting
- Communications equipment
- Lockout/tagout devices
- Barricade equipment
- Other safety equipment as required to complete the task

11. ATMOSPHERIC TESTING

Air monitoring must be performed by a trained employee prior to entering any confined space to evaluate potential atmospheric hazards and determine if acceptable entry conditions exist, to include if a hazardous condition or oxygen deficiency or enrichment exists. At a minimum, oxygen, combustible gases, carbon monoxide and hydrogen sulfide will be monitored.

a. Air Monitoring

Air testing must be completed prior to entry and must be completed in the following order:

- Oxygen content – Results greater than or equal to 19.5% and less than or equal to 23.5%.
- Flammable/combustible gas content – Results must indicate less than 10% of the LEL (lower explosive limit).
- Toxic gases (carbon monoxide and hydrogen sulfide) – Results must indicate hydrogen sulfide concentrations less than 10 ppm and carbon monoxide concentrations less than 25 ppm.
- If the pre-entry air monitoring shows that there is no hazardous atmosphere or oxygen deficiency/enrichment in the space, there is no reason to believe that there is a chance for onto develop, and other potential hazardous conditions have been removed or controlled, the space may be safely entered to begin work.

b. Monitoring in a Stratified Atmosphere

- Atmospheric measurements shall be taken every 4 feet from the top, middle and bottom, and every 4 feet in the direction of travel and to each side.
- Different gases accumulate at different levels in a given space. For example, methane is lighter than air and will usually be found nearer the top of the space, while hydrogen sulfide is heavier than air and will typically collect at the bottom of the space.

c. Continuous Air Monitoring

Air quality inside the permit-required confined space must be continuously monitored due to the potential for changing atmospheric conditions. These results are to be recorded on the entry permit. To meet this requirement, a four-gas meter is used to continuously monitor the atmosphere inside the space. The preceding shall be completed using one of the following methods:

- Place the monitor inside with the Entrant.
- Place the monitor inside and set up a remote alarm outside with the Attendant.
- Set up the remote sampling tube with the Entrant and place the monitor outside with the Attendant.

d. Calibrating and Maintaining Air Monitoring Equipment

- All monitoring equipment must be properly calibrated and maintained in good working condition.

- All calibrations shall be completed according to the manufacturer's specifications.
- Calibration logs for each instrument shall be kept up to date and inspected regularly to ensure accuracy.

12. HAZARD ELIMINATION AND CONTROL

The Entry Supervisor will identify all potential hazards concerning the permit-required confined space. Each hazard will be eliminated or controlled. Hazards may exist in any of the following categories:

a. Atmospheric Hazards/Ventilation

Fresh air ventilation is the first option for correcting an atmospheric hazard.

- Force fresh air into the space.
- Get airflow to bottom of the space.
- Use continuously.

b. Contents and Residues

Contents should be removed from the space when possible. Entrants must assume that residues may be present and protect themselves from contact with harmful materials.

- Remove contents
- Clean and isolate space.
- Wear appropriate PPE to protect against contact with materials.

c. Potential Energy

Potential energy sources must be secured. They include:

- Electrical equipment and circuits.
- Hydraulic equipment and systems.
- Pneumatic equipment and systems.
- Mechanical equipment and systems.
- Thermal energy equipment and systems.

d. Environment in the Space

Entrants will need to address any safety issues, including the following:

- Slippery surfaces
- Extreme temperatures

e. Configuration of the Space

The configuration of the space can make safe operations more difficult. Use particular care when any of the following are present:

- Unusual shape or slope
- Low overhead clearance
- Drop-offs in floors
- Complex layout

f. External Hazards

- External hazards such as vehicle traffic, machinery, equipment, and processes may increase the hazards of the confined space entry.
- External hazards must be controlled prior to entering the confined space.

13. CONFINED SPACE ENTRY PROCEDURES

When entry into a confined space is necessary, the supervisor shall initiate entry procedures, including the completion of the entry permit or reclassification of the permit-required space to a non-permit space. Entry into a confined space shall follow the standard entry procedures below:

a. Entry into a Permit-Required Confined Space

- The Entry Supervisor physically inspects the space if the entry is at that time a "Permit-Required," "Alternate Procedure," or "Non-Permit" entry. Entry Supervisor then completes all items on the Confined Space Entry Permit.
- Entry Supervisor retains a copy of the Entry Permit, and posts the Entry Permit at the entry site.
- At least one Attendant externally monitors the permit-required confined space being entered for the duration of the entry operation.
- Attendants and Entrants maintain rescue equipment and any other equipment as specified on the permit.
- Attendant verifies acceptable entry conditions by identifying and controlling or eliminating any hazards, and by testing the atmosphere with a four-gas meter at 4-foot intervals.
- Attendant directs the Entrant(s) to enter and exit the space, and conducts periodic checks of hazard controls.
- Attendant orders immediate evacuation of the space if safety equipment fails or if the space becomes, or has the potential to become, immediately hazardous. If necessary, the Attendant summons emergency responders, but NEVER ENTERS the space.
- When the confined space operation is complete, the Entry Supervisor accounts for all Entrants, ensures that the space is secured, and terminates the entry by initialing the Entry Permit.
- Submit terminated permit to the entry employer.

b. Entry into a Permit-Required Confined Space Using Alternate Procedures

- This Alternate Entry Procedure may be used if the only hazard present in the confined space is (as determined by the Entry Supervisor):
  - Atmospheric in nature, and
  - The atmospheric hazard can be controlled by mechanical ventilation alone, and
  - The permit-required confined space will not become immediately dangerous to life and health (IDLH) if the mechanical ventilation fails.
- After evaluating the permit-required confined space and establishing appropriate atmospheric controls, the Entry Supervisor may classify the permit space as an alternate entry confined space by completing the appropriate sections on the Entry Permit.
- Entry Supervisor submits a copy of the permit to the entry company and posts the permit at the entry site.
- The Entrant may enter the confined space without the assistance or use of an Attendant, following the procedure below. When entering the alternate entry confined space, the Entrant will:
  - Establish and ensure that the mechanical ventilation system is operational and providing clean, fresh air to the Entrant's work location within the space during the entire entry.
  - Test the atmosphere of the permit-required space prior to entry into the space.
  - Use and continually operate a gas detector during the entire confined space operation.
  - Immediately evacuate the space if ventilation fails, or if the portable air sampling equipment fails or enters alarm mode.
- Immediately evacuate the space if you discover, or become aware of a previously unrecognized hazard. If this occurs, immediately notify the Entry Supervisor. The Entry Supervisor shall re-evaluate the permit-required space and implements appropriate safety precautions prior to resuming the confined space operation.
- All steps taken to reclassify the permit-required space to an alternate entry space must be written on the Entry Permit.

c. Entry into a Non-Permit Confined Space

- If there are no inherent hazards associated with the space, or if all inherent hazards have been eliminated (not just controlled but eliminated), the space may be classified as a non-permit confined space, and entered using the following guidelines. When entering the non-permit confined space, the Entrant will:
  - Survey the surrounding area before entry for potential hazards and sources of drifting vapors and gases.
  - Always test the non-permit confined space with a four-gas meter before entry, and document pre-entry tests.
  - Follow STELLRR INSULATION safety rules and use generally acceptable safe work practices when entering and working in non-permit confined spaces.

  - Never use paints, thinners, chemicals, or weld or create any other atmospheric hazard while working in a non-permit confined space.
  - Never introduce any other atmospheric, mechanical, engulfing, or electrical hazard into the space.
- No Attendant or arrangement for rescue service is necessary when workers into non-permit confined spaces.
- All steps taken to reclassify a permit-required confined space to a non-permit confined space must be written on the Entry Permit.

d. Emergency Rescue Procedures

Non-Entry Rescue

- Retrieval systems are required whenever an authorized Entrant enters a permit-required space.
- Each authorized Entrant shall use a full-body harness, with a retrieval line attached at the center of the Entrant's back near shoulder level.
- The other end of the retrieval lie shall be attached to a mechanical device or fixed point outside the permit-required space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.
- A mechanical device shall be available to retrieve personnel from vertical type permit-required spaces more than 5 feet deep.

Entry Rescue

- In the event of any emergency situation requiring rescue from a confined space, STELLRR INSULATION employees *shall not* attempt to enter the space to perform a rescue. The Attendant on duty shall immediately implement the predetermined emergency rescue system, and contact 911.
- Rescue services that can be performed safely from outside the confined space (e.g. hoisting a harnessed Entrant) shall be undertaken. Other Entrants in the space shall immediately exit the space and only provide assistance that does not endanger them.
- 911 is the primary emergency rescue service associated with STELLRR INSULATION confined space entries.

14. PROCEDURE REVIEW

This procedure will be reviewed at least annually by STELLRR INSULATION and revised as necessary.

15. RECORDKEEPING

Records shall be maintained indefinitely.

a. Confined Space Inventory

- STELLRR INSULATION shall maintain an updated inventory of all permit-required and non-permit confined spaces.

b. Confined Space Training

- STELLRR INSULATION shall provide and document training for all employees with duties relating to confined space entry. Any refresher training or retraining shall be documented by Entrant supervisors and forwarded to STELLRR INSULATION.

c. Confined Space Permit

- Each permit for confined space entry shall be maintained by the Entry Supervisor's company, and copies of all permits shall be forwarded to STELLRR INSULATION for filing.

ATTACHMENT C.1.—CONFINED SPACE ENTRY PERMIT

STELLRR INSULATION CONFINED SPACE ENTRY PERMIT

Page 1 of 2

SEE PAGE 2 FOR DESCRIPTIONS AND PROCEDURES

1. ____ This is a permit-required confined space entry. ____ This is a CERTIFICATE for an alternate procedure confined space entry.

2. GENERAL INFORMATION

Confined Space Location: _____Date Issued: _____ Time Issued: _____ Time Permit Expires: _____

Purpose of Entry: _____

3. List hazard(s) associated with this entry:

4. PREPARATION __ Drained __ Flushed __ Inerted __ Purged __ Ventilated __ Other _____

Openings: __ Barricaded __ Guarded __ Flagged

5. ISOLATION

Equipment: __ Lockout/Tagout __ Other: _____

Lines: __ Disconnected __ Blanked __Other: _____

6. COMMUNICATION PROCEDURES at confined space:

__ Voice __ Radio __ Intercom __ Rope Signals

7. OTHER REQUIRED PERMISSIONS (e.g. Hot Work Permit):

8. EMERGENCY RESCUE SYSTEM

System Check Was Completed

Initials: _____

9. IDENTIFY SPECIAL EQUIPMENT REQUIRED:

__ Safety Harness/Lifeline __ Hoist __Other: _____

10. SPECIFY REQUIRED PERSONAL PROTECTIVE EQUIPMENT (PPE):

Eye protection: _____ Head protection: _____ Foot protection: _____ Gloves: _____

Respirator (type/cartridge used): _____ Protective clothing: _____ Other: _____

11. ROSTER

Entry Supervisor:		Entry Approved Initial:	Entry Terminated Initial:	Permit Transferred Initial:
Attendant:	**Initial:**	**Dept./Shop:**		
Entrant:	**Initial:**	**Entrant:**		**Initial:**
Entrant:	**Initial:**	**Entrant:**		**Initial:**

12. AIR MONITORING READINGS (use additional sheets if needed)

Hazard	**Acceptable Conditions**	**Pre-Entry Check (At 4' intervals)**			**After Ventilating and/or Isolation**			**Periodic Checks (Take every 20min. unless specified)**				
Oxygen	19.5 - 23.5%											
LEL	< 10%											
H_2S	< 10 PPM											
CO	< 25 PPM											
Other												
Time		:	:	:	:	:	:	:	:	:	:	:
Initial												

Instrument make, model, serial #:	Last calibrated:	Tester's signature:

13. Notes and additional comments/problems during entry:

Post this Permit at job site. Return Permit to Entry Supervisor immediately after completion.
Forward copy of Permit to company. Retain Permit in company files indefinitely.

STELLRR INSULATION CONFINED SPACE ENTRY DESCRIPTIONS AND PROCEDURES

Confined Spaces have the following characteristics:

a) Large enough to enter and perform work.
b) Having limited or restricted means of entry and exit
c) Not designated for continuous worker occupancy.

Permit-Required Confined Spaces have one or more of:

a) Contains a known or potentially hazardous atmosphere **b)** Inward sloping walls or dangerously sloping floor
c) Contains a material that can engulf entrants
d) Contains any other serious safety or health hazard.

Entry into a Permit-Required Confined Space

a) The Entry Supervisor physically inspects the space if the entry is at that time a "Permit-Required," "Alternate Procedure," or "Non-Permit" entry. Entry Supervisor then completes all items on the Confined Space Entry Permit.
Entry Supervisor retains a copy of the Entry Permit and posts the Entry Permit at the entry site.
b) At least one Attendant externally monitors the permit-required confined space being entered for the duration of the entry operation.
c) Attendants and Entrants maintain rescue equipment and any other equipment as specified on the permit.
d) Attendant verifies acceptable entry conditions by identifying and controlling or eliminating any hazards, and by testing the atmosphere with a four-gas meter at 4-foot intervals.
e) Attendant directs the Entrant(s) to enter and exit the space, and conducts periodic checks of hazard controls.
f) Attendant orders immediate evacuation of the space if safety equipment fails or if the space becomes, or has the potential to become, immediately hazardous. If necessary, the Attendant summons emergency responders, but NEVER ENTERS the space.
g) When the confined space operation is complete, the Entry Supervisor accounts for all Entrants, ensures that the space is secured, and terminates the entry by initialing the Entry Permit.
h) Submit terminated permit to entry company.

Entry into a Permit-Required Confined Space Using Alternate Procedures

a) This Alternate Entry Procedure may be used if the only hazard present in the confined space is (as determined by the Entry Supervisor):
- Atmospheric in nature, and
- The atmospheric hazard can be controlled by mechanical ventilation alone, and
- The permit-required confined space will not become immediately dangerous to life and health (IDLH) if the mechanical ventilation fails.

b) After evaluating the permit-required confined space and establishing appropriate atmospheric controls, the Entry Supervisor may classify the permit space as an alternate entry confined space by completing the appropriate sections on the Entry Permit.
c) Entry Supervisor retains a copy of the permit and posts the permit at the entry site.
d) The Entrant may enter the confined space without the assistance or use of an Attendant, following the procedure below. When entering the alternate entry confined space, the Entrant will:
- Establish and ensure that the mechanical ventilation system is operational and providing clean, fresh air to the Entrant's work location within the space during the entire entry.
- Test the atmosphere of the permit-required space prior to entry into the space.
- Use and continually operate a gas detector during the entire confined space operation.
- Immediately evacuate the space if ventilation fails, or if the portable air sampling equipment fails or enters alarm mode.

e) Immediately evacuate the space if you discover, or become aware of a previously unrecognized hazard. If this occurs, immediately notify the Entry Supervisor. The Entry Supervisor shall re-evaluate the permit-required space and implements appropriate safety precautions prior to resuming the confined space operation.
f) Steps taken to reclassify the permit-required space to an alternate entry space must be written on the Permit.

ATTACHMENT C.2.—RECLASSIFICATION FORM

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APPENDIX D:

RESPIRATORY PROTECTION PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.134

{Sample Written Program from ACC-CPI, November 2013}

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

TABLE OF CONTENTS

1. PURPOSE AND SCOPE

The purpose of this program is to protect all employees of STELLRR INSULATION from respiratory hazards, and to ensure that the company is in compliance with OSHA's Respiratory Protection Program Standard 29 CFR§1910.134.

Engineering controls, such as ventilation and substitution of less toxic materials, may not be completely effective in controlling airborne hazards. Routine operations and reasonably foreseeable emergency situations associated with the operations are considered when assessing respirator protection and other types of personal protective equipment (PPE) used to safeguard employees' health.

a. Mandatory Use of Respirators

In any workplace where respirators are necessary to protect the health of the employee, or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. The employer shall include in the program the provisions of 29 CFR § 1910.134(c)(1), as applicable.

STELLRR INSULATION has determined that some employees in certain work tasks are exposed to respiratory hazards. All employees performing these tasks must wear the designated equipment, or equipment providing greater or equivalent protection.

Additionally, STELLRR INSULATION requires these employees to participate in the company's respiratory protection program as a condition of continued employment. An employee's failure to do so may result in disciplinary action, up to and including termination for serious or repeated infractions.

Employees of STELLRR INSULATION are required to wear respirators or personal protective equipment (PPE) when the following situations exist:

- There is exposure to air contaminants above a specific exposure limit.
- Respirators or PPE are necessary to protect employee health.
- During specific routine work practices, processes or tasks identified by STELLRR INSULATION require use of a respirator or PPE.

In all cases, employees participating in this program do so at no cost to themselves. The expenses associated with training, medical evaluations, and equipment are the sole responsibility of STELLRR INSULATION.

b. Voluntary Use of Respirators

If an employee desires to wear a respirator during certain operations in non-hazardous areas, STELLRR INSULATION will review each such request on a case-by-case basis.

An employee may use the respirator provided or may provide his or her own for voluntary use, if:

- Doing so does not jeopardize the employee's health or safety, or that of co-workers.
- The equipment itself does not create a workplace hazard.
- The Founder (Respiratory Protection Program Administrator) has approved the use.

All employees voluntarily wearing respirators are required to receive a copy of "Information for Employees Using Respirators When Not Required Under the Standard." See References and Resources in Section 6 of this document. STELLRR INSULATION must review this OSHA information with each employee prior to their voluntary use of respiratory protective equipment.

In addition, employees voluntarily using tight-fitting respirators must follow the medical surveillance, cleaning, maintenance, and storage procedures in this program. STELLRR INSULATION may assign other additional program requirements for those voluntarily wearing respirators or other PPE.

Employees voluntarily wearing dust masks (filtering facepiece) are not subject to the program's medical evaluation. However, their equipment must be clean and free of contamination and may not interfere with the employee's ability to work safely[1]. These employees are also provided a copy of Appendix II and the information is reviewed with them before their use of dust masks.

Table 1 is to be completed to communicate where respirators are required in the operations of STELLRR INSULATION.

[1] OSHA Directive CPL 2-0 120 D(3)(c)(2)

Table 1

Voluntary and Required Respirator Use		
Respirator Type	Department/Task	Respiratory Hazard/PEL
Filtering facepiece (e.g., paper-type dust mask)	Cutting, grinding, cleanup, and disposal of properly-applied SPF materials. Surface cleaning when non-hazardous particles are present.	None—Voluntary use—particulates not otherwise regulated (e.g., nuisance dust)
Half-face Air Purifying Respirator with organic vapor cartridge pre-filter and particulate filter	Application of high-pressure SPF in outdoor operations such as exterior walls, tanks, and low-slope roofs all installation of low-pressure SPF	There is exposure to airborne polymeric MDI and some amine catalysts above published PEL.
Full-face Supplied Air Respirator	Application of high-pressure SPF in indoor operations with poor ventilation	There is exposure to airborne polymeric MDI and some amine catalysts above published PEL.

2. PROGRAM ADMINISTRATION AND RESPONSIBILITIES

"The employer shall 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." (29 CFR § 1910.134(c)(3))

a. Founder Responsibilities

The Founder is responsible for administering the Respiratory Protection Program.

The Respiratory Protection Program Administrator's duties may include the following:

- Identifying work areas, processes, or tasks that require workers to wear respirators, and evaluating hazards
- Selecting appropriate and approved respiratory protection options
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications
- Arranging for and conducting training
- Ensuring proper storage, cleaning, inspection, and maintenance of respiratory protection equipment
- Assign a cartridge replacement schedule as appropriate
- Conducting qualitative and quantitative fit testing
- Administering the medical surveillance program
- Maintaining required program records
- Evaluating the respiratory protection program

- Updating the written program, as necessary

NOTE: There may be additional duties not set forth above.

b. Project Manager Responsibilities

Project Managers are responsible for ensuring that the Respiratory Protection Program is implemented in their work areas in accordance with all OSHA standards. In addition to being knowledgeable about the program requirements for their own protection, supervisors also ensure that the program is understood and followed by the employees under their supervision.

Project Manager duties may include the following:

- Ensure supervised employees (including all new hires) receive appropriate training, fit testing, and annual medical evaluations.
- Ensure the availability of appropriate respirators and accessories.
- Be aware of tasks requiring the use of respiratory protection.
- Enforce the proper use of respiratory protection.
- Ensure that respirators are properly cleaned, maintained, inspected, and stored in accordance with the respiratory protection plan.
- Monitor work areas and operations with sufficient frequency to identify respiratory hazards and select proper equipment.
- Ensure respirators fit well and do not cause discomfort. Coordinate with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.
- Ensure adequate air quantity, quality, and flow of breathing air for atmosphere-supplying respirators. (See (c)(1) of the standard).

c. Employee Responsibilities

Each employee must wear his or her respirator when and where required under the conditions specified by this program. They are also obligated to use the equipment according to the training procedures for each model.

Employees may be responsible for the following:

- Being familiar with this program
- Caring for and maintaining the respirators as instructed, and storing them in a clean, sanitary location

- Performing positive and negative pressure respirator checks before each use
- Informing the supervisor if the respirator no longer fits well, and requesting a new one that fits properly
- Informing the supervisor or Program Administrator of any potential respiratory hazards or other concerns regarding the program
- Informing the supervisor of need for a medical reevaluation

d. Medical Provider Responsibilities

Medical Department "Community Care" Facility is responsible for the medical evaluation of all employees in the program to ensure that they are physically able to perform the work and wear the equipment (29 CFR § 1910.134(e)).

3. PROGRAM ELEMENTS

a. Medical Evaluation

"Medical evaluation: 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." (29 CFR § 1910.134(e)).

Accordingly, this paragraph specifies the minimum requirements for medical evaluation that employers must implement to determine the employee's ability to use a respirator as set forth in 29 CFR § 1910.134(e).

Any employee who is required to wear a respirator, or chooses to wear an air-purifying respirator (APR) voluntarily, must first pass a medical evaluation and have medical approval before wearing the equipment on the job. Voluntary use of filtering facepieces (i.e., dust masks) such as paper masks are excluded from this requirement, as stated in 29 CFR § 1910.134(c)(2)(ii).

Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Employees refusing the medical evaluation cannot work in areas requiring respirator use. The evaluation is conducted using the questionnaire provided in Attachment D.2 of this document, or an actual examination that obtains the same information. All examinations and questionnaires are to remain confidential between the employee and the physician or other licensed health care professional (PLHCP).

The medical evaluation will be conducted by: Community Care Facilities

I. Evaluation Procedures

- Every employee requiring medical evaluation is given a copy of the medical questionnaire in Attachment D.2[2], along with a stamped envelope addressed to the physician or other PLHCP. The employee is to complete the confidential questionnaire during his or her work shift and mail it in the envelope provided.
- To the extent feasible, STELLRR INSULATION accommodates employees unable to read the questionnaire. At an employee's request someone other than Founder may be asked to assist in reading the document. If this is not possible, the employee will be sent to the PLHCP for a medical evaluation.
- Follow-up medical exams are given to employees as required by the OSHA standard or as deemed necessary by the PLHCP.
- All employees can speak with the PLHCP about their medical evaluation[3].
- Any employee required by medical reasons to wear a positive pressure air purifying respirator is provided a powered air purifying respirator.

After an employee has received approval and started using a respirator, an additional medical evaluation is conducted for the following reasons, outside of the annual re-evaluation according to 29 CFR § 1910.134(e)(7):

- The employee reports signs and symptoms related to his or her ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing
- The PLHCP or supervisor informs the Program Administrator of a reevaluation need.
- Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.
- A change occurs in the workplace conditions that may result in an increased physiological burden on the employee.

II. Determination of Fitness

A physician or other licensed health care professional (PLHCP) at Community Care evaluates the completed health care questionnaire[4].

Prior to making a formal determination, STELLRR INSULATION provides the PLHCP with the following information on respirator usage in accordance with CFR § 1910.134(e)(5)(i):

[2] OSHA 29 CFR § 1910.134 Appendix C, OSHA Respiratory Medical Evaluation Questionnaire
[3] OSHA Directive CPL 2-0 120 Inspection Procedure for the Respiratory Protection Standard
[4] OSHA Sections 1 and 2, Part A of Appendix C, Prior to implementing the program, the company provides the PLHCP with a copy of the completed Health Care Questionnaire.

- The respirator equipment's type and weight
- Use frequency and duration
- Expected work effort
- Additional personal protective clothing or equipment to be used
- Estimated temperature and humidity extremes expected in the work area where the respirator is to be used[5]

The PLHCP provides a recommendation of each employee's physical ability to wear a respirator and perform the assigned work. Such evaluations will be provided in writing and shall provide only the following information in accordance with CFR § 1910 134(e)(6):

- Any limitations on respirator use related to the medical condition of the employee or related 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 PLHCP has provided the employee with a copy of the PLHCP's written recommendation

III. Follow-up Medical Examination

If an employee responds affirmatively to any of questions 1 through 8 in Section 2 of OSHA's Medical Evaluation Questionnaire (See Attachment A, Appendix II), or if the PLHCP deems it necessary, a follow-up exam is provided. This exam includes any medical tests, consultations, or diagnostic procedures that the PLHCP needs to make a final determination for safe respirator usage.

b. Respirator Selection

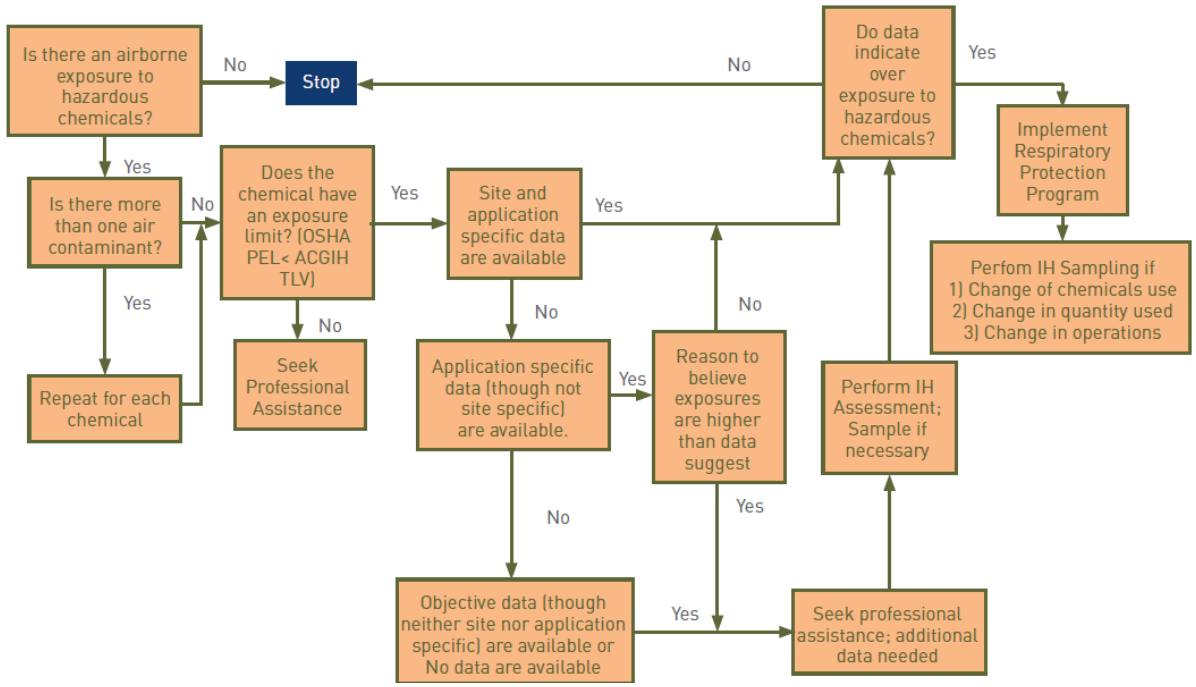
"Respirators shall be provided by the employer when such equipment is necessary to protect the health of the employee The employer shall provide the respirators which are applicable and suitable for the purpose intended The employer shall be responsible for the establishment and maintenance of a respiratory protection program " (29 CFR § 1910 134(a)(2)).

STELLRR INSULATION has performed an exposure assessment identifying the respiratory hazard(s) found in its workplace[6]. The decision matrix used in this process is shown in Figure 1.

[5] If the PLHCP and the noted conditions remain the same, the information need not be provided for subsequent medical evaluations

Figure 1: Center for the Polyurethanes Industry

MDI Exposure Assessment Decision Matrix for Selecting Respiratory Protection



Based on the information in Figure 1, and in accordance with all OSHA Standards, the Program Administrator selects the respirator to be used.

c. Respirator Fit Testing

"Fit testing. This paragraph requires that, before an employee may be required to use any respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. This paragraph specifies the kinds of fit tests allowed, the procedures for conducting them, and how the results of the fit tests must be used" (29 CFR § 1910.134(f)).

Fit testing is required by OSHA for employees wearing respirators with a negative or positive pressure, tight-fitting facepiece. The fit test is conducted using the respirator the employee will be wearing on the job.

Fit testing is conducted in accordance with 29 CFR § 1910 134(f):

- Prior to initial use of the respirator
- If a different respirator facepiece (size, style, model, or make) is used

[6] STELLRR INSULATION has evaluated its operations as required by the Personal Protective Equipment (PPE) Standards in Subpart I, 29 CFR § 1910.132-138.

- When there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.)
- On an annual basis

The company uses a qualitative fit test (QLFT) or a quantitative fit test (QNFT) method as designated in Table 2[7]. If an employee passes either test, but notifies the employer that the fit is unacceptable, the employee is allowed to select a different respirator and be retested.

The Program Administrator will conduct fit tests following the OSHA approved Bitrex™ Solution Aerosol QLFT protocol.

NOTE TO PROGRAM ADMINISTRATOR: Appendix A of the OSHA 1910.134 is titled: Fit Testing Procedures (Mandatory). The requirements in this appendix apply to all OSHA-accepted fit test methods, both Qualitative Fit Testing (QLFT) and Quantitative Fit Testing (QNFT). The Program Administrator must be knowledgeable of the information in this Appendix if the company performs their own respiratory fit testing on employees. Attachment D.1 (attached to this Model Respiratory Program) is an example of one QLFT fit test procedure (Bitrex™) accepted by OSHA Appendix III (attached to this Model Respiratory Program) is an example form documenting and Employee Fit Test Record.

Table 2

OSHA Acceptable Fit-Testing Methods

Table 2 OSHA Acceptable Fit-Testing Methods*		
	QLFT	QNFT
Half-Face, Negative Pressure, APR (<100 fit factor)	Yes	Yes
Full-Face, Negative Pressure, APR (<100 fit factor) used in atmospheres up to 10 times the PEL	Yes	Yes
Full-Face, Negative Pressure, APR (>100 fit factor)	No	Yes
Powered Air-Purfying Respirator, tight-fitting PAPR	Yes	Yes
Supplied-Air Respirators (SAR), or SCBA used in Negative Pressure (Demand Mode) (>100 fit factor)	No	Yes
Supplied-Air Respirators (SAR), or SCBA used in Positive Pressure (Pressure Demand Mode)	Yes	Yes
SCBA-Structural Fire Fighting, Positive Pressure	Yes	Yes
SCBA/SAR-IDLH, Positive Pressure	Yes	Yes
Mouth-bit Respirators	Fit-testing is not required	
Loose-fitting Respirators (e.g. hoods, helmets)	Fit-testing is not required	

* Table adapted from OSHA's Small Entity Compliance Guide for the Respiratory Protection Standard. OSHA 29 CFR §1910.134(f)(6)

[7] As established in Appendix A of the OSHA standard (Attachment 1)

d. Respirator Use General

Use instructions each time a respirator is worn, the wearer must conduct a user seal check (29 CFR § 1910 134(g)(1)(iii)). Employees may select either the positive or negative pressure check[8]. Additional PPE, combined with respirator use, may be necessary to adequately prevent exposure. The use of eye, face, or skin protection may be required during certain processes. Consult the process supervisor for other required equipment.

In accordance with 29 CFR § 1910 134(g)(1), tight fitting facepiece respirators are not permitted for use if:

- An employee has facial hair that interferes with either the sealing surface of the respirator and the face, or interferes with the valve function.
- Corrective glasses, goggles, or other personal protective equipment interferes with the seal of the facepiece.
- Any other condition interferes with the facepiece seal.

In accordance with 29 CFR § 1910 134(g)(2), the employee must vacate the respirator use area for any of the following reasons:

- To wash his or her face and respirator facepiece, as necessary to prevent respirator-induced eye or skin irritation
- If vapor or gas breakthrough is detected
- If there is a change in breathing resistance
- If there is facepiece leakage
- To replace the respirator or filter, or to change the cartridge or canister

e. Cleaning, Maintenance, and Storage

Requirement: “Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators” (29 CFR §1910.134(c)(1)(v)).

Respirators are to be regularly cleaned and disinfected according to the manufacturer’s instructions. APRs are to be cleaned and disinfected as often as necessary to be maintained in a sanitary condition. SARs and emergency use respirators are to be cleaned and disinfected after each use according to 29 CFR § 1910 134(h)(1)(iii).

[8] The seal check procedures are performed in accordance with Appendix B-1 of OSHA 29 CFR §1910 134 or the manufacturer’s direction (whichever is most effective).

I. Cleaning

Follow these general steps for cleaning and disinfecting respirators refer to the manufacturer for specific directions:

1) Disassemble respirator removing all filters, canisters, or cartridges.
2) Wash the facepiece and associated parts in a mild detergent with warm water. Do not use organic solvents or bleach.
3) Rinse thoroughly in clean, warm water.
4) Wipe the respirator with disinfectant wipes (70% isopropyl alcohol) to kill germs.
5) Air-dry in a clean area. If a clean area is not available, use clean disposable paper towels to blot excess moisture.
6) Reassemble the respirator and replace any defective parts (noting the condition of the head straps and valve flaps).
7) Place in a clean, dry plastic bag or other airtight container.

The Program Administrator is responsible for ensuring there are adequate cleaning and disinfecting supplies. If supplies are low, employees can notify their Supervisor or the Program Administrator.

II. Maintenance

After leaving the respirator use area, employees can do limited maintenance on their equipment only in an area that is free from respiratory hazards.

Respirators are to be properly maintained at all times so that they function properly and adequately protect the employee. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts must be replaced prior to equipment use.

No components are replaced or repairs made beyond those recommended by the manufacturer. 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 according to 29 CFR § 1910 134(h).

The following checklist (Table 3) may be used when inspecting respirators:

Table 3

Respirator Inspection Checklist

	Facepiece: cracks, tears, holes, facemask distortion, cracked or loose lenses or face shield
	Head straps: breaks, tears, broken buckles or clasps, overstretched elastic bands
	Valves: residue or dirt, cracks or tears in valve material, absence of valve flap
	Filters and Cartridges: proper cartridge for hazard, approval designation, intact gaskets, cracks or dents in housing
	Air Supply Systems: breathing air quality or grade, condition of supply hoses, hose connections, settings on regulators and valves

Defective respirators or those with defective parts are taken out of service immediately (29 CFR §1910.134(h)(4)). Employees should notify their supervisor about all respirator defects. It is the Supervisor's responsibility to give the defective equipment either to the Program Administrator or to the individual charged with replacement or repair. The Program Administrator then decides whether to:

- Temporarily take the respirator out of service until it can be repaired.
- Have it repaired.
- Dispose of it if the problem is irreparable.

III. Storage

APRs are stored in a clean, dry area and following the manufacturer's recommendations. Employees inspect and clean their own respirators according to the provisions of this program. The equipment is stored in plastic bags or airtight containers. Each bag or container is marked with an employee name, and only that employee can use it for their equipment storage (29 CFR §1910 134(h)(2)).

A supply of respirators and replacement components is stored in the original manufacturer's packaging in the Equipment Storage Shop.

IV. Cartridge and Canister Change-Out Schedules

In the application of product containing MDI, the use of an air-purifying respirator (APR) may be permitted if the airborne MDI concentration is no greater than 10 times the American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) or OSHA PEL. If an APR is selected, the cartridge must be equipped with an end of service life indicator (ESLI) certified by NIOSH, or a change-out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. When using an APR respirator, a pre-filter combined with an organic vapor cartridge is

recommended. APR cannot be used if (1) the employee is working in the zone of the contaminant (e.g., visible overspray is evident on the workers body), or (2) in the construction industry where spray foam application is inside a structure or a confined space with inadequate ventilation. In these situations, PAPR or SAR is provided. Contact the respirator manufacturer or the product supplier for their recommendation on specific cartridge use. The basis for the change out schedule must be described in the employer's written respirator program.

Employees wearing APR with particulate pre-filters for protection against wood dust and other particulates must change their cartridges when they experience difficulty breathing (i.e., resistance) while wearing their mask, according to the manufacturer.

V. Equipment Malfunction During Use

1) Air-Purifying Respirators (APR)

If an APR or any of its components malfunctions (breakthrough, facepiece leakage, or faulty valve), the wearer must leave the respirator use area immediately and notify the supervisor about the malfunction. The supervisor is then responsible for ensuring that the employee receives the necessary repair parts or a new functional respirator.

2) Supplied-Air Respirator (SAR)

Usually, employees using SAR work in pairs. If one experiences an SAR malfunction, then he or she notifies the partner of the problem by using hand signals. The partner then escorts the affected employee outside the respirator use area.

Supplied-air respirators use only Grade D breathing air as described in ANSI/ Compressed Gas Association Commodity Specification for Air, G-7 1-1989[9]. The Program Administrator will maintain a Certificate of Analysis from the supplier that (1) Grade D breathing air is contained in the cylinders used to supply breathing air, (2) cylinders are tested and maintained as required in the Shipping Container Specification Regulations of the Department of Transportation, and (3) the moisture content in the cylinder does not exceed a dew point of -50 degrees Fahrenheit at one atmosphere pressure for each shipment of cylinders received or for the purification system used to clean breathing air in a hose or compressor system.

[9] The oxygen content (v/v) is between 19 5% and 23 5%, hydrocarbon (condensed) content is 5 mg/m3 or less, carbon monoxide content is 10ppm or less, and carbon dioxide content is 1,000.

f. Training

"Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance" is required by 29 CFR §1910.134(c)(1)(viii).

The Program Administrator provides training to respirator users and their supervisors on:

- Contents of STELLRR INSULATION respiratory protection program
- Responsibilities of employees and supervisors
- Requirements of OSHA's respiratory protection standard

All training occurs prior to any respirator use in the workplace. Supervisors receive their training prior to supervising employees required to use respirators.

The training program covers the following topics:

- Elements of STELLRR INSULATION respiratory protection program
- The information covered under OSHA Standard 29 CFR § 1910 134
- Respiratory hazards encountered at the worksite
- Proper selection and use of respirators
- Additional PPE
- Respirator limitations
- How to perform user seal (fit) checks
- Fit testing
- Emergency respirator use procedures
- Respirator maintenance and storage
- Medical signs and symptoms limiting effective respirator use

OSHA requires employees to demonstrate their understanding of the topics covered in the training through hands-on exercises and a written quiz. The Program Administrator documents respirator training. Refer to Appendix D.4 of this document for a copy of the Respirator Protection Training Quiz. This documentation includes the type, model, and size of respirator on which each employee has been trained and fit tested.

Employees are retrained annually or as needed (i.e., relocation to another department using a different type of respirator).

4. PROGRAM EVALUATION

"This section requires the employer to conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult employees to ensure that they are using the respirators properly" (29 CFR § 1910.134(l)).

The Program Administrator and other responsible supervisors conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. These evaluations can include regular consultations with both the employees using respirators and their supervisors. There may be other topics that a company determines are appropriate. This can identify areas for improvement and address problems.

Records' reviews, site inspections, and periodic air monitoring also assist in program review.

5. DOCUMENTATION AND RECORDKEEPING

The Program Administrator maintains the following records:

- A written copy of this program and the OSHA standard (this information is available to any interested employee)
- Training and fit testing records updated as new employees are trained, when existing employees receive refresher training, or when new fit testing is conducted
- Written recommendations from the PLHCP on an employee's ability to use respirators Medical evaluations maintained in accordance with the OSHA Medical Records Standard (29 CFR § 1910.1020)

The OSHA website hosts additional information about topics such as respiratory fit testing procedures, user seal check procedures, respiratory cleaning procedures, and the OSHA Respiratory Medical Evaluation Questionnaire. You should access OSHA's website at www.osha.gov for more information.

6. RESOURCES

Click on the following link to open the full text of Attachment 1:

29 CFR § 1910 134 Respiratory Protection Standard and Appendices, OSHA

For the most up-to-date information on these sections of OSHA regulations, click below to visit the OSHA website:
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&P_id=12716&p_text_version=FALSE

a. Fit Testing Procedures

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9780&p_text_version=FALSE

I. User Seal Check Procedures

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9781&p_text_version=FALSE

II. Respiratory Cleaning Procedures

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=978&p_text_version=FALSE

b. OSHA Respirator Medical Evaluation Questionnaire

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9783&p_text_version=FALSE

c. Information for Employees Using Respirators When Not Required Under the Standard

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9784&p_text_version=FALSE

I. Excerpts from "Risk Assessment - Methylenediphenyl diisocyanate, CAS-No :26447-40-5, EINECS- No : 247-714-0," Draft of 5.02.99

II. OSHA Standard for Respiratory Protection requirements for Allowable Use of Air-purifying Respirators (APR) Against Gases and Vapors - Excerpts from OSHA documents

III. Evaluation of the Effectiveness of Air-purifying Respirator Cartridges in Removing MDI Aerosols From Air, M W Spence, T D Landry, D W Huff; Environment, Health, and Safety, The Dow Chemical Company, Midland, Michigan 48674; (517)636-2331

IV. National Institute for Occupational Safety and Health (NIOSH) Policy Statement, NIOSH Respirator Use Policy/OSHA's §1910 134, August 4, 1999

V. For the most up-to-date information on this topic, click to visit the NIOSH website:
http://www.3m.com/market/safety/ohes2/html/nioshPolicyStatement.html

VI. Questions and Answers on the Respiratory Protection Standard (English only) OSHA and Appendices

1) Appendix D (Spanish Translation)

2) Respirator Use Requirements Flowchart

3) State Licensing Boards Information

4) Respirator Medical Evaluation Questionnaire (English)

For the most up-to-date information on this topic and for the translations, click below to visit the OSHA website: http://www.osha-slc.gov/qna.pdf.

VII. Letter from Richard Fairfax, OSHA, Directorate of Compliance Programs, to David G Sarvadi, Keller and Heckman, LLP, July 18, 2000, and Larry Janssen, CIH, 3M Company, July 18, 2000

Attachment D.1.—OSHA Bitrex™ Respirator Fit Test Protocol

The purpose of a fit test is to meet OSHA Standard 29 CFR §1910.134. The Bitrex™ (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex™ is routinely used as a taste aversion agent in household liquids which children should not be drinking and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. The entire screening and testing procedure shall be explained to the test subject prior to conducting the screening test.

1. Bitrex™ Fit Test Instructions

a. Scope

The Bitrex™ fit test is conducted so the person being fit tested can detect the taste of the Bitrex™ sensitivity solution. Once detection is confirmed, the person is tested using the Bitrex™ fit test solution with the respirator to detect breakthrough.

b. Related Procedures and Other Documents

- Bitrex™ Qualitative Fit Test Kit Instructions Part No 2041 Allegro Industries
- SDS Bitrex™ Fit Sensitivity Solution #1
- SDS Bitrex™ Fit Test Solution #2
- Respirator Fit Test Record (Appendix III)
- Respirator Protection Training Quiz (Appendix IV)

2. Equipment

- Fit test kit
- Test hood
- Nebulizer #1 (sensitivity)
- Nebulizer #2 (fit test)
- Sensitivity test solution
- Fit test solution
- Stopper

- Canister cartridge

3. Bitrex™ Fit Test Solution Instructions

a. Remove sensitivity test solution, and with tip pointed upward, pinch along the length of the applicator tube to crush the glass ampoule.

b. It is important to keep the applicator tip pointed upward when pinching the tube to prevent the solution from squirting out during the pinching process.

c. Remove the end cap from the nebulizer, and insert the applicator tip into the U section opening of the nebulizer. Squeeze and transfer the solution from the applicator into the neck of the nebulizer until the applicator is empty.

d. Do not remove the end tip of the applicator tube. It contains a porous filter designed to filter out the crushed glass. The tip contains a hole for solution transfer.

e. Replace the protective end cap on the nebulizer until the test is ready to be performed.

f. Repeat operations 3.a and 3.b for the fit test solution ampoule using the appropriate nebulizer.

4. Bitrex™ Sensitivity Test Instructions

NOTE: The subject should not eat, drink, or chew gum for at least 15 minutes before the test.

a. Place the hood over the subject without a respirator.

b. Position the hood forward so there is about six inches between the subject's face and the window. This is important to ensure even dispersion of the aerosol and clearance for the respirator during the fit test.

c. Instruct the subject to breathe through their mouth with their tongue extended.

d. Using the sensitive test solution Nebulizer #1 inject the aerosol into the hood through the hole in the window.

   I. Inject 10 times, fully squeezing and collapsing the bulb.

   II. The nozzle is directed away from the nose and mouth of the person being tested.

e. Ask the subject if they can detect the bitter taste of the solution.

   I. If tasted, note the number of squeezes on the Respirator Fit Test Record.

II. All testing results are in groups of 10 and should be noted on the paperwork in groups of 10 squeezes.

f. If the subject does not taste the sensitivity solution, inject an additional 10 full squeezes of the aerosol into the hood.

I. Repeat with 10 more squeezes.

g. If the Bitrex™ is not tasted after 30 squeezes, the subject is unable to taste Bitrex™ and may not perform the fit test.

5. Bitrex™ Fit Test Work Instructions

a. Have the subject don and fit check the respirator per the manufacturers' instructions.

I. Use the particulate filter provided (N95-P100 rating).

b. Place the hood over the subject with the respirator on.

c. Position the hood forward so there is about six inches between the subject's face and the window.

d. This is important to ensure even dispersion of the aerosol and clearance for the respirator during the fit test.

e. Instruct the subject to breathe through their mouth with their tongue extended. Using the sensitive test solution Nebulizer #2, inject the aerosol into the hood through the hole in the window.

I. Inject 10 times, fully squeezing and collapsing the bulb.

II. To maintain an adequate concentration of aerosol during this test, inject one half of the number of squeezes used in step 5.e.I, every 30 seconds.

f. Ask the subject if they can detect the bitter taste of the solution any time during the following exercises for 60 seconds each.

I. Normal breathing

II. Deep breathing (breaths should be deep and regular)

III. Turning head from side to side- movement should be complete with one turn every second

IV. Nodding head up and down (movement should be complete with one turn every second)

V. Talking, reciting the alphabet, or reading aloud a prepared text (the “Rainbow Passage” is suggested[10])

VI. Bending over (The test subject shall bend at the waist as if they were to touch their toes.)

1) Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

g. If the entire test is completed without the subject detecting the bitter taste of the Bitrex™ aerosol, the test is successful, and the respirator fit is deemed adequate.

h. If the taste of Bitrex™ is detected, the test has failed, and a different respirator must be tried. The entire procedure is repeated (sensitivity and fit tests).

i. Enter “pass” or “fail” on the Respirator Fit Test Record.

j. Have the subject and the trainer sign the document.

[10] The Rainbow Passage: “When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.”

Attachment D.2.—OSHA Respiratory Medical Evaluation Questionnaire[11]

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee: Can you read (circle one)? YES NO

Your employer must allow you to answer this questionnaire during normal working hours or at a time and place that is convenient for you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the healthcare professional who will review it.

1. Part A. Section 1 (Mandatory)

The following information must be provided by every employee who has been selected to use any type of respirator (please print):

1. Today's date: _____
2. Your name: _____
3. Your age (to nearest year): _____
4. Sex (circle one): Male Female
5. Your height: ____ feet ____ inches
6. Your weight: ____ pounds
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the area code): (____) ____-_____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one)? YES NO
11. Check the type of respirator you will use (you can check more than one category):

    ☐ N, R, or P disposable respirator (filter-mask, non- cartridge type only)

[11] OSHA 1910 134 Appendix C, OSHA Respiratory Medical Evaluation Questionnaire

☐ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus)

12. Have you worn a respirator (circle one)? YES NO

    a. If "yes," what type(s): _____

2. Part A. Section 2 (Mandatory)

Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please check "yes" or "no")

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month? YES NO

2. Have you ever had any of the following conditions?

    a. Seizures (fits): YES NO

    b. Diabetes (sugar disease): YES NO

    c. Allergic reactions that interfere with your breathing: YES NO

    d. Claustrophobia (fear of closed-in places): YES NO

    e. Trouble smelling odors: YES NO

3. Have you ever had any of the following pulmonary or lung problems?

    a. Asbestosis: YES NO

    b. Asthma: YES NO

    c. Chronic bronchitis: YES NO

    d. Emphysema: YES NO

    e. Pneumonia: YES NO

    f. Tuberculosis: YES NO

    g. Silicosis: YES NO

    h. Pneumothorax (collapsed lung): YES NO

i. Lung cancer: YES NO

j. Broken ribs: YES NO

k. Any chest injuries or surgeries: YES NO

l. Any other lung problem that you've been told about: YES NO

4. Do you currently have any of the following symptoms of pulmonary or lung illness?

a. Shortness of breath: YES NO

b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: YES NO

c. Shortness of breath when walking with other people at an ordinary pace on level ground: YES NO

d. Have to stop for breath when walking at your own pace on level ground: YES NO

e. Shortness of breath when washing or dressing yourself: YES NO

f. Shortness of breath that interferes with your job: YES NO

g. Coughing that produces phlegm (thick sputum): YES NO

h. Coughing that wakes you early in the morning: YES NO

i. Coughing that occurs mostly when you are lying down: YES NO

j. Coughing up blood in the last month: YES NO

k. Wheezing: YES NO

l. Wheezing that interferes with your job: YES NO

m. Chest pain when you breathe deeply: YES NO

n. Any other symptoms that you think may be related to lung problems: YES NO

5. Have you ever had any of the following cardiovascular or heart problems?

a. Heart attack: YES NO

b. Stroke: YES NO

c. Angina: YES NO

d. Heart failure: YES NO

e. Swelling in your legs or feet (not caused by walking): YES NO

f. Heart arrhythmia (heart beating irregularly): YES NO

g. High blood pressure: YES NO

h. Any other heart problem that you've been told about: YES NO

6. Have you ever had any of the following cardiovascular or heart symptoms?

a. Frequent pain or tightness in your chest: YES NO

b. Pain or tightness in your chest during physical activity: YES NO

c. Pain or tightness in your chest that interferes with your job: YES NO

d. In the past two years, have you noticed your heart skipping or missing a beat: YES NO

e. Heartburn or indigestion that is not related to eating: YES NO

f. Any other symptoms that you think may be related to heart or circulation problems: YES NO

7. Do you currently take medication for any of the following problems?

a. Breathing or lung problems: YES NO

b. Heart trouble: YES NO

c. Blood pressure: YES NO

d. Seizures (fits): YES NO

8. I f you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check the following space and go to question 9.):

a. Eye irritation: YES NO

b. Skin allergies or rashes: YES NO

c. Anxiety: YES NO

d. General weakness or fatigue: YES NO

e. Any other problem that interferes with your use of a respirator: YES NO

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire? YES NO

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently)? YES NO

11. Do you currently have any of the following vision problems?

a. Wear contact lenses: YES NO

b. Wear glasses: YES NO

c. Color blind: YES NO

d. Any other eye or vision problem: YES NO

12. Have you ever had an injury to your ears, including a broken ear drum? YES NO

13. Do you currently have any of the following hearing problems?

a. Difficulty hearing: YES NO

b. Wear a hearing aid: YES NO

c. Any other hearing or ear problem: YES NO

14. Have you ever had a back injury? YES NO

15. Do you currently have any of the following musculoskeletal problems?

a. Weakness in any of your arms, hands, legs, or feet: YES NO

b. Back pain: YES NO

c. Difficulty fully moving your arms and legs: YES NO

d. Pain or stiffness when you lean forward or backward at the waist: YES NO

e. Difficulty fully moving your head up or down: YES NO

f. Difficulty fully moving your head side to side: YES NO

g. Difficulty bending at your knees: YES NO

h. Difficulty squatting to the ground: YES NO

i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: YES NO

j. Any other muscle or skeletal problem that interferes with using a respirator: YES NO

Attachment D.3.—Respirator Fit Test Record (Qualitative)

Name: _____ Date: _____

Job: _____ Glasses worn: _____

Facial hair, other: _____

Test media: ☐ Bitrex™ ☐ Saccharin

Respirator Type	A	B
Compatible with eye glasses		
Test Exercises		
Head stationary, normal breathing		
Head stationary, deep breathing		
Head turning side to side		
Head moving up and down		
Talking (rainbow passage)		
Comfort		
Very comfortable		
Comfortable		
Barely comfortable		
Uncomfortable		
Intolerable		
Pass/Fail		

Assigned equipment: A

Manufacturer: _____ Model: _____ Size: _____

Assigned equipment: B

Manufacturer: _____ Model: _____ Size: _____

Tested by:

Print name: _____

Signature: _____

Signature of trainee: _____

Attachment D.4.—Respirator Protection Training—QUIZ

Name: _____ Date: _____

Circle the correct answer.

1. A positive and negative pressure check should be conducted each time the respirator is worn. TRUE FALSE
2. A dust mask is adequate protection against solvents. TRUE FALSE
3. Respirators should be cleaned on a daily basis. TRUE FALSE
4. The only adequate protection against MDI is from the dual-cartridge respirator. TRUE FALSE
5. A respirator can be borrowed from a co-worker in the event that your respirator is not available. TRUE FALSE
6. In order to assure a proper fit, clean shaven skin must be in contact with all respirator skin sealing surfaces at all times. TRUE FALSE
7. Air-purifying respirators (APRs) can be worn for protection against MDI vapor or mist during spray foam applications. TRUE FALSE

APPENDIX E:

HEARING CONSERVATION PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.95

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

TABLE OF CONTENTS

1. PURPOSE AND SCOPE

The STELLRR INSULATION Hearing Protection Program is designed to protect employees by establishing accepted practices to protect employee's hearing and effectively manage or eliminate hazardous noise exposures. Based upon monitoring results, a continuing Hearing Conservation Program (HCP) is established to meet these objectives.

2. PROGRAM ADMINISTRATION AND RESPONSIBILITIES

a. Program Administrator

The Program Administrator at STELLRR INSULATION is the Founder. The Program Administrator is responsible for administering the hearing protection program. Duties of the program administrator include:

- Coordination and supervision of noise exposure monitoring
- Identification of employees to be included in the HCP
- Coordination and supervision of audiometric program
- Supervision of hearing protector selection
- Development of policies relating to the use of hearing protectors
- Supervision of employee training programs
- Coordination and supervision of record keeping
- Evaluation of overall program

b. Program Applicability

All employees assigned or working in designated noise areas whose noise exposures equal or exceed the action level of 85 dBA (8-hour time weighted average) will be included in the program. These exposures will be determined by actual monitoring or with representative data. Employees are required to fully participate in the program outlined in this policy as a condition of employment. Employees must wear the provided ear protection devices when working in posted noise areas. Each employee exposed to sound levels in excess of 85, will be:

- Given a baseline audiogram prior to assignment and an annual audiogram thereafter (The testing is provided at no cost to the employee.)

- Provided with a choice of suitable ear protectors, fitted and encouraged to use them. (Wearing of ear protection is mandatory for employees working in areas where noise exposure exceeds 90 dBA (8-hour time-weighted average).)
- Notified of the results of noise exposure monitoring when their exposure is determined to be 85 dBA (8 hour time weighted average) or greater
- Notified of any abnormal audiogram indicating a standard threshold shift
- Provided annual training and information

3. PROGRAM ELEMENTS

a. Noise Monitoring

A noise survey indicated that noise levels exceeding 85 dBA were measured on specific jobs. The noise exposure levels and areas or sources are summarized below in Attachment E.1. Additional noise monitoring will be conducted whenever employee exposures are expected to change (equipment changes, plant modifications, engineering control installations, etc.)

b. Work Areas for HCP

Employees in the following areas will be included in the Hearing Conservation Program:

If working in the Rig Engine Room while the engine is running or on noisy job sites.

Affected employees or employee representatives will be notified of planned monitoring by the program administrator and permitted to observe. Employee observation of monitoring will not disrupt normal work activities.

c. Audiometric Testing

Baseline and annual audiometric testing will be performed. A copy of the standard will be provided to the testing center. The testing center will provide or make available records regarding the background sound pressure levels in their audiometric testing rooms.

New employees in noisy areas positions listed above will be provided with appropriate audiometric examinations (baseline or annual) within 30 days of employment. Exposure to workplace noise is not allowed for 14 hours prior to baseline examinations (ear protectors may be used in lieu of 14 hours noise-free). Audiometric testing results provided by the resting center will be reviewed to ensure the appropriate follow-up actions are taken.

If a standard threshold shift (an average shift in either ear of 10 dB or more at 2,000, 3,000 or 4,000 Hz) is identified, the employee will be:

- Notified of the threshold shift within 21 days of this determination
- Informed of the need for further evaluation or retesting if a medical problem is suspected
- Required to wear hearing protection
- Refitted or retrained in the use of hearing protection
- Referred for additional audiological or medical testing, if appropriate, and informed of the need for this testing, the purpose and outcome, and whether shift may not be related to use of hearing protectors

d. Hearing Protection

Hearing protection is required to be worn by employees in the following job positions (exposure exceeds 90 dBA, 8-hour-time weighted average):

Currently N/A

e. Noise Signs

Company policy requires all work areas where noise exposures may exceed 85dBA to be posted with noise warning signs at all entrances to these areas. All employees in the HCP will wear ear protection when working in posted areas.

f. Employee Training

Participation in an annual training program is required for employees exposed to noise at or above 85 dBA. The training will include information on:

- The effects of noise on hearing
- The purpose and use of hearing protectors, the advantages and disadvantages of the various types
- Instructions in selection, fitting, use, and care of hearing protectors
- The purpose of audiometric testing and an explanation of test procedures
- Contents of 29 CFR 1910.95, Occupational Noise Exposure
- Contents of 29 CFR 1910.20, Access to Medical and Exposure Records

A copy of the noise standard and the written training and instructional materials are attached and are made available to employees upon request. Records of training will be maintained in Attachment E.2.

4. DOCUMENTATION AND RECORDKEEPING

Audiometric program records are maintained in the employee's personnel file and will be provided to employees upon request. Records applicable to employee monitoring and exposure records will be retained as follows:

- Employee audiometric test records (baseline and annual audiogram, retests, test room background levels, and audiometer calibration records) are maintained for the duration of affected employees' employment.
- Noise exposure measurement records are maintained for two years.

ATTACHMENT E.1.—Sample Noise Exposure Measurement Log

Location	Operation	Date	Exposure Level (dBA)

ATTACHMENT E.2.—Sample Hearing Conservation Training Record

Date	Employee	Topic	Trainer

APPENDIX F:

CONTROL OF HAZARDOUS ENERGY (LOCK-OUT/TAG-OUT) PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.147

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

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1. PURPOSE AND SCOPE

The objective of this procedure is to establish a means of positive control to prevent the accidental starting or activating of machinery or systems while they are being repaired, cleaned, or serviced. This program serves to:

- Establish a safe and positive means of shutting down machinery, equipment, and systems.
- Prohibit unauthorized personnel or remote control systems from starting machinery or equipment while it is being serviced.
- Provide a secondary control system (tag-out) when it is impossible to positively lock-out the machinery or equipment.
- Establish responsibility for implementing and controlling lock-out/tag-out procedures.
- Ensure that only approved locks, standardized tags, and fastening devices provided by the company will be utilized in the lock-out/tag-out procedures.

2. PROGRAM ADMINISTRATION

a. Program Administrator Responsibilities

The Program Administrator at STELLRR INSULATION is the Founder. The Program Administrator is responsible for administering the lock-out/tag-out program. Duties of the program administrator include:

- Implementing the lock-out/tag-out program
- Enforcing the program and insuring compliance with the procedures in their departments
- Monitoring the compliance of this procedure and conducting the annual inspection and certification of the authorized employees

b. Employee Responsibility

Only authorized employees (those listed in Attachment F.1) are responsible for following established lock-out/tag-out procedures.

- Affected employees (all other employees in the facility) are responsible for ensuring they do not attempt to restart or re-energize machines or equipment that are locked out or tagged out.

3. PROGRAM ELEMENTS

The ensuing items are to be followed to ensure both compliance with the OSHA Control of Hazardous Energy Standard and the safety of our employees.

a. Preparation for Lock-out or Tag-out

Employees who are required to utilize the lock-out/tag-out procedure (see employee list in Attachment F.1) must be knowledgeable of the different energy sources and the proper sequence of shutting off or disconnecting energy means. The four types of energy sources are:

- Electrical (most common form)
- Hydraulic and pneumatic
- Fluids and gases
- Mechanical (including gravity)

More than one energy source may be used on some equipment, and the proper procedure must be followed in order to identify energy sources and lock-out/tag-out accordingly. See Attachment F.5 for the specific procedure format.

b. Electrical

I. Shut off power at machine and disconnect.

II. Disconnecting means must be locked or tagged.

III. Press start button to see that correct systems are locked out.

IV. All controls must be returned to their safest position.

Remember these points:

- If a machine or piece of equipment contains capacitors, they must be drained of stored energy.
- Possible disconnecting means include the power cord, power panels (look for primary and secondary voltage), breakers, the operator's station, motor circuit, relays, limit switches, and electrical interlocks.
- Some equipment may have a motor-isolating shut-off and a control-isolating shut-off.
- If the electrical energy is disconnected by simply unplugging the power cord, the cord must be kept under the control of the authorized employee or the plug end of the cord must be locked out or tagged out.

c. Hydraulic and Pneumatic

I. Shut off all energy sources (pumps and compressors). If the pumps and compressors supply energy to more than one piece of equipment, lock-out or tag-out the valve supplying energy to the piece of equipment being serviced.

II. Stored pressure from hydraulic and pneumatic lines shall be drained and bled when release of stored energy could cause injury to employees.

III. Make sure controls are returned to their safest position (off, stop, standby, inch, jog, etc.).

d. Fluids and Gases

I. Identify the type of fluid or gas and the necessary personal protective equipment.

II. Close valves to prevent flow, and lock-out/tag-out.

III. Determine the isolating device, and then close and lock-out/tag-out.

IV. Drain and bleed lines to zero energy state.

V. Some systems may have electrically controlled valves. If so, they must be shut off and locked-out/tagged out.

VI. Check for zero energy state at the equipment.

e. Mechanical Energy

Mechanical energy includes gravity activation, energy stored in springs, etc.

I. Block out, or use die ram safety chain.

II. Lock-out or tag-out safety device.

III. Shut off and lock-out or tag-out the electrical system.

IV. Check for zero energy state.

V. Return controls to their safest position.

f. Release from Lock-out/Tag-out

I. Inspection: Make certain the work is completed, and inventory the tools and equipment that were used.

II. Clean-up: Remove all towels, rags, work-aids, etc.

III. Replace guards: Replace all guards possible. Sometimes a particular guard may have to be left off until the start sequence is over due to possible adjustments. However, all other guards should be put back into place.

IV. Check controls: All controls should be in their safest position.

V. The work area shall be checked to ensure that all employees have been safely positioned or removed and have been notified that the lock-out/tag-out devices are being removed.

VI. Remove locks and tags. Remove only your lock or tag.

g. Service or Maintenance Involving More than One Person

When servicing or maintenance is performed by more than one person, each authorized employee shall place his or her own lock or tag on the energy-isolating source. This shall be done by utilizing a multiple lock scissors clamp if the equipment is capable of being locked out. If the equipment cannot be locked out, then each authorized employee must place his tag on the equipment.

h. Removal of an Authorized Employee's Lock-out/Tag-out by the Company

Each location must develop written emergency procedures that comply with 1910.147(e)(3) to be utilized at that location. Emergency procedures for removing lock-out/tag-out should include the following:

I. Verification by employer that the authorized employee who applied the device is not in the facility.

II. Make reasonable efforts to advise the employee that his or her device has been removed. (This can be done when he or she returns to the facility).

III. Ensure that the authorized employee has this knowledge before he or she resumes work at the facility.

i. Shift or Personnel Changes

Each facility must develop written procedures based on specific needs and capabilities. Each procedure must specify how the continuity of lock-out or tag-out protection will be ensured at all times. See 1910.147(e)(4).

j. Procedures for Outside Personnel and Contractors

Outside personnel and contractors shall be advised that the company has and enforces the use of lock-out/tag-out procedures. They will be informed of the use of locks and tags and notified

about the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

The company will obtain information from the outside personnel or contractor about their lock-out/tag-out procedures and will advise affected employees of this information.

The outside personnel or contractor will be required to sign a certification form. If the outside personnel or contractor has previously signed a certification that is on file, additional signed certification is not necessary.

k. Training and Communication

Each authorized employee who will be utilizing the lock-out/tag-out procedure will be trained in the recognition of applicable hazardous energy sources, type and magnitude of energy available in the work place, and the methods and means necessary for energy isolation and control.

Each affected employee (all employees other than authorized employees utilizing the lock-out/tag-out procedure) shall be instructed in the purpose and use of the lock-out/tag-out procedure, and the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

Training will be certified using Attachment F.2 (Authorized Personnel) or Attachment F.3 (Affected Personnel). The certifications will be retained in the employee personnel files.

l. Periodic Inspection

A periodic inspection (at least annually) will be conducted of each authorized employee under the lock-out/tag-out procedure. This inspection shall be performed by the {responsible person}. If the {responsible person} is also using the energy control procedure being inspected, then the inspection shall be performed by another party.

The inspection will include a review between the inspector and each authorized employee of that employee's responsibilities under the energy control (lock-out/tag-out) procedure. The inspection will also consist of a physical inspection of the authorized employee while performing work under the procedures.

The Founder shall certify in writing that the inspection has been performed. The written certification (Attachment F.4) shall be retained in the individual's personnel file. The {responsible person} shall be trained at the Authorized Level.

ATTACHMENT F.1.—List of Authorized Personnel For Lock-out/Tag-out Procedures

Name	Job Title

ATTACHMENT F.2.—Certification of Training (Authorized Personnel)

I certify that I have received training as an authorized employee under STELLRR INSULATION Lock-Out/Tag-Out Program. I further certify that I understand the procedures and will abide by those procedures.

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

ATTACHMENT F.3.—Certification of Training (Affected Personnel)

I certify that I have received training as an affected employee under STELLRR INSULATION Lock-Out/Tag-Out Program. I further certify and understand that I am prohibited from attempting to restart or re-energize machines or equipment that are locked out or tagged out.

_____ _____

AFFECTED EMPLOYEE SIGNATURE DATE

ATTACHMENT F.4.—Lock-out/Tag-out Inspection Certification

I certify that {equipment} was inspected on this date utilizing lock-out/tag-out procedures. The inspection was performed while working on {equipment}.

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

_____ _____

INSPECTOR'S SIGNATURE DATE

ATTACHMENT F.5.—Lock-out/Tag-out Energy Control Procedures Specific to Each Machine

{NOTE: SPF Contractors should consider making a separate LOTO procedure for each proportioner, generator, and compressor used.}

1. Preparation for Shut Down

a. Identify equipment to be shut down: _____

b. Location in facility: _____

c. Procedures to notify all **affected employees**: _____

_____

d. Identify all power sources:

I. Electrical: _____

II. Air: _____

III. Steam: _____

IV. Hydraulic: _____

V. Gravity: _____

VI. Other: _____

e. Identify lock-out/tag-out devices to be used: _____

_____

_____

2. Shut Down

Description of the shut down procedures: _____

_____

_____

3. Isolation

Procedures for isolation of equipment from all power sources: _____

_____

_____

4. Lock-out/Tag-out Device Application

Procedure for locking out or tagging out equipment: _____

_____

_____

5. Release of Stored Energy

Procedures for the release of stored energy (where applicable): _____

_____

_____

6. Verification of Isolation

Procedures to ensure that equipment is isolated from all power sources: _____

_____

_____

7. Start-Up

a. Visually inspect the machine and equipment. Ensure all tools have been removed. Return guards to place.

b. Notify all affected employees and other employees of the start up.

c. Remove all lock-out/tag-out devices, and restore power.

APPENDIX G:

EMERGENCY ACTION PLAN (EAP)

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.38

{Complete for each jobsite.}

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

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EMERGENCY RESPONSE PLAN

1. Company Information

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Company Contact:

Name: Shawn Mansur

Title: Founder

Telephone or Cell: _____

Email: _____

2. Alerts

In the event of an emergency, employees are alerted by:

- **The sounding of an alarm**
- **Verbal announcement**

Identify the emergency signal for each emergency situation (i.e., earthquake, fire, general evacuation):

_____

_____

_____

3. Policy

In the event of fire or other emergency, ALL employees shall evacuate immediately.

4. Routes

In the event of an emergency, employees shall evacuate by means of the nearest available marked exit.

5. Fire Extinguishers

In the event of a fire, the following individuals are authorized to use portable fire extinguishers to attempt to extinguish fires before evacuating:

{Enter the names of those trained to use fire extinguishers.}

_____

_____

_____

_____

6. Operations

In the event of an emergency, the following employees are to remain in the workplace to shutdown or monitor critical operations before they evacuate:

{List the employees to remain during shutdown.}

_____

_____

_____

_____

7. Duties:

The following employees are to perform rescue or medical duties during an emergency:

{List qualified EMR personnel, if any.}

_____

_____

_____

8. Assembly

After an emergency evacuation, employees are to gather in the following location(s):

{Enter gathering locations.}

9. Accounting

After an emergency evacuation, the procedure for accounting for all employees is:

{Perform employee roll call.}

10. Additional Information

{Enter additional evacuation plan and procedures.}

APPENDIX H:

FALL PROTECTION PLAN

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1926 Subpart M Appendix E

{Complete for each jobsite.}

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

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FALL PROTECTION WORK PLAN

1. SPECIFIC JOB INFORMATION

Company Name: STELLRR INSULATION

Job Name: _____ Date: _____

Job Address: _____ City: _____

Job Foreman: _____ Jobsite Phone: _____

2. FALL HAZARDS IN THE WORK AREA

Include location and dimensions for each hazard.

Elevator shaft: _____ Stairwell: _____

Leading edge: _____ Window opening: _____

Outside static line: _____ Roof eave height: _____

Perimeter edge: _____ Roof perimeter dimensions: _____

Other fall hazards in the work area:

_____

_____

_____

_____

_____

_____

_____

3. METHOD OF FALL ARREST OR FALL RESTRAINT

{For fall protection equipment, include details, such as manufacturer, etc.}

Full body harness: _____

Body belt (restraint only): _____

Lanyard: _____

Dropline: _____

Lifeline: _____

Restraint line: _____

Horizontal lifeline: _____

Rope grab: _____

Deceleration device: _____

Shock absorbing lanyard: _____

Locking snap hooks: _____

Safety nets: _____

Guard rails: _____

Anchorage points: _____

Catch platform: _____

Scaffolding platform: _____

Safety monitor: _____

Name of monitor, if used: _____

Other: _____

_____

_____

4. ASSEMBLY, MAINTENANCE, INSPECTION, AND DISASSEMBLY PROCEDURE

Assembly and disassembly of all equipment will be done according to manufacturers' recommended procedures. {Include copies of manufacturer's data for each specific type of equipment used.}

Specific types of equipment on the job are: _____

_____

A visual inspection of all safety equipment will be done daily or before each use, as stated in the Employee Training Packet. Any defective equipment will be tagged and removed from use immediately. The manufacturer's recommendations for maintenance and inspection will be followed.

5. HANDLING, STORAGE, and SECURING OF TOOLS AND MATERIAL

Toe boards will be installed on all scaffolding to prevent tools and equipment from falling from scaffolding.

Other specific handling, storage, and securing instruction is as follows: _____

6. OVERHEAD PROTECTION

Hard hats are required on all job sites with the exception of those that have no exposure to overhead hazards. Warning signs will be posted to caution of existing hazards whenever they are present. In some cases, debris nets may be used if a condition warrants additional protection.

Additional overhead protection will include: _____

Toe boards (at least four inches in height) will be installed along the edge of scaffolding and walking surfaces for a distance sufficient to protect employees below. Where tools, equipment, or materials are piled higher than the top of the toe board, paneling or screening will be erected to protect employees below.

7. INJURED WORKER REMOVAL

Normal first aid procedures should be performed as the situation arises. If the area is safe for entry, the first aid should be done by a foreman or other certified individual.

Initiate Emergency Services—dial 911 (where available)

Phone location: _____

First aid location: _____

Elevator location: _____

Crane location: _____

Other: _____ Location: _____

Rescue considerations: When personal fall arrest systems are used, the employer must assure that employees can be promptly rescued or can rescue themselves should a fall occur. The availability of rescue personnel, ladders, or other rescue equipment should be evaluated. In some situations, equipment that allows employees to rescue themselves after the fall has been arrested may be desirable, such as devices that have descent capability.

Describe methods to be used for the removal of the injured worker(s): _____

_____

_____

8. TRAINING AND INSTRUCTION PROGRAM

All new employees will be given instructions on the proper use of fall protection devices before they begin work. They will sign a form stating they have been given this information. This form becomes part of the employee's personnel file.

The written fall protection work plan will be reviewed before work begins on the job site. Those employees attending will sign below. The fall protection equipment use will be reviewed regularly at the weekly safety meetings.

_____ _____

_____ _____

_____ _____

_____ _____

Foreman or Job Superintendent: _____ Date: _____

Prior to permitting employees into areas where fall hazards exist, all employees must be trained regarding fall protection work plan requirements. Inspection of fall protection devices/systems must be made to ensure compliance with all applicable regulations.

APPENDIX I:

JOBSITE FIRE PREVENTION PLAN

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1926.24

{Complete for Each Jobsite.}

STELLRR INSULATION

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Austin, Texas 78701

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Shawn Mansur

Founder

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1. PURPOSE AND SCOPE

The purpose of this Fire Prevention Plan is to eliminate the causes of fire, prevent loss of life and property by fire, and to comply with the Occupational Safety and Health Administration's (OSHA) standard on fire prevention, 29 CFR 1910.39. It provides employees with information and guidelines that will assist them in recognizing, reporting, and controlling fire hazards.

2. COMPANY POLICY

STELLRR INSULATION is committed to minimizing the threat of fire to employees, visitors, and property. STELLRR INSULATION complies with all applicable laws, regulations, codes, and good practices pertaining to fire prevention. {Facility name's} separate Emergency Action Plan spells out the procedures for responding to fires. This Fire Prevention Plan serves to reduce the risk of fires at STELLRR INSULATION {location} in the following ways:

- Identifies materials that are potential fire hazards and their proper handling and storage procedures
- Distinguishes potential ignition sources and the proper control procedures of those materials
- Describes fire protection equipment and systems used to control fire hazards
- Identifies persons responsible for maintaining the equipment and systems installed to prevent or control ignition of fires
- Identifies persons responsible for the control and accumulation of flammable or combustible material
- Describes good housekeeping procedures necessary to ensure the control of accumulated flammable and combustible waste material and residues to avoid a fire emergency
- Provides training to employees with regard to fire hazards to which they may be exposed

3. PROGRAM ADMINISTRATION

Fire safety is everyone's responsibility. All employees should know how to prevent and respond to fires, and all are responsible for adhering to company policy regarding fire emergencies.

a. Employer

Management determines the STELLRR INSULATION fire prevention and protection policies. Management will provide adequate controls to provide a safe workplace and will provide

adequate resources and training to its employees to encourage fire prevention and the safest possible response in the event of a fire emergency.

b. Plan Administrator

The Founder administers the Fire Prevention Plan for STELLRR INSULATION. He or she shall manage the Fire Prevention Plan, and shall maintain all records pertaining to the plan. The Plan Administrator shall also:

- Develop and administer the STELLRR INSULATION fire prevention training program.
- Ensure that fire control equipment and systems are properly maintained.
- Control fuel source hazards.
- Conduct fire risk surveys (see Attachment I.1.) and make recommendations.

c. Project Manager Responsibilities

Project Managers are responsible for ensuring that employees receive appropriate fire safety training and for notifying the Founder when changes in operation increase the risk of fire. Supervisors are also responsible for enforcing STELLRR INSULATION fire prevention and protection policies.

d. Employee Responsibilities

All employees shall:

- Complete all required training before working without supervision.
- Conduct operations safely to limit the risk of fire.
- Report potential fire hazards to their supervisors.
- Follow fire emergency procedures.

4. PLAN ELEMENTS

a. Good Housekeeping

To limit the risk of fires, employees shall take the following precautions:

- Minimize the storage of combustible materials.
- Make sure that doors, hallways, stairs, and other exit routes are kept free of obstructions.
- Dispose of combustible waste in covered, airtight, metal containers.

- Use and store flammable materials in well-ventilated areas away from ignition sources.
- Use only nonflammable cleaning products.
- Keep incompatible (i.e., chemically reactive) substances away from each other.
- Perform “hot work” (i.e., welding or working with an open flame or other ignition sources) in controlled and well-ventilated areas.
- Keep equipment in good working order (i.e., inspect electrical wiring and appliances regularly, and keep motors and machine tools free of dust and grease).
- Ensure that heating units are safeguarded.
- Report all gas leaks immediately. Project Manager, Jobsite Foreman or Master Installer shall ensure that all gas leaks are repaired immediately upon notification.
- Repair and clean up flammable liquid leaks immediately.
- Keep work areas free of dust, lint, sawdust, scraps, and similar material.
- Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment.
- Ensure that required hot work permits are obtained.
- Turn off electrical equipment when not in use.
- Properly dispose of all SPF test samples created during equipment set-up. Materials sprayed during daily set-up can generate high exothermic temperatures that can ignite SPF or surrounding materials. Excessively thick samples should never be placed in dumpsters or trash bins, and should always be broken into smaller pieces and allowed to cool before removing them from the jobsite at the end of the day.

b. Maintenance

The Founder will ensure that equipment is maintained according to manufacturers' specifications. STELLRR INSULATION will also comply with requirements of the National Fire Protection Association (NFPA) codes for specific equipment. Only properly trained individuals shall perform maintenance work.

The following equipment is subject to the maintenance, inspection, and testing procedures:

- Equipment installed to detect fuel leaks, control heating, and control pressurized systems
- Portable fire extinguishers, automatic sprinkler systems, and fixed extinguishing systems

- Detection systems for smoke, heat, or flame
- Fire alarm systems
- Emergency backup systems and the equipment they support

5. TYPES OF HAZARDS

The following sections address the major workplace fire hazards at STELLRR INSULATION facilities and the procedures for 401 Congress Ave Ste 1540, Austin, Texas 78701 controlling the hazards.

a. Electrical Fire Hazards

Electrical system failures and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from loose ground connections, wiring with frayed insulation, or overloaded fuses, circuits, motors, or outlets.

To prevent electrical fires, employees shall:

- Replace worn wires.
- Use only appropriately rated fuses.
- Never use extension cords as substitutes for wiring improvements.
- Use only approved extension cords (i.e., those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label).
- Check wiring in hazardous locations where the risk of fire is especially high.
- Check electrical equipment to ensure that it is either properly grounded or double insulated.
- Ensure adequate spacing while performing maintenance.

b. Portable Heaters

All portable heaters shall be approved by the Founder. Portable electric heaters shall have tip-over protection that automatically shuts off the unit when it is tipped over. There shall be adequate clearance between the heater and combustible furnishings or other materials at all times.

c. Office Fire Hazards

Fire risks are not limited to STELLRR INSULATION industrial facilities or jobsites. Fires in offices have become more likely because of the increased use of electrical equipment, such as computers and fax machines. To prevent office fires, employees shall:

- Avoid overloading circuits with office equipment.
- Turn off nonessential electrical equipment at the end of each workday.
- Keep storage areas clear of rubbish.
- Ensure that extension cords are not placed under carpets.
- Ensure that trash and paper set aside for recycling is not allowed to accumulate.

d. Cutting, Welding, and Open Flame Work

The Founder will ensure the following:

- All necessary hot work permits have been obtained prior to work beginning.
- Cutting and welding are done by authorized personnel in designated cutting and welding areas whenever possible.
- Adequate ventilation is provided.
- Torches, regulators, pressure-reducing valves, and manifolds are UL listed or FM approved.
- Oxygen-fuel gas systems are equipped with listed and approved backflow valves and pressure-relief devices.
- Cutters, welders, and helpers are wearing eye protection and protective clothing as appropriate.
- Cutting or welding is prohibited in sprinkler-protected areas while sprinkler protection is out of service.
- Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapors, or dusts could develop from residues or accumulations in confined spaces.
- Cutting or welding is prohibited on metal walls, ceilings, or roofs built of combustible sandwich-type panel construction or having combustible covering.
- Confined spaces such as tanks are tested to ensure that the atmosphere is not over ten percent of the lower flammable limit before cutting or welding in or on the tank.
- Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding on them begins.
- Fire watch has been established.

e. Flammable and Combustible Materials

The Founder shall regularly evaluate the presence of flammable and combustible materials at STELLRR INSULATION (see Attachment I.4).

Certain types of substances can ignite at relatively low temperatures or pose a risk of catastrophic explosion if ignited. Such substances obviously require special care and handling.

I. Class A Combustibles

These include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in non-specialized areas such as offices. To handle Class A combustibles safely, follow these instructions:

- Dispose of waste daily.
- Keep trash in metal-lined receptacles with tight-fitting covers (metal wastebaskets that are emptied every day do not need to be covered).
- Keep work areas clean and free of fuel paths that could allow a fire to spread.
- Keep combustibles away from accidental ignition sources, such as hot plates, soldering irons, or other heat-producing or spark-producing devices.
- Store paper stock in metal cabinets.
- Store rags in metal bins with self-closing lids.
- Do not order excessive amounts of combustibles.
- Make frequent inspections to anticipate fires before they start.

Water, multi-purpose dry chemical (ABC), and halon 1211 are approved fire extinguishing agents for Class A combustibles.

II. Class B Combustibles

These include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols. To handle Class B combustibles safely, follow these instructions:

- Use only approved pumps, taking suction from the top, to dispense liquids from tanks, drums, barrels, or similar containers (or use approved self-closing valves or faucets).

- Do not dispense Class B flammable liquids into containers unless the nozzle and container are electrically interconnected by contact or by a bonding wire. Either the tank or container must be grounded.
- Store, handle, and use Class B combustibles only in approved locations where vapors are prevented from reaching ignition sources such as heating or electric equipment, open flames, or mechanical or electric sparks.
- Do not use a flammable liquid as a cleaning agent inside a building (the only exception is in a closed machine approved for cleaning with flammable liquids).
- Do not use, handle, or store Class B combustibles near exits, stairs, or any other areas normally used as exits.
- Do not weld, cut, grind, or use unsafe electrical appliances or equipment near Class B combustibles.
- Do not generate heat, allow an open flame, or smoke near Class B combustibles.
- Know the location of and how to use the nearest portable fire extinguisher rated for Class B fire.

Water should not be used to extinguish Class B fires caused by flammable liquids. Water can cause the burning liquid to spread, making the fire worse. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid. The following fire-extinguishing agents are approved for Class B combustibles: carbon dioxide, multi-purpose dry chemical (ABC), halon 1301, and halon 1211.

NOTE: Certain kinds of halon fire suppressant have been determined to be ozone-depleting substances and are no longer being manufactured. Existing systems using halon can be kept in place.

f. Smoking

Smoking is prohibited inside all buildings and inside jobsite locations. Certain outdoor areas may also be designated as no smoking areas. The areas in which smoking is prohibited outdoors are identified by “NO SMOKING” signs.

6. TRAINING

The Founder shall present basic fire prevention training to all employees upon employment, and shall maintain documentation of the training, which includes:

- Review of 29 CFR 1910.38, including how it can be accessed

- This Fire Prevention Plan, including how it can be accessed
- Good housekeeping practices
- Proper response and notification in the event of a fire
- Instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan)
- Recognition of potential fire hazards

Supervisors shall train employees about the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Employees will receive this training at these times:

- At their initial assignment
- Annually
- When changes in work processes necessitate additional training

7. PROGRAM EVALUATION

The Founder shall review this Fire Prevention Plan at least annually for necessary changes.

Attachment I.1.—Fire Risk Survey

STELLRR INSULATION

{Location}

Type of Fire Hazard	Location	Emergency Actions	Required PPE

Completed by: _____ Date: _____

Attachment I.2.—General Fire Prevention Checklist

STELLRR INSULATION

Use this checklist to ensure fire prevention measures conform to the general fire prevention requirements found in OSHA standards.

1.	Is the local fire department acquainted with your facility, its location, and specific hazards?	YES	NO
2.	If you have a fire alarm system, is it tested at least annually?	YES	NO
3.	If you have interior stand pipes and valves, are they inspected regularly?	YES	NO
4.	If you have outside private fire hydrants, are they on a routine preventive maintenance schedule and flushed at least once a year?	YES	NO
5.	Are fire doors and shutters in good operating condition?	YES	NO
6.	Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?	YES	NO
7.	Are automatic sprinkler system water control valves, air pressure, and water pressure checked weekly or periodically?	YES	NO
8.	Has responsibility for the maintenance of automatic sprinkler systems been assigned to an employee or contractor?	YES	NO
9.	Are sprinkler heads protected by metal guards?	YES	NO
10.	Is proper clearance maintained below sprinkler heads?	YES	NO
11.	Are portable fire extinguishers provided in adequate number and type?*	YES	NO
12.	Are fire extinguishers mounted in readily accessible locations?*	YES	NO
13.	Are fire extinguishers recharged regularly with the recharge date noted on an inspection tag?*	YES	NO
14.	Are employees periodically instructed in the use of extinguishers and fire protection procedures?*	YES	NO

***NOTE: Use of fire extinguishers is based on company policy regarding employee fire fighting in your Emergency Action Plan and local fire code.**

Completed by: _____ Date: _____

Attachment I.3.—Exits Checklist

STELLRR INSULATION

Use this checklist to evaluate STELLRR INSULATION compliance with OSHA's standard on emergency exit routes.

1. Is each exit marked with an exit sign and illuminated by a reliable light source? YES NO
2. Are the directions to exits, when not immediately apparent, marked with visible signs? YES NO
3. Are doors, passageways, or stairways that are neither exits nor access to exits, and which could be mistaken for exits, marked “NOT AN EXIT” or other appropriate marking? YES NO
4. Are exit signs provided with the word “EXIT” in letters at least five inches high and with lettering at least one inch wide? YES NO
5. Are exit doors side-hinged? YES NO
6. Are all exits kept free of obstructions? YES NO
7. Are there at least two exit routes provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances? YES NO
8. Is the number of exits from each floor of a building and from the building itself appropriate for the building occupancy? (NOTE: Do not count revolving, sliding, or overhead doors when evaluating whether there are sufficient exits.) YES NO
9. Are exit stairways that are required to be separated from other parts of a building enclosed by at least one-hour fire-resistant walls (or at least two-hour fire-resistant walls in buildings over four stories high)? YES NO
10. Are the slopes of ramps used as part of emergency building exits limited to one foot vertical and 12 feet horizontal? YES NO
11. Are glass doors or storm doors fully tempered, and do they meet the safety requirements for human impact? YES NO
12. Can exit doors be opened from the direction of exit travel without the use of a key or any special knowledge or effort? YES NO
13. Are doors on cold storage rooms provided with an inside release mechanism that will release the latch and open the door even if it's padlocked or otherwise locked on the outside? YES NO

14. Where exit doors open directly onto any street, alley, or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping into the path of traffic? YES NO

15. Are doors that swing in both directions and are located between rooms where there is frequent traffic equipped with glass viewing panels? YES NO

Completed by: _____ Date: _____

Attachment I.4.—Flammable and Combustible Materials Checklist

STELLRR INSULATION

{Location}

Checklist	Needs to be Addressed	Yes	N/A
Are combustible scrap, debris, and waste materials (oily rags, etc.) stored in covered metal receptacles and removed from the worksite promptly?			
Is proper storage practiced to minimize the risk of fire including spontaneous combustion?			
Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?			
Are all connections on drums and combustible liquid piping, vapor and liquid tight?			
Are all flammable liquids kept in closed containers when not in use (e.g., parts cleaning tanks, pans, etc.)?			
Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?			
Do storage rooms for flammable and combustible liquids have explosion-proof lights?			
Do storage rooms for flammable and combustible liquids have mechanical or gravity ventilation?			
Is liquefied petroleum gas stored, handled, and used in accordance with safe practices and standards?			
Are “NO SMOKING” signs posted on liquefied petroleum gas tanks?			
Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?			
Are all solvent wastes, and flammable liquids kept in fire-resistant, covered containers until they are removed from the worksite?			
Is vacuuming used whenever possible rather than blowing or sweeping combustible dust?			
Are firm separators placed between containers of combustibles or flammables, when stacked one upon another, to assure their support and stability?			
Are fuel gas cylinders and oxygen cylinders separated by distance, and fire-resistant barriers, while in storage?			
Are fire extinguishers selected and provided for the types of materials in areas where they are to be used?			

Class A - Ordinary combustible material fires			
Class B - Flammable, liquid, gas or grease fires			
Class C - Energized - electrical equipment fires			
Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of any inside storage area for such materials?			
Are all extinguishers serviced, maintained and tagged at intervals not to exceed 1 year?			
Are all extinguishers fully charged and in their designated places?			
Where sprinkler systems are permanently installed, are the nozzle heads so directed or arranged that water will not be sprayed into operating electrical switch boards and equipment?			
Are "NO SMOKING" signs posted where appropriate in areas where flammable or combustible materials are used or stored?			
Are safety cans used for dispensing flammable or combustible liquids at a point of use?			
Are all spills of flammable or combustible liquids cleaned up promptly?			
Are storage tanks equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure?			
Are "NO SMOKING" rules enforced in areas involving storage and use of hazardous materials?			

Completed by: _____ Date: _____

APPENDIX J:

INJURY AND ILLNESS PREVENTION PROGRAM FOR HIGH HAZARD EMPLOYERS

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1926.20b

STELLRR INSULATION

401 Congress Ave Ste 1540

Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

TABLE OF CONTENTS

1. PURPOSE AND SCOPE

It has been demonstrated that employers that establish and maintain effective injury prevention programs save lives and money. These programs are mandatory in some states and optional in others. They must be in writing and include the following six elements:

a. Management Leadership

- Establish clear safety and health goals for the program and define the actions needed to achieve those goals.
- Designate one or more individuals with overall responsibility for implementing and maintaining the program.
- Provide sufficient resources to ensure effective program implementation.

b. Worker Participation

- Consult with workers in developing and implementing the program, and involve them in updating and evaluating the program.
- Include workers in workplace inspections and incident investigations.
- Encourage workers to report concerns, such as hazards, injuries, illnesses, and near misses.
- Protect the rights of workers who participate in the program.

c. Hazard Identification and Assessment

- Identify, assess, and document workplace hazards by soliciting input from workers, inspecting the workplace, and reviewing available information on hazards.
- Investigate injuries and illnesses to identify hazards that may have caused them.
- Inform workers of the hazards in the workplace.

d. Hazard Prevention and Control

- Establish and implement a plan to prioritize and control hazards identified in the workplace.
- Provide interim controls to protect workers from any hazards that cannot be controlled immediately.
- Verify that all control measures are implemented and are effective.
- Discuss the hazard control plan with affected workers.

e. Education and Training

- Provide education and training to workers in a language and vocabulary they can understand to ensure that they know:
  - Procedures for reporting injuries, illnesses, and safety and health concerns
  - How to recognize hazards
  - Ways to eliminate, control, and reduce hazards
  - Elements of the program
  - How to participate in the program
- Conduct refresher education and training programs periodically.

f. Program Evaluation and Improvement

- Conduct a periodic review of the program to determine if it has been implemented as designed and is making progress towards achieving its goals.
- Modify the program, as necessary, to correct deficiencies.
- Continuously look for ways to improve the program.

2. PROGRAM ADMINISTRATION

a. Company Policy

It is the policy of STELLRR INSULATION that every employee is entitled to a safe and healthful place in which to work. To this end, every reasonable effort will be made in the interest of Accident Prevention, Fire Protection, and Health Preservation.

The management concept of STELLRR INSULATION is not production and safety; it is production with safety. When production with safety is achieved, production with efficiency is attained as well.

We at STELLRR INSULATION have a basic responsibility to make the safety of human beings a part of our daily, hourly concern. We count on you to do your part in making our program an effective one.

The successful operation of STELLRR INSULATION will depend not only on sales and service, but also on how safely each job is performed. There is no job so important—nor any service so urgent—that we cannot take time to work safely. I consider the safety of our personnel to be of prime importance, and I expect your full cooperation in making our program effective.

_____

Signed

b. Responsibilities

The Injury and Illness Prevention Program (IIP Program) administrator, Founder has the authority and responsibility for implementing the provisions of this program for STELLRR INSULATION.

All managers and supervisors are responsible for implementing and maintaining the IIP Program in their work areas and for answering worker questions about the IIP Program. A copy of this IIP Program is available from each manager and supervisor.

Management is responsible for ensuring that all safety and health policies and procedures are clearly communicated and understood by all employees. Managers and supervisors are expected to enforce the rules fairly and uniformly.

All employees are responsible for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe work environment.

Our system of ensuring that all workers comply with the rules and maintain a safe work environment includes:

- Informing workers of the provisions of our IIP Program
- Evaluating the safety performance of all workers
- Recognizing employees who perform safe and healthful work practices
- Providing training to workers whose safety performance is deficient
- Disciplining workers for failure to comply with safe and healthful work practices
- The following practices: _____

3. PROGRAM ELEMENTS

a. Communication

We recognize that open, two-way communication between management and staff on health and safety issues is essential to an injury-free, productive workplace. The following system of communication is designed to facilitate a continuous flow of safety and health information between management and staff in a form that is readily understandable and that consists of one or more of the following checked items:

- New worker orientation including a discussion of safety and health policies and procedures.

- Review of our IIP Program.
- Workplace safety and health training programs.
- Regularly scheduled safety meetings.
- Effective communication of safety and health concerns between workers and supervisors, including translation where appropriate.
- Posted or distributed safety information.
- A system for workers to anonymously inform management about workplace hazards.
- Our establishment has less than ten employees. The company communicates with and instructs these employees orally about general safe work practices with respect to hazards unique to each employee's job assignment.
- A labor and management safety and health committee that meets regularly, prepares written records of the safety and health committees meetings, reviews results of the periodic scheduled inspections, reviews investigations of accidents and exposures, makes suggestions to management for the prevention of future incidents, reviews investigations of alleged hazardous conditions, and submits recommendations to assist in the evaluation of employee safety suggestion.
- Other: _____

Table 1: Hazard Assessment

Periodic inspections to identify and evaluate workplace hazards shall be performed by the following competent observer(s) in the following areas of our workplace:

Competent Observer	Area

Periodic inspections are performed according to the following schedule: {Frequency (daily, weekly, monthly, etc.)}

- When we initially established our IIP Program
- When new substances, processes, procedures or equipment which present potential new hazards are introduced into our workplace
- When new, previously unidentified hazards are recognized
- When occupational injuries and illnesses occur
- When we hire or reassign permanent or intermittent workers to processes, operations, or tasks for which a hazard evaluation has not been previously conducted
- Whenever workplace conditions warrant an inspection

Periodic inspections consist of identification and evaluation of workplace hazards utilizing applicable sections of the attached Hazard Assessment Checklist and any other effective methods to identify and evaluate workplace hazards.

b. Accident or Exposure Investigations

Procedures for investigating workplace accidents and hazardous substance exposures include:

- Visiting the accident scene as soon as possible
- Interviewing injured workers and witnesses
- Examining the workplace for factors associated with the accident or exposure
- Determining the cause of the accident or exposure
- Taking corrective action to prevent the accident or exposure from reoccurring
- Recording the findings and corrective actions taken

c. Hazard Correction

Unsafe or unhealthy work conditions, practices, or procedures shall be corrected in a timely manner based on the severity of the hazards. Hazards shall be corrected according to the following procedures:

- When hazards are observed or discovered, they are corrected.
- When an imminent hazard exists that cannot be immediately abated without endangering employee(s) or property, we will remove all exposed workers from the area except those necessary to correct the existing condition. Workers necessary to correct the hazardous condition shall be provided with the necessary protection.

- All such actions taken and dates they are completed shall be documented on the appropriate forms.

d. Training and Instruction

All workers, including managers and supervisors, shall have training and instruction on general and job-specific safety and health practices. Training and instruction shall be provided as follows:

- When the IIP Program is first established
- To all new workers, except for construction workers who are provided training through a Cal/OSHA approved construction industry occupational safety and health training program
- To all workers given new job assignments for which training has not previously provided
- Whenever new substances, processes, procedures or equipment are introduced to the workplace and represent a new hazard
- Whenever the employer is made aware of a new or previously unrecognized hazard
- To supervisors to familiarize them with the safety and health hazards to which workers under their immediate direction and control may be exposed
- To all workers with respect to hazards specific to each employee's job assignment

Workplace safety and health practices for all industries include, but are not limited to, the following:

- Explanation of the employer's IIP Program, emergency action plan, and fire prevention plan; measures for reporting any unsafe conditions, work practices, and injuries; and when additional instruction is needed
- Use of appropriate clothing, including gloves, footwear, and personal protective equipment
- Information about chemical hazards to which employees could be exposed and other hazard communication program information
- Availability of toilet, hand-washing, and drinking water facilities
- Provisions for medical services and first aid including emergency procedures

In addition, we provide specific instructions to all workers regarding hazards unique to their job assignment to the extent that such information was not already covered in other training.

e. List of Training Subjects

STELLRR INSULATION trains our workers about the following checked training subjects:

- The employer's Code of Safe Practices
- Confined spaces
- Safe practices for operating any agricultural equipment
- Good housekeeping, fire prevention, and safe practices for operating any construction equipment
- Safe procedures for cleaning, repairing, servicing, and adjusting equipment and machinery
- Safe access to working areas
- Protection from falls
- Electrical hazards, including working around high voltage lines
- Crane operations
- Trenching and excavation work
- Proper use of powered tools
- Guarding of belts and pulleys, gears and sprockets, and conveyor nip points
- Machine, machine parts, and prime movers guarding
- Lock-out/tag-out procedures
- Materials handling
- Chainsaw and other power tool operation
- Tree falling and bucking procedures and precautions, including procedures for recognizing and working with hazard trees, snags, lodged trees, and unsafe weather conditions
- Yarding operations, including skidding, running lines, unstable logs, rigging, and communication
- Landing and loading areas, including release of rigging, landing layout, moving vehicles and equipment, and log truck locating, loading, and wrapping
- Fall protection from elevated locations

- Use of elevated platforms, including condors and scissor lifts
- Safe use of explosives
- Driver safety
- Slips, falls, and back injuries
- Ergonomic hazards, including proper lifting techniques and working on ladders or in a stooped posture for prolonged periods at one time
- Personal protective equipment
- Respiratory equipment
- Hazardous chemical exposures
- Hazard communication
- Physical hazards, such as heat or cold stress, noise, and ionizing and non-ionizing radiation
- Laboratory safety
- Blood-borne pathogens and other biological hazards
- Other job-specific hazards, such as: _____

_____

4. EVALUATION, DOCUMENTATION AND RECORD KEEPING

We have checked one of the following categories as our recordkeeping policy:

☐ **Category 1:** Our establishment is on a designated high hazard industry list. We have taken the following steps to implement and maintain our IIP Program:

Records of hazard assessment inspections, including the person(s) or persons conducting the inspection, the unsafe conditions and work practices that have been identified and the action taken to correct the identified unsafe conditions and work practices, are recorded on a hazard assessment and correction form.

Documentation of safety and health training for each worker, including the worker's name or other identifier, training dates, type(s) of training, and training providers are recorded on a worker training and instruction form. We also include the records relating to worker training provided by a construction industry occupational safety and health program approved by OSHA.

Inspection records and training documentation will be maintained according to the following checked schedule:

- For one year, except for training records of employees who have worked for less than one year that are provided to the worker upon termination of employment; or
- Since we have less than ten workers, including managers and supervisors, we maintain inspection records only until the hazard is corrected. We also only maintain a log of instructions to workers with respect to worker job assignments when they are first hired or assigned new duties.

☐ **Category 2:** We are a local governmental entity (any county, city, or district, and any public or quasi-public corporation or public agency therein) and we are not required to keep written records of the steps taken to implement and maintain our IIP Program.

ATTACHMENT J.1.—HAZARD ASSESSMENT CHECKLIST

1. GENERAL WORK ENVIRONMENT

☐ Are all worksites clean and orderly?

☐ Are work surfaces kept dry or appropriate means taken to assure the surfaces are slip-resistant?

☐ Are all spilled materials or liquids cleaned up immediately?

☐ Is combustible scrap, debris, and waste stored safely and removed from the worksite promptly?

☐ Is accumulated combustible dust routinely removed from elevated surfaces, including the overhead structure of buildings?

☐ Is combustible dust cleaned up with a vacuum system to prevent the dust going into suspension?

☐ Is metallic or conductive dust prevented from entering or accumulation on or around electrical enclosures or equipment?

☐ Are covered metal waste cans used for oily and paint-soaked waste?

☐ Are all oil and gas fired devices equipped with flame failure controls that will prevent flow of fuel if pilots or main burners are not working?

☐ Are paint spray booths, dip tanks, and the like cleaned regularly?

☐ Are the minimum number of toilets and washing facilities provided?

☐ Are all toilets and washing facilities clean and sanitary?

☐ Are all work areas adequately illuminated?

☐ Are pits and floor openings covered or otherwise guarded?

2. PERSONAL PROTECTIVE EQUIPMENT and CLOTHING

☐ Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?

☐ Are approved safety glasses required to be worn at all times in areas where there is a risk of eye injuries such as punctures, abrasions, contusions, or burns?

- ☐ Are employees who need corrective lenses (glasses or contacts lenses) in working environments with harmful exposures required to wear only approved safety glasses, protective goggles, or use other medically approved precautionary procedures?
- ☐ Are protective gloves, aprons, shields, or other means provided against cuts, corrosive liquids, and chemicals?
- ☐ Are hard hats provided and worn where danger of falling objects exists?
- ☐ Are hard hats inspected periodically for damage to the shell and suspension system?
- ☐ Is appropriate foot protection required where there is the risk of foot injuries from hot, corrosive, poisonous substances, falling objects, crushing, or penetrating actions?
- ☐ Are approved respirators provided for regular or emergency use where needed?
- ☐ Is all protective equipment maintained in a sanitary condition and ready for use?
- ☐ Do you have eye wash facilities and a quick drench shower within the work area where employees are exposed to injurious corrosive materials?
- ☐ Where special equipment is needed for electrical workers, is it available?
- ☐ When lunches are eaten on the premises, are they eaten in areas where there is no exposure to toxic materials or other health hazards?
- ☐ Is protection against the effects of occupational noise exposure provided when sound levels exceed those of the OSHA noise standard?

3. WALKWAYS

- ☐ Are aisles and passageways kept clear?
- ☐ Are aisles and walkways marked as appropriate?
- ☐ Are wet surfaces covered with non-slip materials?
- ☐ Are holes in the floor, sidewalk, or other walking surface repaired properly, covered, or otherwise made safe?
- ☐ Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating?
- ☐ Are spilled materials cleaned up immediately?
- ☐ Are materials or equipment stored in such a way that sharp projectiles will not interfere with the walkway?

- ☐ Are changes of direction or elevations readily identifiable?
- ☐ Are aisles or walkways that pass near moving or operating machinery, welding operations, or similar operations arranged so employees will not be subjected to potential hazards?
- ☐ Is adequate headroom provided for the entire length of any aisle or walkway?
- ☐ Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?
- ☐ Are bridges provided over conveyors and similar hazards?

4. FLOOR and WALL OPENINGS

- ☐ Are floor openings guarded by a cover, guardrail, or equivalent on all sides (except at entrance to stairways or ladders)?
- ☐ Are toeboards installed around the edges of a permanent floor opening (where persons may pass below the opening)?
- ☐ Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds?
- ☐ Is the glass in windows, doors, and glass walls that are subject to human impact of sufficient thickness and type for the condition of use?
- ☐ Are grates or similar type covers over floor openings, such as floor drains, of such design that foot traffic or rolling equipment will not be affected by the grate spacing?
- ☐ Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?
- ☐ Are manhole covers, trench covers, and similar covers, plus their supports, designed to carry a truck rear axle load of at least 20,000 pounds when located in roadways and subject to vehicle traffic?
- ☐ Are floor or wall openings in fire resistive construction provided with doors or covers compatible with the fire rating of the structure and provided with self-closing features when appropriate?

5. STAIRS and STAIRWAYS

- ☐ Are standard stair rails or handrails on all stairways having four or more risers?
- ☐ Are all stairways at least 22 inches wide?

- ☐ Do stairs have at least a 6'6" overhead clearance?
- ☐ Do stairs angle no more than 50 and no less than 30 degrees?
- ☐ Are stairs of hollow-pan type treads and landings filled to noising level with solid material?
- ☐ Are step risers on stairs uniform from top to bottom, with no riser spacing greater than 7-1/2 inches?
- ☐ Are steps on stairs and stairways designed or provided with a surface that renders them slip resistant?
- ☐ Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?
- ☐ Do stairway handrails have a least 1.5 inches of clearance between the handrails and the wall or surface they are mounted on?
- ☐ Are stairway handrails capable of withstanding a load of 200 pounds, applied in any direction?
- ☐ Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?
- ☐ Do stairway landings have a dimension measured in the direction of travel, at least equal to width of the stairway?
- ☐ Is the vertical distance between stairway landings limited to 12 feet or less?

6. ELEVATED SURFACES

- ☐ Are signs posted, when appropriate, showing the elevated surface load capacity?
- ☐ Are surfaces elevated more than 30 inches above the floor or ground provided with standard guardrails?
- ☐ Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toeboards?
- ☐ Is a permanent means of access and egress provided to elevated storage and work surfaces?
- ☐ Is required headroom provided where necessary?
- ☐ Is material on elevated surfaces piled, stacked, or racked in a manner to prevent it from tipping, falling, collapsing, rolling, or spreading?

☐ Are dock boards or bridge plates used when transferring materials between docks and trucks or rail cars?

7. EXITING OR EGRESS

☐ Are all exits marked with an exit sign and illuminated by a reliable light source?

☐ Are the directions to exits, when not immediately apparent, marked with visible signs?

☐ Are doors, passageways, or stairways that are neither exits nor access to exits and which could be mistaken for exits, appropriately marked "NOT AN EXIT," "TO BASEMENT," "STOREROOM," and the like?

☐ Are exit signs provided with the word "EXIT" in lettering at least five inches high and the stroke of the lettering at least 1/2 inch wide?

☐ Are exit doors side-hinged?

☐ Are all exits kept free of obstructions?

☐ Are at least two means of egress provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?

☐ Are there sufficient exits to permit prompt escape in case of emergency?

☐ Are special precautions taken to protect employees during construction and repair operations?

☐ Is the number of exits from each floor of a building, and the number of exits from the building itself, appropriate for the building occupancy load?

☐ Are exit stairways, which are required to be separated from other parts of a building, enclosed by at least two hour fire- resistive construction in buildings more than four stories in height, and not less than one-hour fire resistive construction elsewhere?

☐ When ramps are used as part of required exiting from a building, is the ramp slope limited to one foot vertical and 12 feet horizontal?

☐ Where exiting will be through frameless glass doors, glass exit doors, storm doors, and such, are the doors fully tempered and meet the safety requirements for human impact?

8. EXIT DOORS

- ☐ Are doors that are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?
- ☐ Are windows that could be mistaken for exit doors made inaccessible by means of barriers or railings?
- ☐ Are exit doors openable from the direction of exit travel without the use of a key or any special knowledge or effort when the building is occupied?
- ☐ Is a revolving, sliding, or overhead door prohibited from serving as a required exit door?
- ☐ Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?
- ☐ Are doors on cold storage rooms provided with an inside release mechanism that will release the latch and open the door even if it's padlocked or otherwise locked on the outside?
- ☐ Where exit doors open directly onto any street, alley or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?
- ☐ For doors that swing in both directions and are located between rooms where there is frequent traffic, are there viewing panels in each door?

9. PORTABLE LADDERS

- ☐ Are all ladders maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and moveable parts operating freely without binding or undue play?
- ☐ Are non-slip safety feet provided on each ladder?
- ☐ Are non-slip safety feet provided on each metal or rung ladder?
- ☐ Are ladder rungs and steps free of grease and oil?
- ☐ Is it prohibited to place a ladder in front of doors opening toward the ladder except when the door is blocked open, locked or guarded?
- ☐ Is it prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height?
- ☐ Are employees instructed to face the ladder when ascending or descending?

- ☐ Are employees prohibited from using ladders that are broken; missing steps, rungs, or cleats; or containing broken side rails or other faulty equipment?
- ☐ Are employees instructed not to use the top two steps of ordinary stepladders as a step?
- ☐ When portable rung ladders are used to gain access to elevated platforms, roofs, and the like, does the ladder always extend at least three feet above the elevated surface?
- ☐ Is it required that when portable rung or cleat type ladders are used, the base is so placed that slipping will not occur, or it is lashed or otherwise held in place?
- ☐ Are portable metal ladders legibly marked with signs reading "CAUTION," "Do Not Use Around Electrical Equipment," or equivalent wording?
- ☐ Are employees prohibited from using ladders as guys, braces, skids, gin poles, or for other than their intended purposes?
- ☐ Are employees instructed to only adjust extension ladders while standing at a base (not while standing on the ladder or from a position above the ladder)?
- ☐ Are metal ladders inspected for damage?
- ☐ Are the rungs of ladders uniformly spaced at 12 inches apart, center-to-center?

10.HAND TOOLS and EQUIPMENT

- ☐ Are all tools and equipment (both company and employee- owned) used by employees at their workplace in good condition?
- ☐ Are hand tools develop mushroomed heads during use, such as chisels and punches, reconditioned or replaced as necessary?
- ☐ Are broken or fractured handles on hammers, axes, and similar equipment replaced promptly?
- ☐ Are worn or bent wrenches replaced regularly?
- ☐ Are appropriate handles used on files and similar tools?
- ☐ Are employees made aware of the hazards caused by faulty or improperly used hand tools?
- ☐ Are appropriate safety glasses, face shields, and similar equipment used while using hand tools or equipment that might produce flying materials or be subject to breakage?
- ☐ Are jacks checked periodically to assure they are in good operating condition?
- ☐ Are tool handles wedged tightly in the head of all tools?

- ☐ Are tool cutting edges kept sharp so the tool will move smoothly without binding or skipping?
- ☐ Are tools stored in a dry, secure location where they will not be tampered with?
- ☐ Are eye and face protection used when driving hardened or tempered spuds or nails?

11.PORTABLE (POWER OPERATED) TOOLS and EQUIPMENT

- ☐ Are grinders, saws, and similar equipment provided with appropriate safety guards?
- ☐ Are power tools used with the correct shield, guard or attachment recommended by the manufacturer?
- ☐ Are portable circular saws equipped with guards above and below the base shoe?
- ☐ Are circular saw guards checked to assure they are not wedged up, thus leaving the lower portion of the blade unguarded?
- ☐ Are rotating or moving parts of equipment guarded to prevent physical contact?
- ☐ Are all cord-connected, electrically operated tools and equipment effectively grounded or of the approved double insulated type?
- ☐ Are effective guards in place over belts, pulleys, chains, and sprockets, on equipment such as concrete mixers, air compressors, and the like?
- ☐ Are portable fans provided with full guards or screens having openings 1/2 inch or less?
- ☐ Is hoisting equipment available and used for lifting heavy objects, and are hoist ratings and characteristics appropriate for the task?
- ☐ Are ground-fault circuit interrupters provided on all temporary electrical 15 and 20 ampere circuits, used during periods of construction?
- ☐ Are pneumatic and hydraulic hoses on power-operated tools checked regularly for deterioration or damage?

12.ABRASIVE WHEEL EQUIPMENT GRINDERS

- ☐ Is the work rest used and kept adjusted to within 1/8 inch of the wheel?
- ☐ Is the adjustable tongue on the top side of the grinder used and kept adjusted to within 1/4 inch of the wheel?
- ☐ Do side guards cover the spindle, nut, and flange and 75 percent of the wheel diameter?

- ☐ Are bench and pedestal grinders permanently mounted?
- ☐ Are goggles or face shields always worn when grinding?
- ☐ Is the maximum RPM rating of each abrasive wheel compatible with the RPM rating of the grinder motor?
- ☐ Are fixed or permanently mounted grinders connected to their electrical supply system with metallic conduit or other permanent wiring method?
- ☐ Does each grinder have an individual on and off control switch?
- ☐ Is each electrically operated grinder effectively grounded?
- ☐ Before new abrasive wheels are mounted, are they visually inspected and ring tested?
- ☐ Are dust collectors and powered exhausts provided on grinders used in operations that produce large amounts of dust?
- ☐ Are splashguards mounted on grinders that use coolant, to prevent the coolant reaching employees?
- ☐ Is cleanliness maintained around grinder?

13.POWDER-ACTUATED TOOLS

- ☐ Are employees who operate powder-actuated tools trained in their use and carry a valid operator's card?
- ☐ Do the powder-actuated tools being used have written approval of the Division of Occupational Safety and Health?
- ☐ Is each powder-actuated tool stored in its own locked container when not being used?
- ☐ Is a sign at least 7" by 10" with bold type reading "POWDER- ACTUATED TOOL IN USE" conspicuously posted when the tool is being used?
- ☐ Are powder-actuated tools left unloaded until they are actually ready to be used?
- ☐ Are powder-actuated tools inspected for obstructions or defects each day before use?
- ☐ Do powder-actuated tools operators have and use appropriate personal protective equipment such as hard hats, safety goggles, safety shoes and ear protectors?

14.MACHINE GUARDING

- ☐ Is there a training program to instruct employees on safe methods of machine operation?
- ☐ Is there adequate supervision to ensure that employees are following safe machine operating procedures?
- ☐ Is there a regular program of safety inspection of machinery and equipment?
- ☐ Is all machinery and equipment kept clean and properly maintained?
- ☐ Is sufficient clearance provided around and between machines to allow for safe operations, set up and servicing, material handling and waste removal?
- ☐ Is equipment and machinery securely placed and anchored, when necessary to prevent tipping or other movement that could result in personal injury?
- ☐ Is there a power shut-off switch within reach of the operator's position at each machine?
- ☐ Can electric power to each machine be locked out for maintenance, repair, or security?
- ☐ Are the noncurrent-carrying metal parts of electrically operated machines bonded and grounded?
- ☐ Are foot-operated switches guarded or arranged to prevent accidental actuation by personnel or falling objects?
- ☐ Are manually operated valves and switches controlling the operation of equipment and machines clearly identified and readily accessible?
- ☐ Are all emergency stop buttons colored red?
- ☐ Are all pulleys and belts that are within seven feet of the floor or working level properly guarded?
- ☐ Are all moving chains and gears properly guarded?
- ☐ Are splashguards mounted on machines that use coolant, to prevent the coolant from reaching employees?
- ☐ Are methods provided to protect the operator and other employees in the machine area from hazards created at the point of operation, ingoing nip points, rotating parts, flying chips, and sparks?
- ☐ Are machinery guards secure and so arranged that they do not offer a hazard in their use?

- ☐ If special hand tools are used for placing and removing material, do they protect the operator's hands?
- ☐ Are revolving drums, barrels, and containers required to be guarded by an enclosure that is interlocked with the drive mechanism, so that revolution cannot occur unless the guard enclosure is in place, so guarded?
- ☐ Do arbors and mandrels have firm and secure bearings and are they free from play?
- ☐ Are provisions made to prevent machines from automatically starting when power is restored after a power failure or shutdown?
- ☐ Are machines constructed so as to be free from excessive vibration when the largest size tool is mounted and run at full speed?
- ☐ If machinery is cleaned with compressed air, is air pressure controlled and personal protective equipment or other safeguards used to protect operators and other workers from eye and body injury?
- ☐ Are fan blades protected with a guard having openings no larger than 1/2 inch, when operating within seven feet of the floor?
- ☐ Are saws used for ripping, equipped with anti-kickback devices and spreaders?
- ☐ Are radial arm saws so arranged that the cutting head will gently return to the back of the table when released?

15.LOCK-OUT/BLOCK-OUT PROCEDURES

- ☐ Is all machinery or equipment capable of movement required to be de-energized or disengaged and blocked or locked out during cleaning, servicing, adjusting, or setting up operations, whenever required?
- ☐ Is the locking-out of control circuits in lieu of locking-out main power disconnects prohibited?
- ☐ Are all equipment control valve handles provided with a means for locking-out?
- ☐ Does the lock-out procedure require that stored energy (i.e., mechanical, hydraulic, air,) be released or blocked before equipment is locked-out for repairs?
- ☐ Are appropriate employees provided with individually keyed personal safety locks?
- ☐ Are employees required to keep personal control of their key(s) while they have safety locks in use?

☐ Is it required that employees check the safety of the lock out by attempting a start up after making sure no one is exposed?

Where the power disconnecting means for equipment does not also disconnect the electrical control circuit:

☐ Are the appropriate electrical enclosures identified?

☐ Are means provided to assure the control circuit can also be disconnected and locked out?

16.WELDING, CUTTING and BRAZING

☐ Are only authorized and trained personnel permitted to use welding, cutting or brazing equipment?

☐ Do all operators have a copy of the appropriate operating instructions, and are they directed to follow them?

☐ Are compressed gas cylinders regularly examined for obvious signs of defects, deep rusting, or leakage?

☐ Is care used in handling and storage of cylinders, safety valves, relief valves, and the like, to prevent damage?

☐ Are precautions taken to prevent the mixture of air or oxygen with flammable gases, except at a burner or in a standard torch?

☐ Are only approved apparatus (torches, regulators, pressure- reducing valves, acetylene generators, manifolds) used?

☐ Are cylinders kept away from sources of heat?

☐ Is it prohibited to use cylinders as rollers or supports?

☐ Are empty cylinders appropriately marked their valves closed and valve-protection caps on?

☐ Are signs reading: DANGER NO-SMOKING, MATCHES, OR OPEN LIGHTS, or the equivalent posted?

☐ Are cylinders, cylinder valves, couplings, regulators, hoses, and apparatus kept free of oily or greasy substances?

☐ Is care taken not to drop or strike cylinders?

☐ Unless secured on special trucks, are regulators removed and valve-protection caps put in place before moving cylinders?

- ☐ Do cylinders without fixed hand wheels have keys, handles, or non-adjustable wrenches on stem valves when in service?
- ☐ Are liquefied gases stored and shipped valve-end up with valve covers in place?
- ☐ Are employees instructed to never crack a fuel-gas cylinder valve near sources of ignition?
- ☐ Before a regulator is removed, is the valve closed and gas released from the regulator?
- ☐ Is red used to identify the acetylene (and other fuel-gas) hose, green for oxygen hose, and black for inert gas and air hose?
- ☐ Are pressure-reducing regulators used only for the gas and pressures for which they are intended?
- ☐ Is open circuit (No Load) voltage of arc welding and cutting machines as low as possible and not in excess of the recommended limits?
- ☐ Under wet conditions, are automatic controls for reducing no-load voltage used?
- ☐ Is grounding of the machine frame and safety ground connections of portable machines checked periodically?
- ☐ Are electrodes removed from the holders when not in use?
- ☐ Is it required that electric power to the welder be shut off when no one is in attendance?
- ☐ Is suitable fire extinguishing equipment available for immediate use?
- ☐ Is the welder forbidden to coil or loop welding electrode cable around his body?
- ☐ Are wet machines thoroughly dried and tested before being used?
- ☐ Are work and electrode lead cables frequently inspected for wear and damage, and replaced when needed?
- ☐ Do means for connecting cables' lengths have adequate insulation?
- ☐ When the object to be welded cannot be moved and fire hazards cannot be removed, are shields used to confine heat, sparks, and slag?
- ☐ Are firewatchers assigned when welding or cutting is performed, in locations where a serious fire might develop?
- ☐ Are combustible floors kept wet, covered by damp sand, or protected by fire-resistant shields?
- ☐ When floors are wet down, are personnel protected from possible electrical shock?

- ☐ When welding is done on metal walls, are precautions taken to protect combustibles on the other side?
- ☐ Before hot work is begun, are used drums, barrels, tanks, and other containers so thoroughly cleaned that no substances remain that could explode, ignite, or produce toxic vapors?
- ☐ Is it required that eye protection helmets, hand shields and goggles meet appropriate standards?
- ☐ Are employees exposed to the hazards created by welding, cutting, or bracing operations protected with personal protective equipment and clothing?
- ☐ Is a check made for adequate ventilation in and where welding or cutting is preformed?
- ☐ When working in confined places are environmental monitoring tests taken and means provided for quick removal of welders in case of an emergency?

17.COMPRESSORS and COMPRESSED AIR

- ☐ Are compressors equipped with pressure relief valves, and pressure gauges?
- ☐ Are compressor air intakes installed and equipped to ensure that only clean uncontaminated air enters the compressor?
- ☐ Are air filters installed on the compressor intake?
- ☐ Are compressors operated and lubricated in accordance with the manufacturer's recommendations?
- ☐ Are safety devices on compressed air systems checked frequently?
- ☐ Before any repair work is done on the pressure system of a compressor, is the pressure bled off and the system locked-out?
- ☐ Are signs posted to warn of the automatic starting feature of the compressors?
- ☐ Is the belt drive system totally enclosed to provide protection for the front, back, top, and sides?
- ☐ Is it strictly prohibited to direct compressed air towards a person?
- ☐ Are employees prohibited from using highly compressed air for cleaning purposes?
- ☐ If compressed air is used for cleaning off clothing, is the pressure reduced to less than 10 psi?
- ☐ When using compressed air for cleaning, do employees use personal protective equipment?

- ☐ Are safety chains or other suitable locking devices used at couplings of high pressure hose lines where a connection failure would create a hazard?
- ☐ Before compressed air is used to empty containers of liquid, is the safe working pressure of the container checked?
- ☐ When compressed air is used with abrasive blast cleaning equipment, is the operating valve a type that must be held open manually?
- ☐ When compressed air is used to inflate auto tires, is a clip-on chuck and an inline regulator preset to 40 psi required?
- ☐ Is it prohibited to use compressed air to clean up or move combustible dust if such action could cause the dust to be suspended in the air and cause a fire or explosion hazard?

18.COMPRESSED AIR RECEIVERS

- ☐ Is every receiver equipped with a pressure gauge and with one or more automatic, spring-loaded safety valves?
- ☐ Is the total relieving capacity of the safety valve capable of preventing pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent?
- ☐ Is every air receiver provided with a drainpipe and valve at the lowest point for the removal of accumulated oil and water?
- ☐ Are compressed air receivers periodically drained of moisture and oil?
- ☐ Are all safety valves tested frequently and at regular intervals to determine whether they are in good operating condition?
- ☐ Is there a current operating permit issued by the Division of Occupational Safety and Health?
- ☐ Is the inlet of air receivers and piping systems kept free of accumulated oil and carbonaceous materials?

19.COMPRESSED GAS and CYLINDERS

- ☐ Are cylinders with a water weight capacity over 30 pounds equipped with means for connecting a valve protector device, or with a collar or recess to protect the valve?
- ☐ Are cylinders legibly marked to clearly identify the gas contained?

- ☐ Are compressed gas cylinders stored in areas which are protected from external heat sources such as flame impingement, intense radiant heat, electric arcs, or high temperature lines?
- ☐ Are cylinders located or stored in areas where they will not be damaged by passing or falling objects or subject to tampering by unauthorized persons?
- ☐ Are cylinders stored or transported in a manner to prevent them creating a hazard by tipping, falling or rolling?
- ☐ Are cylinders containing liquefied fuel gas, stored or transported in a position so that the safety relief device is always in direct contact with the vapor space in the cylinder?
- ☐ Are valve protectors always placed on cylinders when the cylinders are not in use or connected for use?
- ☐ Are all valves closed off before a cylinder is moved, when the cylinder is empty, and at the completion of each job?
- ☐ Are low pressure fuel-gas cylinders checked periodically for corrosion, general distortion, cracks, or any other defect that might indicate a weakness or render it unfit for service?
- ☐ Does the periodic check of low pressure fuel-gas cylinders include a close inspection of the cylinders' bottom?

20.HOIST and AUXILIARY EQUIPMENT

- ☐ Is each overhead electric hoist equipped with a limit device to stop the hook travel at its highest and lowest point of safe travel?
- ☐ Will each hoist automatically stop and hold any load up to 125 percent of its rated load, if its actuating force is removed?
- ☐ Is the rated load of each hoist legibly marked and visible to the operator?
- ☐ Are stops provided at the safe limits of travel for trolley hoist?
- ☐ Are the controls of hoists plainly marked to indicate the direction of travel or motion?
- ☐ Is each cage-controlled hoist equipped with an effective warning device?
- ☐ Are close-fitting guards or other suitable devices installed on hoist to assure hoist ropes will be maintained in the sheave groves?
- ☐ Are all hoist chains or ropes of sufficient length to handle the full range of movement for the application while still maintaining two full wraps on the drum at all times?

- ☐ Are nip points or contact points between hoist ropes and sheaves which are permanently located within seven feet of the floor, ground or working platform, guarded?
- ☐ Is it prohibited to use chains or rope slings that are kinked or twisted?
- ☐ Is it prohibited to use the hoist rope or chain wrapped around the load as a substitute, for a sling?
- ☐ Is the operator instructed to avoid carrying loads over people?
- ☐ Are only employees who have been trained in the proper use of hoists allowed to operate them?

21.INDUSTRIAL TRUCKS – FORKLIFTS

- ☐ Are only trained personnel allowed to operate industrial trucks?
- ☐ Is substantial overhead protective equipment provided on high lift rider equipment?
- ☐ Are the required lift truck operating rules posted and enforced?
- ☐ Is directional lighting provided on each industrial truck that operates in an area with less than two foot candles per square foot of general lighting?
- ☐ Does each industrial truck have a warning horn, whistle, gong or other device which can be clearly heard above the normal noise in the areas where operated?
- ☐ Are the brakes on each industrial truck capable of bringing the vehicle to a complete and safe stop when fully loaded?
- ☐ Will the industrial truck's parking brake effectively prevent the vehicle from moving when unattended?
- ☐ Are industrial trucks operating in areas where flammable gases or vapors, or combustible dust or ignitable fibers may be present in the atmosphere, approved for such locations?
- ☐ Are motorized hand and hand/rider trucks so designed that the brakes are applied, and power to the drive motor shuts off when the operator releases his or her grip on the device that controls the travel?
- ☐ Are industrial trucks with internal combustion engine operated in buildings or enclosed areas, carefully checked to ensure such operations do not cause harmful concentration of dangerous gases or fumes?

22. SPRAYING OPERATIONS

- ☐ Is adequate ventilation assured before spray operations are started?
- ☐ Is mechanical ventilation provided when spraying operation is done in enclosed areas?
- ☐ When mechanical ventilation is provided during spraying operations, is it so arranged that it will not circulate the contaminated air?
- ☐ Is the spray area free of hot surfaces?
- ☐ Is the spray area at least 20 feet from flames, sparks, operating electrical motors and other ignition sources?
- ☐ Are portable lamps used to illuminate spray areas suitable for use in a hazardous location?
- ☐ Is approved respiratory equipment provided and used when appropriate during spraying operations?
- ☐ Do solvents used for cleaning have a flash point of 100F or more?
- ☐ Are fire control sprinkler heads kept clean?
- ☐ Are "NO SMOKING" signs posted in spray areas, paint rooms, paint booths, and paint storage areas?
- ☐ Is the spray area kept clean of combustible residue?
- ☐ Are spray booths constructed of metal, masonry, or other substantial noncombustible material?
- ☐ Are spray booth floors and baffles noncombustible and easily cleaned?
- ☐ Is infrared drying apparatus kept out of the spray area during spraying operations?
- ☐ Is the spray booth completely ventilated before using the drying apparatus?
- ☐ Is the electric drying apparatus properly grounded?
- ☐ Are lighting fixtures for spray booths located outside of the booth and the interior lighted through sealed clear panels?
- ☐ Are the electric motors for exhaust fans placed outside booths or ducts?
- ☐ Are belts and pulleys inside the booth fully enclosed?
- ☐ Do ducts have access doors to allow cleaning?
- ☐ Do all drying spaces have adequate ventilation?

23.ENTERING CONFINED SPACES

- ☐ Are confined spaces thoroughly emptied of any corrosive or hazardous substances, such as acids or caustics, before entry?
- ☐ Before entry, are all lines to a confined space, containing inert, toxic, flammable, or corrosive materials valved off and blanked or disconnected and separated?
- ☐ Is it required that all impellers, agitators, or other moving equipment inside confined spaces be locked-out if they present a hazard?
- ☐ Is either natural or mechanical ventilation provided prior to confined space entry?
- ☐ Before entry, are appropriate atmospheric tests performed to check for oxygen deficiency, toxic substance and explosive concentrations in the confined space before entry?
- ☐ Is adequate illumination provided for the work to be performed in the confined space?
- ☐ Is the atmosphere inside the confined space frequently tested or continuously monitor during conduct of work?
- ☐ Is there an assigned safety standby employee outside of the confined space whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and give assistance?
- ☐ Is the standby employee or other employees prohibited from entering the confined space without lifelines and respiratory equipment if an emergency's cause is unknown?
- ☐ In addition to the standby employee, is there at least one other trained rescuer in the vicinity?
- ☐ Are all rescuers appropriately trained and using approved, recently inspected equipment?
- ☐ Does all rescue equipment allow for lifting employees vertically from a top opening?
- ☐ Are there trained personnel in First Aid and CPR immediately available?
- ☐ Is there an effective communication system in place whenever respiratory equipment is used and the employee in the confined space is out of sight of the standby person?
- ☐ Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?
- ☐ Is all portable electrical equipment used inside confined spaces either grounded and insulated, or equipped with ground fault protection?
- ☐ Before gas welding or burning is started in a confined space, are hoses checked for leaks, compressed gas bottles forbidden inside of the confined space, torches lighted only outside of

the confined area and the confined area tested for an explosive atmosphere each time before a lighted torch is to be taken into the confined space?

☐ If employees will be using oxygen-consuming equipment such as salamanders, torches, furnaces, in a confined space, is sufficient air provided to assure combustion without reducing the oxygen concentration of the atmosphere below 19.5 percent by volume?

☐ Whenever combustion-type equipment is used in confined space, are provisions made to ensure the exhaust gases are vented outside of the enclosure?

☐ Is each confined space checked for decaying vegetation or animal matter, which may produce methane?

☐ Is the confined space checked for possible industrial waste, which could be toxic?

☐ If the confined space is below the ground and near areas where motor vehicles will be operating, is it possible for vehicle exhaust or carbon monoxide to enter the space?

24.ENVIRONMENTAL CONTROLS

☐ Are all work areas properly illuminated?

☐ Are employees instructed in proper first aid and other emergency procedures?

☐ Are hazardous substances identified which may cause harm by inhalation, ingestion, skin absorption or contact?

☐ Are employees aware of the hazards involved with the various chemicals they may be exposed to in their work environment, such as ammonia, chlorine, epoxies, and caustics?

☐ Is employee exposure to chemicals in the workplace kept within acceptable levels?

☐ Can a less harmful method or product be used?

☐ Is the work area's ventilation system appropriate for the work being performed?

☐ Are spray painting operations done in spray rooms or booths equipped with an appropriate exhaust system?

☐ Is employee exposure to welding fumes controlled by ventilation, use of respirators, exposure time, or other means?

☐ Are welders and other workers nearby provided with flash shields during welding operations?

☐ If forklifts and other vehicles are used in buildings or other enclosed areas, are the carbon monoxide levels kept below maximum acceptable concentration?

- ☐ Has there been a determination that noise levels in the facilities are within acceptable levels?
- ☐ Are steps being taken to use engineering controls to reduce excessive noise levels?
- ☐ Are proper precautions being taken when handling asbestos and other fibrous materials?
- ☐ Are caution labels and signs used to warn of asbestos?
- ☐ Are wet methods used, when practicable, to prevent the emission of airborne asbestos fibers, silica dust and similar hazardous materials?
- ☐ Is vacuuming with appropriate equipment used whenever possible rather than blowing or sweeping dust?
- ☐ Are grinders, saws, and other machines that produce respirable dusts vented to an industrial collector or central exhaust system?
- ☐ Are all local exhaust ventilation systems designed and operating properly such as airflow and volume necessary for the application?
- ☐ Are the ducts free of obstructions or the belts slipping?
- ☐ Is personal protective equipment provided, used and maintained wherever required?
- ☐ Are there written standard operating procedures for the selection and use of respirators where needed?
- ☐ Are restrooms and washrooms kept clean and sanitary?
- ☐ Is all water provided for drinking, washing, and cooking potable?
- ☐ Are all outlets for water not suitable for drinking clearly identified?
- ☐ Are employees' physical capacities assessed before being assigned to jobs requiring heavy work?
- ☐ Are employees instructed in the proper manner of lifting heavy objects?
- ☐ Where heat is a problem, have all fixed work areas been provided with spot cooling or air conditioning?
- ☐ Are employees screened before assignment to areas of high heat to determine if their health condition might make them more susceptible to having an adverse reaction?
- ☐ Are employees working on streets and roadways where they are exposed to the hazards of traffic, required to wear bright colored (traffic orange) warning vest?
- ☐ Are exhaust stacks and air intakes located so that contaminated air will not be recirculated within a building or other enclosed area?

☐ Is equipment producing ultra-violet radiation properly shielded?

25. FLAMMABLE and COMBUSTIBLE MATERIALS

☐ Are combustible scrap, debris and waste materials (i.e., oily rags) stored in covered metal receptacles and removed from the worksite promptly?

☐ Is proper storage practiced to minimize the risk of fire including spontaneous combustion?

☐ Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?

☐ Are all connections on drums and combustible liquid piping, vapor and liquid tight?

☐ Are all flammable liquids kept in closed containers when not in use (e.g., parts cleaning tanks, pans)?

☐ Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?

☐ Do storage rooms for flammable and combustible liquids have explosion-proof lights?

☐ Do storage rooms for flammable and combustible liquids have mechanical or gravity ventilation?

☐ Is liquefied petroleum gas stored, handled, and used in accordance with safe practices and standards?

☐ Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?

☐ Are all solvent wastes and flammable liquids kept in fire- resistant covered containers until they are removed from the worksite?

☐ Is vacuuming used whenever possible rather than blowing or sweeping combustible dust?

☐ Are fire separators placed between containers of combustibles or flammables, when stacked one upon another, to ensure their support and stability?

☐ Are fuel gas cylinders and oxygen cylinders separated by distance, fire resistant barriers, or other means while in storage?

☐ Are fire extinguishers selected and provided for the types of materials in areas where they are to be used?

- Class A: Ordinary combustible material fires
- Class B: Flammable liquid, gas or grease fires
- Class C: Energized-electrical equipment fires

- ☐ If a Halon 1301 fire extinguisher is used, can employees evacuate within the specified time for that extinguisher?
- ☐ Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids and within 10 feet of any inside storage area for such materials?
- ☐ Is the transfer/withdrawal of flammable or combustible liquids performed by trained personnel?
- ☐ Are fire extinguishers mounted so that employees do not have to travel more than 75 feet for a class "A" fire or 50 feet for a class "B" fire?
- ☐ Are employees trained in the use of fire extinguishers?
- ☐ Are extinguishers free from obstructions or blockage?
- ☐ Are all extinguishers serviced, maintained and tagged at intervals not to exceed one year?
- ☐ Are all extinguishers fully charged and in their designated places?
- ☐ Is a record maintained of required monthly checks of extinguishers?
- ☐ Where sprinkler systems are permanently installed, are the nozzle heads directed or arranged so that water will not be sprayed into operating electrical switchboards and equipment?
- ☐ Are "NO SMOKING" signs posted where appropriate in areas where flammable or combustible materials are used or stored?
- ☐ Are "NO SMOKING" signs posted on liquefied petroleum gas tanks?
- ☐ Are "NO SMOKING" rules enforced in areas involving storage and use of flammable materials?
- ☐ Are safety cans used for dispensing flammable or combustible liquids at a point of use?
- ☐ Are all spills of flammable or combustible liquids cleaned up promptly?
- ☐ Are storage tanks adequately vented to prevent the development of excessive vacuum or pressure as a result of filling, emptying, or atmosphere temperature changes?
- ☐ Are storage tanks equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure?
- ☐ Are spare portable or butane tanks, which are sued by industrial trucks stored in accordance with regulations?

26.FIRE PROTECTION

- ☐ Do you have a fire prevention plan?

- ☐ Does your plan describe the type of fire protection equipment and systems?
- ☐ Have you established practices and procedures to control potential fire hazards and ignition sources?
- ☐ Are employees aware of the fire hazards of the material and processes to which they are exposed?
- ☐ Is your local fire department well acquainted with your facilities, location, and specific hazards?
- ☐ If you have a fire alarm system, is it tested at least annually?
- ☐ If you have a fire alarm system, is it certified as required?
- ☐ If you have interior standpipes and valves, are they inspected regularly?
- ☐ If you have outside private fire hydrants, are they flushed at least once a year and on a routine preventive maintenance schedule?
- ☐ Are fire doors and shutters in good operating condition?
- ☐ Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?
- ☐ Are fire door and shutter fusible links in place?
- ☐ Are automatic sprinkler system water control valves, air and water pressures checked weekly/periodically as required?
- ☐ Is maintenance of automatic sprinkler system assigned to responsible persons or to a sprinkler contractor?
- ☐ Are sprinkler heads protected by metal guards, when exposed to physical damage?
- ☐ Is proper clearance maintained below sprinkler heads?
- ☐ Are portable fire extinguishers provided in adequate number and type?
- ☐ Are fire extinguishers mounted in readily accessible locations?
- ☐ Are fire extinguishers recharged regularly and noted on the inspection tag?
- ☐ Are employees periodically instructed in the use of extinguishers and fire protection procedures?

27.HAZARDOUS CHEMICAL EXPOSURES

- ☐ Are employees trained in the safe handling practices of hazardous chemicals such as acids, caustics, and the like?
- ☐ Are employees aware of the potential hazards involving various chemicals stored or used in the workplace--such as acids, bases, caustics, epoxies, and phenols?
- ☐ Is employee exposure to chemicals kept within acceptable levels?
- ☐ Are eye wash fountains and safety showers provided in areas where corrosive chemicals are handled?
- ☐ Are all containers, such as vats and storage tanks labeled as to their contents (e.g., "CAUSTICS")?
- ☐ Are all employees required to use personal protective clothing and equipment when handling chemicals (e.g., gloves, eye protection, and respirators)?
- ☐ Are flammable or toxic chemicals kept in closed containers when not in use?
- ☐ Are chemical piping systems clearly marked as to their content?
- ☐ Where corrosive liquids are frequently handled in open containers or drawn from storage vessels or pipelines, are adequate means readily available for neutralizing or disposing of spills or overflows properly and safely?
- ☐ Have standard operating procedures been established and are they being followed when cleaning up chemical spills?
- ☐ Where needed for emergency use, are respirators stored in a convenient, clean and sanitary location?
- ☐ Are respirators intended for emergency use adequate for the various uses for which they may be needed?
- ☐ Are employees prohibited from eating in areas where hazardous chemicals are present?
- ☐ Is personal protective equipment provided, used and maintained whenever necessary?
- ☐ Are there written standard operating procedures for the selection and use of respirators where needed?
- ☐ If you have a respirator protection program, are your employees instructed on the correct usage and limitations of the respirators?
- ☐ Are the respirators NIOSH approved for this particular application?

- ☐ Are they regularly inspected and cleaned sanitized and maintained?
- ☐ If hazardous substances are used in your processes, do you have a medical or biological monitoring system in operation?
- ☐ Are you familiar with the Threshold Limit Values or Permissible Exposure Limits of airborne contaminants and physical agents used in your workplace?
- ☐ Have control procedures been instituted for hazardous materials, where appropriate, such as respirators, ventilation systems, handling practices, and the like?
- ☐ Whenever possible, are hazardous substances handled in properly designed and exhausted booths or similar locations?
- ☐ Do you use general dilution or local exhaust ventilation systems to control dusts, vapors, gases, fumes, smoke, solvents or mists which may be generated in your workplace?
- ☐ Is ventilation equipment provided for removal of contaminants from such operations as production grinding, buffing, spray painting, or vapor decreasing, and is it operating properly?
- ☐ Do employees complain about dizziness, headaches, nausea, irritation, or other factors of discomfort when they use solvents or other chemicals?
- ☐ Is there a dermatitis problem? Do employees complain about skin dryness, irritation, or sensitization?
- ☐ Have you considered the use of an industrial hygienist or environmental health specialist to evaluate your operation?
- ☐ If internal combustion engines are used, is carbon monoxide kept within acceptable levels?
- ☐ Is vacuuming used, rather than blowing or sweeping dusts whenever possible for clean up?
- ☐ Are materials that give off toxic asphyxiant, suffocating, or anesthetic fumes stored in remote or isolated locations when not in use?

28.HAZARDOUS SUBSTANCES COMMUNICATION

- ☐ Is there a list of hazardous substances used in your workplace?
- ☐ Is there a written hazard communication program dealing with Safety Data Sheets (SDS) labeling, and employee training?
- ☐ Who is responsible for SDS, container labeling, employee training?

- ☐ Is each container for a hazardous substance (i.e., vats, bottles, storage tanks,) labeled with product identity and a hazard warning (communication of the specific health hazards and physical hazards)?
- ☐ Is there a Material Safety Data Sheet readily available for each hazardous substance used?
- ☐ How will you inform other employers whose employees share the same work area where the hazardous substances are used?
- ☐ Is there an employee training program for hazardous substances?

  Does this program include the following?

  - ☐ An explanation of what an SDS is and how to use and obtain one
  - ☐ SDS contents for each hazardous substance or class of substances
  - ☐ Explanation of "Right to Know”
  - ☐ Identification of where employees can see the employer's written hazard communication program and where hazardous substances are present in their work area
  - ☐ The physical and health hazards of substances in the work area, how to detect their presence, and specific protective measures to be used
  - ☐ Details of the hazard communication program, including how to use the labeling system and SDS
  - ☐ How employees will be informed of hazards of non-routine tasks, and hazards of unlabeled pipes

29.ELECTRICAL

- ☐ Are your workplace electricians familiar with the OSHA Electrical Safety Orders?
- ☐ Do you specify compliance with OSHA for all contract electrical work?
- ☐ Are all employees required to report as soon as practicable any obvious hazard to life or property observed in connection with electrical equipment or lines?
- ☐ Are employees instructed to make preliminary inspections and appropriate tests to determine what conditions exist before starting work on electrical equipment or lines?
- ☐ When electrical equipment or lines are to be serviced, maintained or adjusted, are necessary switches opened, locked-out and tagged whenever possible?
- ☐ Are portable electrical tools and equipment grounded or of the double insulated type?

- ☐ Are electrical appliances such as vacuum cleaners, polishers, vending machines grounded?
- ☐ Do extension cords being used have a grounding conductor?
- ☐ Are multiple plug adapters prohibited?
- ☐ Are ground-fault circuit interrupters installed on each temporary 15 or 20 ampere, 120 volt AC circuit at locations where construction, demolition, modifications, alterations or excavations are being performed?
- ☐ Are all temporary circuits protected by suitable disconnecting switches or plug connectors at the junction with permanent wiring?
- ☐ Is exposed wiring and cords with frayed or deteriorated insulation repaired or replaced promptly?
- ☐ Are flexible cords and cables free of splices or taps?
- ☐ Are clamps or other securing means provided on flexible cords or cables at plugs, receptacles, tools, and equipment and is the cord jacket securely held in place?
- ☐ Are all cord, cable, and raceway connections intact and secure?
- ☐ In wet or damp locations, are electrical tools and equipment appropriate for the use or location or otherwise protected?
- ☐ Is the location of electrical power lines and cables (overhead, underground, under-floor, other side of walls) determined before digging, drilling or similar work is begun?
- ☐ Are metal measuring tapes, ropes, hand lines, or similar devices with metallic thread woven into the fabric prohibited where they could come in contact with energized parts of equipment or circuit conductors?
- ☐ Is the use of metal ladders prohibited in area where the ladder or the person using the ladder could come in contact with energized parts of equipment, fixtures or circuit conductors?
- ☐ Are all disconnecting switches and circuit breakers labeled to indicate their use or equipment served?
- ☐ Are disconnecting means always opened before fuses are replaced?
- ☐ Do all interior wiring systems include provisions for grounding metal parts of electrical raceways, equipment and enclosures?
- ☐ Are all electrical raceways and enclosures securely fastened in place?

- ☐ Are all energized parts of electrical circuits and equipment guarded against accidental contact by approved cabinets or enclosures?
- ☐ Is sufficient access and working space provided and maintained about all electrical equipment to permit ready and safe operations and maintenance?
- ☐ Are all unused openings (including conduit knockouts) in electrical enclosures and fittings closed with appropriate covers, plugs or plates?
- ☐ Are electrical enclosures such as switches, receptacles, junction boxes, etc., provided with tight-fitting covers or plates?
- ☐ Are disconnecting switches for electrical motors in excess of two horsepower, capable of opening the circuit when the motor is in a stalled condition, without exploding? (Switches must be horsepower rated equal to or in excess of the motor hp rating).
- ☐ Is low voltage protection provided in the control device of motors driving machines or equipment, which could cause probably injury from inadvertent starting?
- ☐ Is each motor disconnecting switch or circuit breaker located within sight of the motor control device?
- ☐ Is each motor located within sight of its controller or the controller disconnecting means capable of being locked in the open position or is a separate disconnecting means installed in the circuit within sight of the motor?
- ☐ Is the controller for each motor in excess of two horsepower, rated in horsepower equal to or in excess of the rating of the motor is serves?
- ☐ Are employees who regularly work on or around energized electrical equipment or lines instructed in the cardiopulmonary resuscitation (CPR) methods?
- ☐ Are employees prohibited from working alone on energized lines or equipment over 600 volts?

30.NOISE

- ☐ Are there areas in the workplace where continuous noise levels exceed 85 dBA? (To determine maximum allowable levels for intermittent or impact noise, see Title 8, Section 5097.)
- ☐ Are noise levels being measured using a sound level meter or an octave band analyzer and records being kept?
- ☐ Have you tried isolating noisy machinery from the rest of your operation?
- ☐ Have engineering controls been used to reduce excessive noise levels?

- ☐ Where engineering controls are determined not feasible, are administrative controls (i.e., worker rotation) being used to minimize individual employee exposure to noise?
- ☐ Is there an ongoing preventive health program to educate employees in safe levels of noise and exposure, effects of noise on their health, and use of personal protection?
- ☐ Is the training repeated annually for employees exposed to continuous noise above 85 dBA?
- ☐ Have work areas where noise levels make voice communication between employees difficult been identified and posted?
- ☐ Is approved hearing protective equipment (noise attenuating devices) available to every employee working in areas where continuous noise levels exceed 85 dBA?
- ☐ If you use ear protectors, are employees properly fitted and instructed in their use and care?
- ☐ Are employees exposed to continuous noise above 85 dBA given periodic audiometric testing to ensure that you have an effective hearing protection system?

31.FUELING

- ☐ Is it prohibited to fuel an internal combustion engine with a flammable liquid while the engine is running?
- ☐ Are fueling operations done in such a manner that likelihood of spillage will be minimal?
- ☐ When spillage occurs during fueling operations, is the spilled fuel cleaned up completely, evaporated, or other measures taken to control vapors before restarting the engine?
- ☐ Are fuel tank caps replaced and secured before starting the engine?
- ☐ In fueling operations is there always metal contact between the container and fuel tank?
- ☐ Are fueling hoses of a type designed to handle the specific type of fuel?
- ☐ Is it prohibited to handle or transfer gasoline in open containers?
- ☐ Are open lights, open flames, or sparking or arcing equipment prohibited near fueling or transfer of fuel operations?
- ☐ Is smoking prohibited in the vicinity of fueling operations?
- ☐ Are fueling operations prohibited in building or other enclosed areas that are not specifically ventilated for this purpose?
- ☐ Where fueling or transfer of fuel is done through a gravity flow system, are the nozzles of the self-closing type?

32.IDENTIFICATION OF PIPING SYSTEMS

- ☐ When non-potable water is piped through a facility, are outlets or taps posted to alert employees that it is unsafe and not to be used for drinking, washing or other personal use?
- ☐ When hazardous substances are transported through above ground piping, is each pipeline identified at points where confusion could introduce hazards to employees?
- ☐ When pipelines are identified by color painting, are all visible parts of the line so identified?
- ☐ When pipelines are identified by color painted bands or tapes, are the bands or tapes located at reasonable intervals and at each outlet, valve or connection?
- ☐ When pipelines are identified by color, is the color code posted at all locations where confusion could introduce hazards to employees?
- ☐ When the contents of pipelines are identified by name or name abbreviation, is the information readily visible on the pipe near each valve or outlet?
- ☐ When pipelines carrying hazardous substances are identified by tags, are the tags constructed of durable materials, the message carried clearly ad permanently distinguishable and are tags installed at each valve or outlet?
- ☐ When pipelines are heated by electricity, steam or other external source, are suitable warning signs or tags placed at unions, valves, or other serviceable parts of the system?

33.MATERIAL HANDLING

- ☐ Is there safe clearance for equipment through aisles and doorways?
- ☐ Are aisleways designated, permanently marked, and kept clear to allow unhindered passage?
- ☐ Are motorized vehicles and mechanized equipment inspected daily or prior to use?
- ☐ Are vehicles shut off and brakes set prior to loading or unloading?
- ☐ Are containers or combustibles or flammables, when stacked while being moved, always separated by dunnage sufficient to provide stability?
- ☐ Are dock boards (bridge plates) used when loading or unloading operations are taking place between vehicles and docks?
- ☐ Are trucks and trailers secured from movement during loading and unloading operations?
- ☐ Are dock plates and loading ramps constructed and maintained with sufficient strength to support imposed loading?

- ☐ Are hand trucks maintained in safe operating condition?
- ☐ Are chutes equipped with sideboards of sufficient height to prevent the materials being handled from falling off?
- ☐ Are chutes and gravity roller sections firmly placed or secured to prevent displacement?
- ☐ At the delivery end of rollers or chutes, are provisions made to brake the movement of the handled materials?
- ☐ Are pallets usually inspected before being loaded or moved?
- ☐ Are hooks with safety latches or other arrangements used when hoisting materials so that slings or load attachments won't accidentally slip off the hoist hooks?
- ☐ Are securing chains, ropes, chocks, or slings adequate for the job to be performed?
- ☐ When hoisting material or equipment, do provisions prevent passing under suspended loads?
- ☐ Are Safety Data Sheets available to employees handling hazardous substances?

34.TRANSPORTING EMPLOYEES and MATERIALS

- ☐ Do employees who operate vehicles on public thoroughfares have valid operator's licenses?
- ☐ When seven or more employees are regularly transported in a van, bus or truck, is the operator's license appropriate for the class of vehicle being driven?
- ☐ Is each van, bus or truck used regularly to transport employees, equipped with an adequate number of seats?
- ☐ When employees are transported by truck, are provision provided to prevent their falling from the vehicle?
- ☐ Are vehicles used to transport employees, equipped with lamps, brakes, horns, mirrors, windshields and turn signals in good repair?
- ☐ Are transport vehicles provided with handrails, steps, stirrups or similar devices, so placed and arranged that employees can safely mount or dismount?
- ☐ Are employee transport vehicles equipped at all times with at least two reflective-type flares?
- ☐ Is a fully charged fire extinguisher, in good condition, and with at least 4 B:C rating maintained in each employee transport vehicle?
- ☐ When cutting tools with sharp edges are carried in passenger compartments of employee transport vehicles, are they placed in closed boxes or containers which are secured in place?

☐ Are employees prohibited from riding on top of any load, which can shift, topple, or otherwise become unstable?

35.CONTROL OF HARMFUL SUBSTANCES BY VENTILATION

☐ Is the volume and velocity of air in each exhaust system sufficient to gather the dusts, fumes, mists, vapors or gases to be controlled, and to convey them to a suitable point of disposal?

☐ Are exhaust inlets, ducts and plenums designed, constructed, and supported to prevent collapse or failure of any part of the system?

☐ Are clean-out ports or doors provided at intervals not to exceed 12 feet in all horizontal runs of exhaust ducts?

☐ Where two or more different types of operations are being controlled through the same exhaust system, will the combination of substances being controlled constitute a fire, explosion or chemical reaction hazard in the duct?

☐ Is adequate makeup air provided to areas where exhaust systems are operating?

☐ Is the intake for makeup air located so that only clean, fresh air, which is free of contaminates, will enter the work environment?

☐ Where two or more ventilation systems are serving a work area, is their operation such that one will not offset the functions of the other?

36.SANITIZING EQUIPMENT and CLOTHING

☐ Is personal protective clothing or equipment, that employees are required to wear or use, of a type capable of being easily cleaned and disinfected?

☐ Are employees prohibited from interchanging personal protective clothing or equipment, unless it has been properly cleaned?

☐ Are machines and equipment that process, handle, or apply materials that could be injurious to employees cleaned and decontaminated before being overhauled or placed in storage?

☐ Are employees prohibited from smoking or eating in any area where contaminates are present that could be injurious if ingested?

☐ When employees are required to change from street clothing into protective clothing, is a clean change room with a separate storage facility for street and protective clothing provided?

☐ Are employees required to shower and wash their hair as soon as possible after a known contact has occurred with a carcinogen?

☐ Are equipment, materials, or other items taken into or removed from a carcinogen-regulated area in a way that prevents contaminating non-regulated areas or the external environment?

37.TIRE INFLATION

☐ Where tires are mounted or inflated on drop center wheels, is a safe practice procedure posted and enforced?

☐ Where tires are mounted or inflated on wheels with split rims or retainer rings, is a safe practice procedure posted and enforced?

☐ Does each tire inflation hose have a clip-on chuck with at least 24 inches of hose between the chuck and an in-line hand valve and gauge?

☐ Does the tire inflation control valve automatically shut off airflow when the valve is released?

☐ Is a tire restraining device such as a cage, rack or other effective means used while inflating tires mounted on split rims, or rims using retainer rings?

☐ Are employees forbidden from positioning directly over or in front of a tire while it's inflated?

38.EMERGENCY ACTION PLAN

☐ Are you required to have an emergency action plan?

☐ Does the emergency action plan comply with requirements of T8CCR 3220(a)?

☐ Have emergency escape procedures and routes been developed and communicated to all employers?

☐ Do employees, who remain to operate critical plant operations before they evacuate, know the proper procedures?

☐ Is the employee alarm system that provides a warning for emergency action recognizable and perceptible above ambient conditions?

☐ Are alarm systems properly maintained and tested regularly?

☐ Is the emergency action plan reviewed and revised periodically?

Do employees know their responsibilities:

- ☐ For reporting emergencies?
- ☐ During an emergency?
- ☐ For conducting rescue and medical duties?

39. INFECTION CONTROL

- ☐ Are employees potentially exposed to infectious agents in body fluids?
- ☐ Have occasions of potential occupational exposure been identified and documented?
- ☐ Has a training and information program been provided for employees exposed to or potentially exposed to blood or body fluids?
- ☐ Have infection control procedures been instituted where appropriate, such as ventilation, universal precautions, workplace practices, and personal protective equipment?
- ☐ Are employees aware of specific workplace practices to follow when appropriate? (Hand washing, handling sharp instruments, handling of laundry, disposal of contaminated materials, reusable equipment.)
- ☐ Is personal protective equipment provided to employees, and in all appropriate locations?
- ☐ Is the necessary equipment (i.e., mouthpieces, resuscitation bags, and other ventilation devices) provided for administering mouth-to-mouth resuscitation on potentially infected patients?
- ☐ Are facilities and equipment that comply with workplace practices available, such as hand-washing sinks, biohazard tags and labels, needle containers, detergents/disinfectants to clean up spills?
- ☐ Are all equipment and environmental and working surfaces cleaned and disinfected after contact with blood or potentially infectious materials?
- ☐ Is infectious waste placed in closable, leak proof containers, bags or puncture-resistant holders with proper labels?
- ☐ Has medical surveillance including HBV evaluation, antibody testing and vaccination been made available to potentially exposed employees?
- ☐ Is there training on universal precautions?
- ☐ Is there training on personal protective equipment?
- ☐ Is there training on workplace practices, which should include blood drawing, room cleaning, laundry handling, clean-up of blood spills?

- ☐ Is there training on needle stick exposure and management?
- ☐ Do employees have current Hepatitis B vaccinations?

40.ERGONOMICS

- ☐ Can the work be performed without eyestrain or glare to the employees?
- ☐ Does the task require prolonged raising of the arms?
- ☐ Do the neck and shoulders have to be stooped to view the task?
- ☐ Are there pressure points on any parts of the body (wrists, forearms, back of thighs)?
- ☐ Can the work be done using the larger muscles of the body?
- ☐ Can the work be done without twisting or overly bending the lower back?
- ☐ Are there sufficient rest breaks, in addition to the regular rest breaks, to relieve stress from repetitive-motion tasks?
- ☐ Are tools, instruments and machinery shaped, positioned and handled so that tasks can be performed comfortably?
- ☐ Are all pieces of furniture adjusted, positioned and arranged to minimize strain on all parts of the body?

41.VENTILATION FOR INDOOR AIR QUALITY

- ☐ Does your HVAC system provide at least the quantity of outdoor air required by the local building codes?
- ☐ Is the HVAC system inspected at least annually and problems corrected?
- ☐ Are inspection records retained for at least five years?

42.CRANE CHECKLIST

- ☐ Are the cranes visually inspected for defective components prior to the beginning of any work shift?
- ☐ Are all electrically operated cranes effectively grounded?
- ☐ Is a crane preventive maintenance program established?

- ☐ Is the load chart clearly visible to the operator?
- ☐ Are operating controls clearly identified?
- ☐ Is a fire extinguisher provided at the operator's station?
- ☐ Is the rated capacity visibly marked on each crane?
- ☐ Is an audible warning device mounted on each crane?
- ☐ Is sufficient illumination provided for the operator to perform the work safely?
- ☐ Are cranes of such design that the boom could fall over backward equipped with boom stops?
- ☐ Does each crane have a certificate indicating that required testing and examinations have been performed?
- ☐ Are crane inspection and maintenance records maintained and available for inspection?

ATTACHMENT J.2.—HAZARD ASSESSMENT AND CORRECTION RECORD

Date of Inspection: _____ Person Conducting Inspection: _____

Unsafe Condition or Work Practice: _____

Corrective Action Taken: _____

Date of Inspection: _____ Person Conducting Inspection: _____

Unsafe Condition or Work Practice: _____

Corrective Action Taken: _____

ATTACHMENT J.3.—ACCIDENT/EXPOSURE INVESTIGATION REPORT

Date and Time of Accident: _____ Location: _____

Accident Description: _____

_____

_____

_____

Employees Involved: _____

_____

_____

_____

Preventative Action Recommendations: _____

_____

_____

_____

Corrective Actions Taken: _____

_____

_____

_____

Manager Responsible: _____ Date Completed: _____

ATTACHMENT J.4.—WORKER TRAINING AND INSTRUCTION RECORD

EMPLOYEE NAME	TRAINING DATES	TYPE OF TRAINING	TRAINERS

APPENDIX K:

POWERED INDUSTRIAL TRUCK (FORKLIFT) SAFETY PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.178

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Founder

TABLE OF CONTENTS

1. PURPOSE AND SCOPE

The purpose of this Powered Industrial Truck Program is to protect the health and safety of all employees assigned to operate powered industrial trucks and to comply with the requirements of 29 CFR 1910.178 (Powered Industrial Trucks).

2. PROGRAM ADMINISTRATION

a. The Founder Responsibilities

The Founder will be responsible for the following:

- Developing specific policies and procedures pertaining to the operation and maintenance of powered industrial trucks.
- Implementing a training program based on the general principles of safe truck operation, the type of vehicle(s) being used in the workplace, the hazards of the workplace created by the use of the vehicle(s)
- Coordinating the training and performance testing of Powered industrial truck operators.
- Maintaining the training certification records and performance tests of employees included in the training sessions.
- Periodically reviewing the effectiveness of the program.

b. Supervisor Responsibilities

Managers and Supervisors are responsible for:

- Ensuring that employees who operate powered industrial trucks in their departments have received appropriate training
- Providing observations and feedback to operators to ensure safe equipment operation
- Ensuring that the vehicles under their responsibility are properly inspected and maintained in safe operating condition

c. Supervisor Responsibilities

Managers and Supervisors are responsible for:

- Ensuring that employees who operate powered industrial trucks in their departments have received appropriate training
- Providing observations and feedback to operators to ensure safe equipment operation

- Ensuring that the vehicles under their responsibility are properly inspected and maintained in safe operating condition

d. Powered Industrial Truck Operator Responsibilities

- Operating powered industrial trucks in a safe manner.
- Inspecting powdered industrial trucks at the beginning of each work shift and completing the appropriate inspection forms if requested.
- Reporting equipment defects and maintenance needs to their supervisors immediately.

3. DEFINITION OF TERMS

The following terms are associated with the design, type and use of powered industrial trucks:

- **Backrest:** Supports the load when tipped back and adds stability.
- **Carriage:** The part of the mast where the forks and backrest are mounted.
- **Counterbalance Forklifts:** Designed for both indoor and outdoor use, counterbalance truck wheels as their center of gravity and can be powered by battery, propane, gasoline or diesel fuel.
- **Full-tapered Forks:** Forks that gradually increase in thickness from the tip of the fork all the way back to the fork's heel (rear). Full-tapered forks are used to lift lighter loads.
- **Half-tapered forks:** Forks that gradually increase in thickness from the tip of the fork (front) to about midway back where the blade reaches its maximum thickness. Half-tapered forks are used to lift heavier loads.
- **Identification Plate:** Contains information about the truck's design and capacity including information about the truck's engine, load capacity, serial number, weight and the truck's type designation. The identification plate may also contain additional information specific to that type of truck.
- **Lift Cylinders:** Hydraulically operated single acting cylinders used to lift the carriage.
- **Load Center:** The distance from the heels of the forks to the load's center of gravity.
- **Mast:** The mechanism on the truck that raises and lowers the load. The mast is made up of a set of tracks that house bearings and chains.
- **Material Handling:** Any activity that involves picking up and moving materials, parts, or finished products.

- **Powered Industrial Truck:** An industrial vehicle used to carry, push, pull, lift or stack material that is powered by an electric motor or an internal combustion engine. Included are vehicles that are commonly referred to as forklift trucks, rider trucks, motorized or powered hand trucks, pallet trucks and tugs. Not included is compressed air or nonflammable compressed gas-operated industrial trucks, farm vehicles or vehicles intended primarily for earth moving or over-the-road hauling.

- **Powered Pallet Jack:** A type of powered industrial truck designed to move palletized materials. These trucks may be called walkies or walkie riders.

- **Order Picker:** A type of truck designed to allow the operator to ride up and down the load so that individual items can be pulled form a rack or storage self.

- **Overhead Guard:** A guard over the operator's head that protects the operator from falling debris.

  NOTE: The overhead guard is not designed to withstand the full impact of falling objects.

- **Rated Capacity:** The maximum weight that the truck is designed to lift as determined by the manufacture. To lift the maximum rated capacity, the load must be as close as possible to the drive wheels. The rated capacity of a truck can be found on the Identification Plate on the vehicle and in the manufacturer's operator manual.

- **Side Stability:** Refers to the truck's ability to resist tipping sideways under various loaded and unloaded conditions.

- **Tilt Cylinders:** Hydraulically operated double acting cylinders used to tilt the backrest and forks. Tilt cylinders work in both forward and backward directions.

- **Type Designation:** Refers to the truck's power source (diesel, gas, electric or liquefied propane gas) and if the truck is equipped with any additional safeguards to the exhaust, fuel, or electrical systems. The designation will also indicate any locations where the truck may not be used such as in atmospheres containing flammable vapors or dusts.

The following definitions help to explain the principle of stability.

- **Center of gravity** is a point on an object at which all of the object's weight can be considered to be concentrated.

- **Counterweight** is the weight that is a part of the truck's basic structure that is used to offset the load's weight and to maximize the vehicle's resistance to tipping over.

- **Fulcrum** is the truck's axis of rotation when it tips over.

- **Grade** is a surface's slope that is usually measured as the number of feet of rise or fall over a hundred foot horizontal distance (measured as a per cent).

- **Lateral stability** is a truck's resistance to tipping over sideways.
- **Line of action** is an imaginary line through an object's center of gravity.
- **Load center** is the horizontal distance from the load's edge (or the fork's or other attachment's vertical face) to the line of action through the load's center of gravity.
- **Longitudinal stability** is the truck's resistance to overturning forward or rearward.
- **Moment** is the object's weight times the distance form a fixed point. In the case of a powered industrial truck, the distance is measured from the point that the truck will tip over to the object's line of action. The distance is always measured perpendicular to the line of action.
- **Track** is the distance between wheels on the vehicle's same axle.
- **Wheelbase** is the distance between the centerline of the vehicle's front and rear wheels.

4. PROGRAM ELEMENTS

a. General Requirements

Selection:

- If the load to be handled is such that it presents a hazard to the operator (for instance, boxes falling from a pallet during travel), the manufacturer will install a vertical load backrest.
- A vehicle used in dim areas of the plant will come equipped with its own light (including vehicles that are used to load semi-trucks).
- Nameplates and markings on powered industrial trucks should remain intact and should be maintained in legible condition. The manufacturer’s written approval must be obtained for any modifications that affect truck capacity or safe operation. If a modification is made, the capacity, operation and maintenance instruction plates, tags or decals should be changed.
- Prior to using a truck in each area of the plant, the atmosphere or location should be classified as to whether it is hazardous or nonhazardous. The type of industrial truck used in each area is dependent on this classification. Only approved industrial trucks should be used in hazardous locations.

b. Safety Guards

The following safety guards should be provided on powered industrial trucks:

- **Enclosure Guards:** All hazardous moving parts should be guarded, such as exposed gears and chain-and-sprocket drives. Tires should also be guarded to prevent objects from being propelled toward the operator.
- **Overhead Guard:** An overhead guard should be provided where there is a danger of falling objects or where loads are lifted higher the operator's head. These guards should extend beyond the operator's position.
- **Vertical Load Backrest Extension:** A load backrest extension should be provided when the type of load present a hazard to the operator.

c. Battery Maintenance

The following safety rules should be followed when charging/changing batteries:

- Batteries should be charged only in the battery charging area.
- Trucks should be properly positioned and the brake applied before attempting to change or charge batteries. Material handling equipment should be provided for handling batteries.
- Facilities should be provided for:
  - Flushing and neutralizing spilled electrolyte
  - Fire protection
  - Protecting charging apparatus from damage by trucks
  - Ventilation for dispersal of fumes from gassing batteries
- A carboy tilter or siphon should be provided for handling electrolyte.
- When changing batteries, acid should be poured into water; water should not be poured into acid.
- Ensure that vent caps are functioning. The battery or compartment covers should be open to dissipate heat.
- Take precautions to prevent open flames, sparks or electric arcs in the battery charging area.
- Smoking is prohibited in the charging area.
- Keep tools and metallic objects away from the top of uncovered batteries.
- Make sure that reinstalled batteries are properly positioned and secured in the truck.

d. Fuel Handling And Storage

Liquid fuels (gasoline, diesel fuel) should be handled and stored in accordance with National Fire Protection Association (NFPA) Flammable and Combustible Liquids Code (NFPA No. 30).

Liquefied petroleum gas (LPG) should be handled and stored in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58).

- The engine should be stopped and the driver should dismount the vehicle before a truck is refueled.
- Fuel tanks will not be filled while the engine is running. Spillage will be avoided. Refueling must be performed out of all buildings and away from open doors.
- Spillage of oil or fuel will be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- No forklift will be operated with a leak in the fuel system until the leak has been corrected.

e. Control Of Noxious Gases And Fumes

Concentration levels of carbon monoxide gas created by powered industrial trucks should not exceed levels specified in 29 CFR 1910.1000. Currently, the 8-hour time weighted average limit is 50 parts per million (ppm). Industrial hygiene sampling should be conducted to verify carbon monoxide levels.

To control the levels of carbon monoxide in the plant, gasoline engines should not be idled in enclosed areas for long periods of time.

f. Routine Inspection And Maintenance

- Operators will be held responsible for checking the mechanical condition of their trucks at the start of each shift or before initial use.
- Operators will be instructed never to make adjustments or repairs on trucks, but to promptly report any faulty mechanical condition to maintenance for repair.
- Maintenance employees will make a thorough mechanical inspection of all trucks at least once a month, at which time necessary repair and parts replacement will be made.
- If at any time a powered industrial forklift is found to be in need of repair, defective or in any way unsafe, the truck will be taken out of service until it has been restored to safe operating condition.
- Open flames will not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

- Storage batteries used for electric-powered trucks require regular maintenance and charging. Adequate ventilation, emergency eyewash stations, and other appropriate equipment will be provided. Employees will be trained in the proper procedures to handle and charge batteries and to handle acids.

- All powered industrial trucks should be maintained in safe operating condition at all times. Maintenance activities should include regular inspections, preventive maintenance and overhauls when necessary. Trucks that are not in safe operating condition should be removed from service until repairs are made. Repairs should be made only by authorized personnel.

- Powered industrial truck operators should inspect their trucks at the beginning of their shift. The operators should check the controls, tires, brakes, and other moving parts. A standardized operator's checklist should be used for these inspections. (A sample form is located at the end of this section.)

- Documentation should be maintained of all inspection and maintenance activities. A file containing the maintenance and inspection records should be maintained for each truck.

g. Safe Operating Rules

Because of the hazards involved with powered industrial vehicle operations, the following safe operating practices have been developed to ensure that authorized employees drive in a safe manner.

I. General

- Safeguard the pedestrian at all times.

- When leaving a vehicle unattended (definition: vehicle not in view or is in view, but is more than 25 feet away), the operator should ensure the following:

- Forks will be fully lowered.

- The transmission is in neutral.

- Power shut off.

- Brakes set and key or connector plug is removed.

- Wheels are chocked if the truck is parked on an incline.

- A safe distance will be maintained from the edge of ramps or platforms while on any elevated dock, platform or freight car. Vehicles will not be used for opening or closing doors.

- Brakes will be set and wheel chocks will be in place to prevent movement of trucks, trailers or railroad cars while loading or unloading. Fixed jacks may be necessary to support semi-trailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of the trucks, trailers and railroad cars will be checked for breaks and weakness before they are entered with a vehicle.
- An overhead guard will be used as protection against falling objects.
- A load backrest extension should always be used to minimize the possibility of the load or part of it from falling forward.
- Fire aisles, fire doors, access to stairways, and fire equipment and emergency exits will always be kept clear.
- Any vehicle with hydraulically controlled attachments should only be used for which it was designed.
- Vehicles will not be driven up to anyone standing in front of a fixed object.
- The driver will never place his or her arms or legs between the uprights of the mast or outside the running lines of the vehicle.
- No person will be allowed to stand or pass under the elevated portion of any vehicle whether loaded or empty.
- Unauthorized personnel will not be permitted to ride on powered industrial vehicles.
- The driver will never push one load with another load.
- Spinner knobs must not be attached to steering hand wheels of trucks not originally equipped with such.
- Vehicles will never be used to lift people unless you have a properly designed safety platform securely attached to the forks and the mast.
- Dock boards or bridge plates will be properly secured before they are driven over. Dock board or bridge plates will be driven over carefully and slowly and their rate capacity never exceeded.
- Elevators will be approached slowly and then entered squarely after the elevator car is properly leveled. Once on the elevator, the transmission will be in neutral, the engine shut off and the brakes set.
- Never pick up loads in excess of the rated capacity of the vehicle.

II. Traveling

- All traffic regulations will be observed, including observing all stop signs and yield signs.
- The driver must always slow down and sound the horn at cross aisles and when approaching blind corners, intersections or other locations where vision is obstructed.
- A safe distance under normal conditions will be maintained approximately three vehicle lengths from the truck ahead.
- The driver should always keep to the right of the aisle when possible.
- If the load being carried obstructs forward view, the driver must travel in reverse.
- Railroad tracks will be crossed diagonally whenever possible. Parking closer than eight feet from the center of the railroad tracks is prohibited.
- Grades will be ascended or descended slowly, keeping the load uphill. Never operate diagonally across an incline.
- Operators should never reach through the mast of a vehicle to adjust the load.
- Keep forks slightly tilted back so load is cradled by the backrest to aid in stabilizing loads when traveling.
- When traveling the forks must be just high enough to clear the floor.

III. Operation of the Vehicle

- Vehicles will be inspected before being placed in service. Defects when found will be immediately reported and corrected.
- The daily operator's check-off list must be filled out completely by each operator at the start of each shift before the vehicle is put into operation.
- If at any time during your shift a vehicle is found to be in need of repair or in any way unsafe, the vehicle will be taken out of service until it has been restored to safe operating condition.
- Spillage of oil or fuel will be carefully washed away or completely evaporated and the fuel tank cup replaced before restarting engine.
- Fuel tanks will not be filled while the engine is running, spillage will be avoided.
- No vehicle will be operated with a leak in the fuel system or hydraulic system.

- Open flames will not be used for checking electrolyte level in storage batteries or gasoline level in field tanks.
- Before changing tanks on liquefied propane powered vehicles, the tank valve should always be turned off and the engine allowed to run until out of gas.
- Smoking is not allowed when changing storage batteries or placing them on charge or taking them off charge for electric powered vehicles.

IV. Loading/Stacking

- Only stable or safely arranged loads will be handled.
- Only loads within the rated capacity of the vehicle will be handled.
- The forks must be placed under the load as far as possible. The mast will be carefully tilted backward.
- Extreme care should be used when tilting the load forward or backward, especially when the load is raised.
- When stacking or tiering, the operator should use only enough backward tilt to stabilize the load.
- The operator must be careful not to damage lights, pipes, sprinkler systems, overhead doors, vertical beams, walls, etc., when stacking material.
- The uppermost portion of any staked loads will never be closer than 18 inches under overhead installations, lights, etc.
- Never tilt the load except where the load is on a deposit position over a rack or stack.
- If material is not banded or correctly piled and the load obviously is wobbly, the operator will not attempt to lift it.
- Never stack material so that it causes blind spots at corners and intersections.
- Only stack material on a stable base that is sufficient in size and capable of supporting the stacked weight.
- The operator should remove unsafe containers and damaged pallets.

h. Training Requirements

I. Operator Training

Operator training will be conducted prior to allowing anyone to operate an industrial vehicle, with recertification for experienced drivers every three years. Methods will be devised to train operators in the safe operation of powered industrial lift trucks. This training should include the following:

- All employees covered by this program will receive proper training, including operation and rules for safe driving. A completed license will serve as documentation of the training. A copy of this license will be maintained on file with the company.
- All training for drivers will include classroom and practical driving testing.
- Operators certified to drive vehicles should be given a certification card to be carried with them whenever operating a vehicle.

II. Non-operator Training

Employees working in areas where powered industrial vehicles operate should be made aware of the following general rules:

- Never pass under the raised forks of a vehicle, whether they are loaded or not.
- Walk around forks of a vehicle, never over or between them.
- Never “hitch a ride” on someone else’s vehicle.
- Allow vehicles the right of way.

Attachment K.1.—Forklift Inspection Form

Circle the correct finding for each question.

GENERAL		
Do industrial trucks acquired after Feb. 15, 1972, meet the design requirements in American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969?	OK	Action Needed
Has the manufacturer provided written approval for modifications that affect the capacity and safety operations of the equipment?	OK	Action Needed
Do industrial trucks have labels designating approval for use in various hazardous or non-hazardous locations?	OK	Action Needed
DESIGNATIONS		
Are safety coordinator and procurers of equipment aware of the 11 designations of industrial trucks or tractors (D, DS, DY, E, ES, EE, EX, G, GS, LP, and LS)?	OK	Action Needed
DESIGNATED USE OF REQUIREMENTS		
Are safety coordinator and operators knowledgeable about the use of industrial trucks in various locations?	OK	Action Needed
FUEL HANDLING AND STORAGE REQUIREMENTS		
Is the storage and handling of liquid fuels in accordance with NFPA Flammable and Combustible Liquids Code (NFPA No. 58-1969)?	OK	Action Needed
Is the storage and handling of liquefied petroleum gas fuel in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1969)?	OK	Action Needed
CHANGING AND CHARGING STORAGE BATTERIES		
Are battery-charging installations located in areas designated for that purpose?	OK	Action Needed
Are facilities provided for flushing and neutralizing spilled electrolyte?	OK	Action Needed
Are facilities provided for adequate ventilation for dispersal of fumes from gassing batteries?	OK	Action Needed
Is proper handling equipment (conveyor and hoists) provided for handling batteries?	OK	Action Needed
Is a carbon filter or siphon provided for handling electrolyte?	OK	Action Needed
Is care taken to ensure that vent caps are functioning when charging batteries? **NOTE: The battery or compartment covers will be open to dissipate heat.**	OK	Action Needed

Is smoking prohibited in the charging area?	OK	Action Needed
Are precautions taken to prevent open flames, sparks, or electric arcs in battery-charging areas?	OK	Action Needed
Are tools and other metallic objects kept away from the tops of uncovered batteries?	OK	Action Needed
DOCKBOARDS (BRIDGE PLATES)		
Are portable and powered dockboards strong enough to carry the load imposed on them?	OK	Action Needed
Are portable dockboards secured in position, either by being anchored or equipped with devices that will prevent slippage?	OK	Action Needed
Are handholds or other effective means provided on portable dockboards to ensure safe handling?	OK	Action Needed
Is positive protection provided to prevent railroad cars from being moved while dockboards or bridge plates are in position?	OK	Action Needed
OPERATOR TRAINING		
Are only trained and authorized operators permitted to operate a powered industrial truck?	OK	Action Needed
TRUCK OPERATIONS		
Is it prohibited for a person to stand or pass under the elevated portion of any truck, whether loaded or empty?	OK	Action Needed
Are unauthorized personnel prohibited from riding on powered industrial trucks?	OK	Action Needed
Is it prohibited for arms or legs to be placed between the uprights of the mast or outside the running lines of a truck?	OK	Action Needed
Is it required for load engaging means to be fully lowered, controls neutralized, power shut off, and brakes set when a powered industrial truck is left unattended?	OK	Action Needed
Is it required to maintain a safe distance from the edge of ramps or platforms while on any elevated dock, platform, or freight car?	OK	Action Needed
Is an overhead guard used as protection against falling objects?	OK	Action Needed
Is a load backrest extension used whenever necessary to minimize the possibility of the load or part of it from falling backward?	OK	Action Needed
Are only approved industrial trucks used in hazardous locations?	OK	Action Needed

TRAVELING		
Is it required that all traffic regulations be observed, including authorized plant speed limits?	OK	Action Needed
Is it required to yield the right of way to ambulances, fire trucks, or other vehicles in emergency situations?	OK	Action Needed
Is it required that drivers not pass other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations?	OK	Action Needed
Is it required that drivers slow down and sound the horn at cross aisles and other locations where vision is obstructed?	OK	Action Needed
Is it required that railroad tracks will be crossed diagonally wherever possible?	OK	Action Needed
Is it required that when ascending or descending grades that exceed 10 percent, loaded trucks be driven with the load upgrade?	OK	Action Needed
Is it required that on all grades the load and load engaging means be tilted back, if applicable, and raised only as far as necessary to clear the road surface?	OK	Action Needed
Is it required that under all travel conditions the truck be operated at a speed that will permit it to stop in a safe manner?	OK	Action Needed
Are stunt driving and horseplay prohibited?	OK	Action Needed
Are dockboards or bridge plates properly secured before they are driven over?	OK	Action Needed
Is it required that elevators be approached slowly and then entered squarely after the elevator car is properly leveled?	OK	Action Needed
Is it required that motorized hand trucks enter elevators or other confined areas with the load end forward?	OK	Action Needed
LOADING		
Are drivers instructed that only stable or safely-arranged loads be handled?	OK	Action Needed
Are drivers instructed that only loads within the rated capacity of the truck will be handled?	OK	Action Needed
Is a load engaging means placed under the load as far as possible?	OK	Action Needed
Are drivers required to use extreme care when tilting the load forward or backward, particularly when high tiering?	OK	Action Needed
OPERATION OF THE TRUCK		
Are personnel instructed that fuel tanks not be filled while the engine is running?	OK	Action Needed
Is it required that spillage of oil or fuel be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting the engine?	OK	Action Needed

Is it prohibited for a truck to be operated with a leak in the fuel system until the leak has been corrected?	OK	Action Needed
Is it prohibited for open flames to be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks?	OK	Action Needed
MAINTENANCE OF INDUSTRIAL TRUCKS		
Is it required that no repairs be made in Class I, II, and III locations?	OK	Action Needed
Is it required that repairs to the fuel and ignition systems of industrial trucks, which involve fire hazards, be conducted only in locations designated for such repairs?	OK	Action Needed
Is it required that trucks in need of repairs to the electrical system have the battery disconnected before such repairs are made?	OK	Action Needed
Is it required that industrial trucks not be altered without the manufacturer's approval?	OK	Action Needed
Is it required that industrial trucks be examined before being placed in service?	OK	Action Needed
Is it required that water mufflers be filled daily or as frequently as necessary to prevent depletion of the water supply below 75 percent of the filled capacity?	OK	Action Needed
Is it required that vehicles with mufflers and screens or other parts that may become clogged not be operated while such screens or parts are clogged?	OK	Action Needed
Is it required that any vehicle that emits hazardous sparks or flames from the exhaust system be immediately removed from service and not returned to service until the cause for the emission of such sparks and flames has been eliminated?	OK	Action Needed
Is it required that when the temperature of any part of any truck is found to exceed its normal operating temperature, thus creating a hazardous condition, the vehicle be removed from service and not returned to service until the cause for such overheating has been eliminated?	OK	Action Needed

APPENDIX L:

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.120 and 40 CFR 112.1-.7

STELLRR INSULATION

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Austin, Texas 78701

512-520-0044

Shawn Mansur

Founder

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1. Emergency Contact Information

Onsite Emergency Contacts	**Primary** {Name/Title} {Business Phone/24-Hour Phone} **Secondary** {Name/Title} {Business Phone/24-Hour Phone}	
Emergency Response Contacts	Fire/Paramedics/Police:	911
	Fire Non-Emergency Line:	{(XXX) XXX-XXXX}
	County Health Department:	{(XXX) XXX-XXXX}
	Local Clean Air Agency:	{(XXX) XXX-XXXX}
	Department of Ecology:	{(XXX) XXX-XXXX}
	National Response Center:	(800) 424-8802
	{Other}	{Business phone}
Local Emergency Medical Facility	{Hospital/Clinic Name} {Street Address City, State and Zip} Phone: Fax:	 {(XXX) XXX-XXXX} {(XXX) XXX-XXXX}
Safety Data Sheets	{SDS Location}	

2. SPILL PREVENTION

a. Hazardous Substance Management

All hazardous substances, including chemical wastes, are to be managed in a way that prevents release. The following general requirements are to be practiced:

I. Container Management

- All hazardous substance containers must be in good condition and compatible with the materials stored within.
- All hazardous substance containers must be accessible, and spacing between containers must provide sufficient access to perform periodic inspections and respond to releases.
- Empty hazardous substance containers (drums) must have all markers and labels removed and the container marked with the word “empty.”
- Any spills on the exterior of the container must be cleaned immediately.
- Flammable materials stored or dispensed from drums or totes must be grounded to prevent static spark.
- Do not overfill waste drums. 4”of headspace must remain to allow for expansion
- {Add other site-specific practices.}

II. Housekeeping

- All hazardous substances must be stored inside buildings or under cover.
- Store hazardous substances not used daily in cabinets, or in designated areas.
- All chemicals that are transferred from larger to smaller containers must be transferred by use of a funnel or spigot.
- All hazardous substance containers should be closed while not in use.
- Use drip pans or other collection devices to contain drips or leaks from dispensing containers or equipment.
- Implement preventative maintenance activities to reduce the potential for release from equipment.
- Immediately clean up and properly manage all small spills or leaks.

- Periodically inspect equipment and hazardous substance storage areas to ensure leaks or spills are not occurring.
- Use signage to identity hazardous substance storage or waste collection areas.
- Keep all work areas and hazardous substance storage areas clean and in good general condition.
- {Add other site-specific practices.}

III. Secondary Containment

- Store all bulk chemicals (>55 gallons) within appropriate secondary containment, or any sized chemical if there is a potential for release to the environment.
- Secondary containment should be checked periodically, and any spills identified in secondary containment must be immediately cleaned up and removed.
- {Add other site-specific practices.}

IV. Marking and Labeling

- Ensure all hazardous substances, including chemical wastes, are properly marked and labeled in accordance with all federal, state, and local regulations.
- Ensure that hazardous substances transferred to small containers are marked with the chemical's name (for example, "Isopropyl Alcohol") and hazard (for example, "Flammable").
- {Add other site-specific practices.}

b. Employee Training

All employees must receive periodic training on the proper handling of hazardous substances, spill prevention practices, and emergency response procedures. Training must include a review of the spill prevention and emergency response plan, as well as the location and use of emergency response equipment. Training can be recorded through safety committee meetings, staff training logs, or other equivalent record keeping.

c. Hazardous Substance Inventory

Maintain an inventory for all hazardous substances stored in quantities less than 55 gallons, and list locations where non-bulk hazardous substances are stored (for example, flammable lockers – shop floor).

d. Spill Response Equipment

Spill response equipment must be maintained and located in areas where spills are likely to occur. Spill kits should provide adequate response capabilities to manage any anticipated spill or release. The following general requirements are to be practiced:

- Stock spill cleanup kits that are compatible with the hazardous substances stored on site.
- Locate spill kits in areas where spills are likely to occur (for example, loading docks, chemical storage areas, locations where hazardous substance are being transferred, etc.).
- Spill kits should be sized to manage an anticipated release (spill equal to the largest container).
- Emergency response equipment should be inspected periodically to ensure that the spill kit is complete.

e. Spill Response, First Aid Equipment, and Fire Alarm Locations

Location(s)	Spill Equipment Content/Inventory
Loading Dock	40gl – Spill kit including 65-gl over pack drum, universal adsorbent socks, pillows and pads, personal protective equipment, non-sparking shovel, disposable bags and ties, and Emergency Response Guidebook

3. SPILL EMERGENCY RESPONSE PLAN

The Spill Emergency Response Plan is a facility-specific plan for dealing with emergencies and shall be implemented immediately whenever there is a fire, explosion, or release of a hazardous substance that threatens human health or the environment. The emergency response plan shall be reviewed and immediately amended whenever the following occur:

- The plan fails in an emergency.
- The facility changes in its design, construction, operation, maintenance, or other circumstances in a way that increases the potential for fire, explosions, or release of a hazardous substance.
- The list of emergency contacts changes.
- The list of emergency equipment changes.

a. Response Actions (In the Event of a Spill or Release)

In the event of a hazardous substance spill or release, immediately take the following measures to keep the spill from entering sewer or storm drains, spreading off-site, or affecting human health. In all cases, caution and common sense must be maintained with the primary goal being to prevent and limit personal injury.

Stop, contain, and clean up the chemical spill if the following are true:

- The spilled chemical and its hazardous properties have been identified.
- The spill is small and easily contained.
- Responder is aware of the chemicals' hazardous properties.

If a spill or release cannot be controlled or injuries have occurred due to the release, the following procedures should be implemented:

- Summon help or alert others of the release.
- Evacuate immediate area, and provide care to the injured—call 911.
- If potential fire or explosion hazards exist, initiate evacuation procedures—call 911.
- Respond defensively to any uncontrolled spills:
    - Use appropriate personal protective equipment when responding to any spill.
    - Attempt to shut off the source of the release (if safe to do so).
    - Eliminate sources of ignition (if safe to do so).

- Protect drains by use of adsorbent booms or drain covers (if safe to do so).

- Notify onsite emergency contacts.
- Notify other trained staff or {emergency response contractor} to assist with the spill response and cleanup activities.
- Coordinate response activities with local emergency personnel (fire department).
- Be prepared to provide SDS information to fire department, EMT, hospital, or physician.
- Notify appropriate agency if a release has entered the environment. Refer to Notification and Reporting section for reporting thresholds.

b. Evacuation Procedures

In the event of a hazardous substance release that has the potential for fire, explosion, or other human health hazards, the following procedures will be implemented:

- Facility staff will be notified of evacuation by one or more of the following methods: verbal, intercom, portable radio, alarm, and other effective means.
- Notification to emergency services will be performed—call 911.
- Facility staff will follow predetermined evacuation routes and assemble at designated areas. Evacuation maps must be displayed throughout the facility.
- Individuals responsible for coordinating evacuations must confirm if the business has been completely evacuated.
- Facility staff will be made familiar with evacuation procedures during new employee orientation and annual trainings thereafter.
- Designated emergency response contacts will coordinate all activities with outside emergency personnel.

c. Spill Cleanup and Disposal

In the event of a hazardous substance release, spill cleanup materials are to be properly characterized to determine if it designates as a Dangerous Waste. The designated onsite emergency contact, with the assistance of the {waste disposal vendor} and other resources, will determine the wastes status prior to disposal.

d. Reporting a Release

If a hazardous substance spill has been released to soil, surface water, drains, or air, the following entities must be notified within 24 hours (may vary from state to state):

- Fire Department (any release that poses an immediate threat to human health, property, or the environment)
- County Health Department
- Water/Wastewater Management
- Clean Air Agency
- National Response Center (release of oil or fuel to surface water, or a release of a chemical with an established Reportable Quantity-RQ)

When reporting a release, prepare to provide the following information (use spill report form):

- Your name and the telephone number from which you are calling
- Exact address of the release or threatened release
- Date, time, cause, and type of incident (fire, air release, spill, etc.)
- Material and quantity of the release, to the extent known
- Current condition of the facility
- Extent of injuries, if any
- Possible hazards to the public health or environment outside of the facility

e. Hazardous Substance Inventory

Those materials manufactured, stored, used, or generated as a chemical waste in quantities greater than 55 gallons.

Hazardous Substance	Manufacturer	Quantity / Unit of Issue	Location
pMDI		20–55 gallon drums	Main warehouse
pMDI		3–55 gallon drums	Rig #1

f. Facility Map

Include emergency exits routes, fire alarms, fire extinguishers, spill response equipment, and first aid stations (eye wash, first aid kits, etc.).

APPENDIX M:

ASBESTOS AND LEAD AWARENESS PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.1025 and 29 CFR 1926.62

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1. TRAINING

Asbestos and Lead awareness training is required for all associates who may be exposed to the hazard, and their training must be documented.

All STELLRR INSULATION employees shall be aware that they must be cognizant of the work being conducted around them on multiple contractor sites, and they shall keep in place protections at all times.

2. ASBESTOS

Asbestos is a mineral-based material that is resistant to heat and corrosive chemicals. Asbestos is found in building materials such as shingles, floor tiles, cement pipes, roofing felts, insulation, ceiling tiles, fire-resistant drywall, and acoustical products. Today, fortunately, very few asbestos-containing products are being produced and installed. So, most worker exposures occur during removal of asbestos or renovation of structures containing asbestos.

a. Asbestos Exposure Symptoms

If you are not properly protected, your chances of exposing yourself to asbestos are high. OSHA requires training to protect you. Let us look at the effects of asbestos exposure.

Exposure	Effects
Acute (short term)	Shortness of breath, chest or abdominal pain, or irritation of the skin and mucous membranes
Chronic (long term)	Breathing difficulty, dry cough, broadening and thickening of the ends of the fingers, bluish discoloration of the skin and mucous membranes, asbestosis (an emphysema-like condition), and lung cancer or mesothelioma (a cancerous tumor that spreads rapidly in the cells of the membranes covering the lungs and body organs)

b. How Asbestos Exposure Occurs

Asbestos fibers enter the body by inhalation or ingestion of airborne particles that become embedded in the tissue of the respiratory or digestive systems. Should exposure occur, asbestos symptoms may not surface for 20 or more years. Smoking around this substance greatly increases your risk of exposure and potential for developing lung cancer. (An attic insulated with loose fill asbestos is pictured at left. Exposure will occur when the insulation is removed and replaced with a different insulation product)

Exposure must be limited to 0.1 fibers per cubic centimeter of air (0.1 f/cc), averaged over an 8-hour work shift. The excursion or short-term limit is one fiber per cubic centimeter of air (1 f/cc) averaged over a sampling period of 30 minutes. This means that if you had a pinch of asbestos between your thumb and forefinger and threw it into the air, you would meet the exposure limit.

c. Protection Methods

I. Personal protective equipment

Employees must wear NIOSH-approved respirators and protective clothing (i.e., full body suits, gloves, and footwear).

Pictured at right is the removal of asbestos ceiling tiles.

II. Work practices

One good work practice is to place and store contaminated clothing in closed containers that prevent the dispersion of the asbestos outside the container.

III. Signs

An asbestos warning sign will state the following:

- Danger
- Asbestos
- Cancer and Lung Disease Hazard
- Authorized Personnel Only
- Respirators and Protective Clothing are Required in this Area

A sample sign is pictured at right.

3. LEAD

Lead is a chemical element used in batteries, piping, solder, radiation shields, and other industrial materials. Until 1978, it was an additive to certain types of paints. Today, fortunately, very few lead-

containing products are being produced and installed. Most worker exposures occur during removal of lead-based paint and plumbing or renovation of structures containing lead.

a. Lead Exposure Symptoms

If you are not properly protected, your chances of exposing yourself can be high. OSHA requires training to protect you. Let us look at the effects of lead exposure.

- Constipation or diarrhea
- Lack of appetite
- Weight loss
- Nausea
- Abdominal pain
- Adverse effects in the male and female reproductive systems
- Adverse effects in an unborn fetus

Exposure	Effects
Acute (short term)	Lead is a systemic poison that serves no known useful function once absorbed by the body. Exposure to lead in large enough quantities can kill in a matter of days. A condition affecting the brain, known as acute encephalopathy, may arise that develops into seizures, coma, and death. A short-term exposure of this magnitude is highly unlikely but not impossible. There is no sharp dividing line between developing acute and chronic health effects. Lead adversely affects numerous body systems and causes forms of health impairment and disease that arise after periods of exposure as short as days or as long as several years.
Chronic (long term)	Chronic overexposure to lead may result in severe damage to your blood-forming (renal), nervous, urinary, and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, and hyperactivity. At this stage, a qualified physician may diagnose lead poisoning

b. How Lead Exposure Occurs

Lead-based particles from operations, including sanding, sandblasting and other demolition processes, can enter the respiratory system. Non-occupational exposure to lead is may be at concentrations less than that of industrial workplace exposure. Industrial lead exposure can occur at operations such as stacking, pasting, casting, burning and smelting, and oxide manufacturing and assembly. There may be a potential health hazard at manufacturing facilities where lead is a part of operations.

When lead is absorbed into the body in certain doses, it is a toxic substance. Lead is not absorbed through the skin but can enter the body by inhalation and ingestion. When lead is scattered through the air as a dust, fume, or mist, it can be inhaled and absorbed by the lungs and upper respiratory tract.

Inhalation of airborne lead is generally the most important source of occupational lead absorption. Lead can also be absorbed through the digestive system if swallowed. Handling food and cigarettes, chewing tobacco, or putting on make-up with hands contaminated with lead will contribute to ingestion. It is for these reasons that eating, drinking, and smoking in identified lead areas must be avoided.

Lead blood levels will continue to increase if exposure is not controlled. A significant portion of the lead that you inhale or ingest gets into the blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissue. Some of the lead is filtered out of the body by excretion, but some remains in the blood and other tissues. The amount of lead stored in the body will increase if lead absorption is more than body excretion. The lead stored in the body can slowly cause irreversible damage to cells, organs, and the body system.

c. Protection Methods

Proper control of exposure to lead is the responsibility of both the employer and the employee. All of the control methods discussed below are essential to minimize additional sources of lead absorption from inhalation or ingestion of lead that may accumulate on you, your clothing, or your possessions. High personal standards of cleanliness are necessary. Strict compliance with these provisions can virtually eliminate several sources of lead exposure that significantly contribute to excessive lead absorption.

I. Respiratory Protection

Exposure to hazardous materials requires special precautions against absorption of toxic compounds. While engineering controls (e.g., ventilation systems) are the primary means of controlling materials such as lead dust, fumes, vapors, and mists, it is often necessary to rely on respiratory protection. The respirator will give you the proper amount of protection based on the nature of the hazard. Only use respirators tested and certified by the National Institute for Occupational Safety and Health (NIOSH). The cartridges that come with the mask are approved for the environment in which you will be working. Never use a cartridge respirator in an atmosphere containing less than 19.5% oxygen or an atmosphere immediately dangerous to life and health (IDLH). In addition, observe the requirements of the Respiratory Protection Program. In extreme cases a NIOSH-certified air purifying respirator may be required.

II. Protective Work Clothing and Equipment

Protective clothing and equipment must be worn when the exposure to lead and lead compounds is above the PEL. If work clothing is provided, it will be given to you in a clean and dry condition at least weekly, and daily if your airborne exposure to lead is greater than 200 ug/m3. Protective work clothing and equipment can include coveralls, Tyvek™ coveralls, gloves, hats, shoes, shoe coverlets, face shield or vented goggles.

All clothing and equipment will be repaired, replaced, cleaned, laundered, or disposed of as necessary by the company. Contaminated work clothing and equipment must be removed from the designated change room and placed in the provided closed containers to be cleaned or disposed of. At no time may lead be removed from protective clothing or equipment by any means that disperses lead into the workplace.

III. Signs

A lead warning sign will state the following:

- Danger
- Lead
- Hazard
- Authorized Personnel Only
- Respirators and Protective Clothing are Required in this Area

A sample sign is pictured at right.

APPENDIX N:

BLOOD-BORNE PATHOGENS PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.1030 and 29 CFR 1926.50

STELLRR INSULATION

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Shawn Mansur

Founder

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1. PURPOSE

STELLRR INSULATION has developed this Blood-Borne Pathogens Program to protect the Employees from occupational exposures to blood and other potentially infectious materials.

2. REGULATORY SCOPE

This procedure addresses the regulatory requirements under 29 CFR 1926.50 and 1910.1030. Where medical facilities are not reasonably accessible, 29 CFR 1926.50 requires employers to have onsite a person with a valid First Aid/CPR certification. Requirements of the Blood-Borne Pathogens Program are applicable under these circumstances.

3. TRAINING

Employees who may be occupationally exposed to blood-borne pathogens will be provided training. STELLRR INSULATION training will be provided prior to initial assignment where potential occupational exposure may take place and at least annually thereafter.

The training program will contain the following:

- Method to obtain a copy of this policy
- Epidemiology and symptoms of blood-borne diseases
- Modes of transmission of blood-borne pathogens
- Appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials
- Use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment
- Information on the types, proper uses, location, removal, handling, decontamination and disposal of personal protective equipment
- Basis for selection of personal protective equipment
- Appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials
- Procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available

- Post-exposure evaluation and follow-up provided by the designated medical professional contracted by STELLRR INSULATION
- Signs and labels used to identify biological hazards
- Opportunity for questions and answers session

The trainer will be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

4. GENERAL AWARENESS TRAINING

STELLRR INSULATION will provide general awareness training to all Employees. This training will include the following:

- The potential hazards associated with blood, bodily fluids, and other potentially infectious materials
- The modes of transmission (how the employee can become infected)
- Appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials
- The importance of not coming in contact with blood, bodily fluids, or other infectious materials
- The importance of letting medically trained individuals respond and handle emergent medical accidents
- The importance of employees not trained to handle medical emergencies or first aid avoiding any situation where there is possible exposure to blood-borne pathogens

5. EXPOSURE CONTROLS

Only those employees trained and designated by the company to provide First Aid/CPR are considered to have the potential for occupational exposure to blood-borne pathogens. Under our current operating procedures, RPC Industries employees are not trained for, and do not provide, first aid services (with the exception of self-administered treatments such as Band-Aids or ointments). We rely on third party professionals for all medical services.

6. EXPOSURE CONTROL PLAN (ECP)

STELLRR INSULATION shall establish a written Exposure Control Plan (ECP) if employing individuals with potential occupational exposure to infectious waste (i.e., those supplying First Aid/CPR). The ECP shall be made accessible to all employees. At a minimum, the ECP shall include the following:

- A list of all job classifications in which there is the potential for exposure
- A schedule and method of implementation (how the company plans to comply)
- Procedure for the evaluation of circumstances surrounding exposure incidents

STELLRR INSULATION will review and update the ECP at least annually or whenever there is a change or modification to an employee's assignment or a new procedure that will affect (increase or decrease) the employee's occupational exposure.

7. METHODS OF COMPLIANCE (Universal Precautions, Work Practices, etc.)

STELLRR INSULATION will use engineering controls as the primary means for controlling occupational exposures associated with blood, bodily fluids, and other potentially infectious materials.
The company's approach in engineering controls is to use, to the fullest extent feasible, intrinsically safe substances, procedures, or devices (e.g., CPR masks, biohazard cleanup kits, and sanitizing solutions).

8. UNIVERSAL PRECAUTIONS

- All employees whose jobs put them at risk of direct skin contact with blood, other potentially infectious material, mucous membranes, non-intact skin, or when handling items or surfaces soiled with blood or other potentially infectious materials shall wear latex gloves.
- Disposable, single-use gloves, such as intact surgical latex gloves, will be replaced when visibly soiled, torn, punctured, or when their ability to function as a barrier is compromised. Gloves will not be washed or disinfected for reuse.
- CPR masks with backflow prevention devices will be used.
- Masks that protect the nose and mouth area and eye protection or chin-length face shields will be worn whenever splashes, spray, spatter, droplets, or aerosols of blood or other potentially infectious materials may be generated and there is a potential eye, nose, or mouth contamination. Masks are not required for routine care (e.g., a nose bleed type incident). However, protective intact latex gloves will always be used when blood is present.
- Gowns, lab coats, aprons, or similar clothing will be worn if there is a potential for soiling clothes with blood or other infectious materials.

- Hand washing will be conducted immediately after direct hand contact with blood or other infectious materials and after the removal of gloves and other PPE.
- All personal protective equipment will be removed immediately upon leaving the work area and placed in the appropriate container for disposal or storage.
- Eating, drinking, smoking, applying cosmetics, and handling contact lenses is prohibited in work areas where there is potential for occupational exposure.
- Work surfaces will be cleaned with an appropriate disinfectant when surfaces are contaminated by any spill of blood or other potentially infectious material.
- Contaminated surfaces will be cleaned with a disinfectant such as household bleach, freshly diluted with one part bleach to 10 parts water. Gloves will be worn when disinfecting.
- At no time will an employee handle any type of potentially contaminated equipment unless gloves are worn.
- Reusable items that have been contaminated will not be opened, emptied, or cleaned manually or in any other manner that would cause exposure to the employee.

9. POST-EXPOSURE EVALUATION AND FOLLOW-UP

Following the report of an exposure incident, STELLRR INSULATION will make available to the exposed employee a confidential medical evaluation and follow-up including the following:

- The documented route of exposure
- The circumstances under which the exposure occurred
- The identification and documentation of the individual who is the source of exposure, unless prohibited by law
- The testing for infection of both the source individual and the exposed employee as soon as possible (permission must be given from the possible source prior to testing)
- The provision of counseling, if necessary, and an evaluation of reported illness to an exposed employee as soon as it is available

10.COMMUNICATION OF HAZARDS TO EMPLOYEES

STELLRR INSULATION will ensure that all employees are familiar with the blood-borne pathogen sign and labels indicating a hazard.

Labels shall be affixed to any of the following:

- Containers of regulated waste
- Refrigerators and freezers containing blood or other potentially infectious material (i.e., human body fluids)
- Other containers used to ship blood or other potentially infectious materials.

Employees of STELLRR INSULATION shall contact the Founder at the Main Office whenever potentially infectious materials must be labeled or disposed.

11.RECORD KEEPING

a. Medical Records

STELLRR INSULATION will establish and maintain medical records on all employees with occupational exposures.

The record will include the following:

- The name and social security number of the employee
- A copy of all results of examinations, medical testing, and follow-up procedures
- The company's copy of the healthcare professional's written opinion
- A copy of the information provided to the healthcare professional

b. Confidentiality

STELLRR INSULATION will ensure that employee medical records are kept confidential and the contents not disclosed (to any person within or outside the workplace) without the employee's express written consent. These records will be maintained by STELLRR INSULATION for the duration of employment plus 30 years.

c. Training Records

Training records will be kept for three (3) years and will include the following:

- Dates of the training sessions
- Contents or summary of the training
- Names and qualifications of trainers
- Names and job titles of all trainees

d. Availability

All records required to be maintained will be available for examination and copying upon request of the employee or the employee's representative.

APPENDIX O:

ASSURED EQUIPMENT GROUNDING PROGRAM

For Compliance With

OSHA Rules and Regulations

Ref. 29 CFR 1910.404

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1. WRITTEN PROGRAM

STELLRR INSULATION will review and evaluate this standard practice instruction on an annual basis, or when changes occur to 29 CFR 1926.404 that prompt revision of this document, or when facility operational changes occur that require a revision of this document. Effective implementation requires a written program for job safety and health that is endorsed and advocated by the highest level of management within this company and that outlines our goals and plans. This written program will be communicated to all required personnel. It is designed to establish clear goals and objectives.

2. GENERAL REQUIREMENTS

STELLRR INSULATION shall be responsible for the safe condition of electrical tools and equipment used by its employees, including tools and equipment that may be furnished by employees. STELLRR INSULATION will develop assured grounding operational procedures through the use of this document. After tool and equipment selection and evaluation, equipment will be used and maintained in a safe condition.

Supervisors will ensure that equipment utilized at each job site is maintained in a safe condition.

RESPONSIBILITY: The STELLRR INSULATION Founder is Shawn Mansur. The Founder is solely responsible for all facets of this program and has full authority to make necessary decisions to ensure success of the program. The Founder is the sole person authorized to amend these instructions and is authorized to halt any operation of the company where there is danger of serious personal injury.

3. POWER TOOL AND ACCESSORIES SELECTION, EVALUATION, AND CONDITION

The greatest hazards posed by power tools usually results from misuse and improper maintenance. Tool selection sometimes is not considered a priority when arrangements are made to begin work. All employees will consider the following when selecting tools:

- Is the tool correct for the type work to be performed?
- Are grounding methods sufficient when working in wet conditions?
- Is the grounding terminal present on the plug?
- Is the polarity of connections correct? No grounded conductor can be attached to any terminal or lead that results in a reversed designated polarity.
- Are grounding terminals or grounding-type devices on receptacles, cord connectors, or attachment plugs used for the intended purpose?

- Are grounding terminals or grounding-type devices on receptacles, cord connectors, or attachment plugs defeated in any way?
- Are all receptacles and attachment caps or plugs tested for correct attachment of the equipment grounding conductor? The equipment grounding conductor must be connected to its proper terminal.
- Are grounding terminals or grounding-type devices on receptacles, cord connectors, or attachment plugs defeated in any way?
- Are all 120 volt, single-phase15 and 20 ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure, equipped with approved ground-fault circuit interrupters for personnel protection?
- Are conductors used as grounded conductors identifiable and distinguishable from all other conductors?
- Is each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug visually inspected daily before use for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage? (Exception: cord sets and receptacles that are fixed and not exposed to damage)
- Is the equipment found damaged or defective removed from service until repaired or replaced?
- Are guards installed properly and in good condition?
- Are all required tests performed for the following?
    - Before first use
    - Before equipment is returned to service following repairs
    - Before equipment is used after any incident that can be reasonably suspected to have caused damage (for example, when a cord set is run over)
    - At intervals not to exceed three months, except that cord sets and receptacles that are fixed and not exposed to damage must be tested at intervals not to exceed six months
- Are all required tests documented, maintained, and inclusive of the following:
    - Have all equipment that have passed the test been identified?
    - Has the last date tested or the testing interval been accounted for?
    - Is the test documentation maintained until replaced by a more current record?

- Does the tool create sparks or heat? Has this been considered when working around flammable substances?
- Are cutting tools sharp? Dull tools are more hazardous than sharp ones.
- Is the tool used on the proper working surface? Tools used on dirty or wet working surfaces can create a multitude of hazards.
- Are tools stored properly when not being used? Saw blades and other sharp tools should be stored so that sharp edges are directed away from aisles and coworkers.

4. POWER TOOL PRECAUTIONS

Power tools can be hazardous when improperly used. This company uses several types. The following precautions will be taken by employees of this company to prevent injury:

- Power tools will always be operated within their design limitations.
- Eye protection, gloves, and safety footwear are recommended during operation.
- Tools will be stored in an appropriate dry location when not in use.
- Tool work will only be conducted in well illuminated locations.
- Tools will not be carried by the cord or hose.
- Cords or hoses will not be yanked to disconnect them from the receptacle.
- Cords and hoses will be kept away from heat, oils, and sharp edges or any other source that could result in damage.
- Tools will be disconnected when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.
- Observers will be kept at a safe distance at all times from the work area.
- Work will be secured with clamps or a vice where possible to free both hands to operate tools.
- To prevent accidental starting, employees should be continually aware not to hold the start button while carrying a plugged-in tool.
- Tools will be maintained in a clean manner and in accordance with the manufacturer's guidelines.
- Ensure that proper shoes are worn and that the work area is kept clean to maintain proper footing and good balance.

- Ensure that proper apparel is worn. Loose clothing, ties, or jewelry can become caught in moving parts.
- Tools that are damaged will be removed from service immediately and tagged "Do Not Use." They will be reported and turned over to the {location or individual} for repair or replacement.
- Cracked saws: All cracked saws will be removed from service.

5. METHODS OF GUARDING

One or more methods of guarding shall be provided where required to protect the operator and other employees in the area from hazards such as those created by point of operation, in running nip points, rotating parts, flying chips, and sparks. Examples of guarding methods are barrier guards, two-hand tripping devices, electronic safety devices, etc. The guard shall be such that it does not offer an accident hazard in itself. Employees will perform the following:

- Inspect tools without guards for signs of guard removal. If it is evident that a guard is required, tag-out the tool and obtain a replacement. Tools will not be energized during inspection.
- Inspect tools having guards for proper operation and maintenance prior to use. Tools will not be energized during inspection.
- Never remove a guard during use.

6. INITIAL TRAINING

Training shall be conducted prior to job assignment. STELLRR INSULATION shall provide training to ensure that the grounding requirements, purposes, functions, and proper uses of tools to be used in the normal function of their jobs are understood by employees and that the knowledge and skills required for the safe application and usage is acquired by employees. This standard practice instruction shall be provided to and read by all employees receiving training. The training shall include, at a minimum, the following:

- Grounding requirements for tools and associated site electrical equipment.
- Types of tools appropriate for use.
- Recognition of applicable electrical hazards associated with work to be completed.
- Tool selection requirements.
- Procedures for removal of an electrical tool or accessory from service.

- All other employees whose work operations are or may be in an area where tools that could present a hazard to other than the user will be made aware of the hazards.
- Tools identification: Tools having identification numbers will be checked for legibility.
- Certification: STELLRR INSULATION shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.
- Tool trainers: The following employees or position titles will receive training and, as required, serve as tool trainers. Company-qualified, assured grounding program trainers will consist of the following:
    - Title Member
    - Trainer Safety Officer
    - Trainer First Line Supervisors
    - Trainer _____
    - Trainer _____

7. REFRESHER TRAINING

This standard practice instruction shall be provided to and read by all employees receiving refresher training. The training content shall be identical to initial training. Refresher training will be conducted on an as-required basis or when the following conditions are met, which ever event occurs sooner:

- Retraining shall be provided for all authorized and affected employees whenever (and prior to) there being a change in their job assignments, a change in the type of tools used, or when a known hazard is added to the work environment.
- Additional retraining shall also be conducted whenever a periodic inspection reveals, or whenever STELLRR INSULATION has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of tools.
- The retraining shall reestablish employee proficiency and introduce new or revised methods and procedures, as necessary.
- Certification: STELLRR INSULATION shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.