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| **Southern Fluid Solutions, LLC, Inc.** |
| **SAFETY****Policies and Procedures**  |
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# POLICY STATEMENT ON SAFETY

The following policy statement outlines our commitment to provide and maintain safe working conditions for our employees, subcontract employees and others who may be affected by our activities.

We will ensure that the objectives of this statement are communicated to our employees, subcontract employees, etc. initially through our induction training and our Employee Safety and Health Manual

**General statement of safety and health policy**

***Southern Fluid Solutions, LLC will be proactive and diligent in our quest to identify risks and provide mitigating training and action in order to avoid all possible incidents to personnel and property on our property and projects. Our overall target is zero incidents. We will take whatever actions necessary to promote a safe working environment. This will be accomplished by:***

1. Providing an intensive safety program that will meet and, in most cases, exceed regulatory compliance standards;
2. Ensuring pre-job and continual risk identification and mitigation program;
3. Communicating clear and comprehensive subcontractor safety contract requirements;
4. Ensuring that significant risks arising from work activities under our control are eliminated or adequately controlled;
5. Developing and implementing appropriate occupational health and safety procedures including safe working practices;
6. Including the management of health and safety as a specific responsibility of managers at all levels.
7. Ensuring this policy is understood and implemented throughout the organization;
8. Providing a strong site inspection / audit process to ensure compliance with all applicable regulations and conformance with this policy;
9. Providing a holistic approach that stays ahead of OSHA and other regulatory agencies applicable to the industry standards; and
10. Ensuring that employees receive appropriate training and are competent to carry out their designated responsibilities.

# DUTIES AND RESPONSIBILITIES

A successful Safety and Injury and Illness Prevention Program can only be achieved and maintained when there is active interest, participation, and accountability at all levels of the organization. To ensure this, the company delegates the following safety duties to all management personnel. In some cases, employees will need to perform safety duties outside their regular responsibilities to prevent accidents.

The Safety Program Administrator or his designated representative must plan, organize, and administer the program by establishing policy, setting goals and objectives, assigning responsibility, motivating subordinates, and monitoring results. management will support and maintain an ongoing Safety and Injury and Illness Prevention Program through the following:

1. Providing clear understanding and direction to all management and employees regarding the importance of safety through the development, implementation, monitoring and revision of policy and procedures.
2. Providing financial support for the Safety / Injury and Illness Prevention Program through the provision of adequate funds for the purchase of necessary safety materials, safety equipment, proper personal protective equipment, adequate time for employee safety training, and maintenance of tools and equipment.
3. Overseeing implementation and compliance of this safety manual and other required safety programs as well as the requirements of the regulations mentioned in this document.
4. Maintaining a company commitment to accident prevention by expecting safe conduct on the part of all managers, supervisors, employees and sub- employees.
5. Holding all levels of management and employees accountable for accident prevention and safety.
6. Reviewing all accident investigations to determine corrective action.

##  Managers and Supervisors play a key role in the prevention of accidents on the job. They have direct contact with the employees and know the safety requirements for various jobs. Safety responsibilities for these individuals include:

1. Enforce all safety rules in this safety manual and ensure safe work procedures.
2. Verifying corrective action has been taken regarding safety hazards and accident investigations.
3. Conducting periodic inspections of the work sites to identify and correct unsafe actions and conditions that could cause accidents.
4. Act as a leader in company safety policy and setting a good example by following all safety rules.
5. Becoming familiar with local, state, and federal safety regulations. A Southern Fluid Solutions, LLC Manager, Supervisor or Safety Representative is available for assistance.
6. Train all new and existing employees in proper safety procedures and the hazards of the job.
7. Instruct all employees, under their supervision, in safe work practices and job safety requirements.
8. Hold periodic safety meetings with employees.
9. Ensure employee proficiency when assigning work requiring specific knowledge, special operations or equipment.
10. Ascertain that all machinery and equipment are maintained in safe working condition and operate properly.
11. Correct unsafe acts and conditions that could cause accidents.
12. Communicate with all sub- employees about safety and accident prevention activities.
13. Correct the cause of any accident as soon as possible.
14. Ascertain that proper first aid and firefighting equipment is maintained and used when conditions warrant its use.
15. Always maintain good housekeeping conditions.
16. Investigate all injuries and accidents to determine their cause and potential corrective action.
17. Ascertain that all injuries involving employees that require medical attention are properly treated and promptly reported to the office.

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

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

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# HAZARD IDENTIFICATION AND ASSESSMENT

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

Accident Investigations

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

Employee Observation

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

Employee Suggestions

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

Regulatory Requirements

Southern Fluid Solutions, LLC is subject to government regulations relating to safety. Many of these regulations are specific to this type of business. Southern Fluid Solutions, LLC management of the designated safety representative should be consulted if there are any questions related to the applicable regulations.

Outside Agencies

Several organizations may assist us in identifying hazards in the Southern Fluid Solutions, LLC workplace. These include safety officers from other companies, insurance carrier safety and health consultants, private industry consultants, the fire department, etc.

## Periodic Safety Inspections

Periodic safety inspections ensure that physical and mechanical hazards are under control and identify situations that may become potentially hazardous. Inspections shall include a review of the work habits of employees in all work areas. These inspections will be conducted by Southern Fluid Solutions, LLC management, safety personnel or other designated individuals.

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

1. The proper use, condition, maintenance and grounding of all electrically operated equipment.
2. The proper use, condition, and maintenance of safeguards for all power-driven equipment.
3. Compliance with this safety manual and government regulations.
4. Housekeeping and personal protective equipment.
5. Hazardous materials.

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

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

## Documentation of Inspections

Safety inspections will be documented to include the following:

1. Date on which the inspection was performed.
2. The name and title of person who performed the inspection.
3. Specific location of the hazard identified.
4. Any hazardous condition found.

# HAZARD PREVENTION, CORRECTION, AND CONTROL

The following procedures will be used to evaluate, prioritize and correct identified safety hazards. Hazards will be corrected in order of priority: the most serious hazards will be corrected first.

Hazard Evaluation

Factors that will be considered when evaluating hazards include:

1. Potential severity - The potential for serious injury, illness or fatality
2. Likelihood of exposure - The probability of the employee encountering the hazard
3. Frequency of exposure - How often employees encounter the hazard
4. Number of employees exposed
5. Possible corrective actions - What can be done to minimize or eliminate the hazard
6. Time necessary to correct - The time necessary to minimize or eliminate the hazard

## Techniques for Correcting Hazards

1. Engineering Controls: Could include machine guarding, ventilation, noise reduction at the source, and provision of material handling equipment. These are the first and preferred methods of control.
2. Administrative Controls: The next most desirable method would include rotation of employees or limiting exposure time.
3. Personal Protective Equipment: Includes back support belts, hearing protection, respirators and safety glasses. These are often the least effective controls for hazards and should be relied upon only when other controls are impractical.

## Documentation of Corrective Action

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

1. Safety Contact Report
2. Safety Meeting Report
3. Memo or letter
4. Safety inspection form

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

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# ALCOHOL, DRUGS & CONTRABAND

No illegal drugs are allowed on the facilities owned or operated by Southern Fluid Solutions, LLC. Illegal drugs include marijuana or any other substance which the possession or use of is unlawful. Also, anyone who reports for work under the influence of alcoholic beverages, stimulants, depressants, hallucinogens, or other drugs that could endanger themselves or others will not be permitted to work.

As a further safety precaution, entry into or upon facilities operated by Southern Fluid Solutions, LLC is conditioned upon Southern Fluid Solutions, LLC’s right to search the person and personal effects of the entrant for illegal drugs. These searches may be made without warning and may include lockers, vehicles and rooms at any work area operated by Southern Fluid Solutions, LLC, if appropriate.

Such prohibited items discovered through these searches may be taken into custody and, if appropriate, may be turned over to the proper law enforcement authorities.

# ACCIDENT / EXPOSURE INVESTIGATION

The Supervisor, Manager, or other designated individual will investigate all work-related accidents in a timely manner. This includes minor incidents and "near accidents", as well as serious injuries. An accident is defined as any unexpected occurrence that results in injury to personnel, damage to equipment, facilities, or material, or interruption of normal operations.

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

Immediately upon being notified of an accident the Supervisor, Manager, or other designated individual will:

1. Visit the accident scene, as soon as possible, while facts and evidence are still fresh and before witnesses forget important details and to make sure hazardous conditions to which other employees or customers could be exposed are corrected or have been removed;
2. Provide for needed first aid or call 911 for the injured employee(s).
3. If possible, interview the injured worker at the scene of the accident and verbally "walk" him or her through a re-enactment. All interviews should be conducted as privately as possible. Interview all witnesses individually and talk with anyone who has knowledge of the accident, even if they did not actually witness it.
4. Immediately report the accident to the Southern Fluid Solutions, LLC site office.
5. Consider taking signed statements in cases where facts are unclear or there is an element of controversy.
6. Thoroughly investigate the accident to identify all accident causes and contributing factors. Document details graphically. Use sketches, diagrams and photos as needed. Take measurements when appropriate.
7. All accidents involving death or in-patient hospitalization of 3 or more employees as a result of a work-related incident must be orally reported to the area OSHA office as stated in 29 CFR 1904.39.
8. Focus on causes and hazards. Develop an analysis of what happened, how it happened, and how it could have been prevented. Determine what caused the accident itself, not just the injury.

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

Examples include:

1. How did it happen?
2. Why did it happen?
3. How could it have been prevented?
4. Who was involved?
5. Who witnessed the incident?
6. Where were the witnesses at the time of the incident?
7. What was the injured worker doing?
8. What was the employee working on?
9. When did it happen?
10. When was the accident reported?
11. Where did it happen?
12. Why was the employee assigned to do the job?

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

"What do you recommend be done (or have you done) to prevent this type of incident from recurring?"

Document the results of the investigation and provide a copy to Southern Fluid Solutions, LLC management.

# TRAINING AND INSTRUCTION

Southern Fluid Solutions, LLC requires that all employees be trained on all aspects of their job tasks. Before employees begin work on Southern Fluid Solutions, LLC property, those employees should be trained in the basic OSHA requirements. Accepted training programs are PEC Safe land, PEC Core, OSHA 10 Hour or OSHA 30 Hour training.

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

All new employees will be given a copy of this Southern Fluid Solutions, LLC Employee Safety Manual and will be required to read and sign the booklet verifying that the employee has read and understood the information.

All employees given a new job assignment for which training has not been previously provided will be trained before beginning the new assignment. Additional or retraining may be required:

1. Whenever new substances, processes, procedures or equipment that represent a new hazard are introduced into the workplace.
2. Whenever the company is made aware of a new or previously unrecognized hazard.
3. Whenever management believes that additional training is necessary.
4. After all serious accidents.
5. When employees are not following safe work rules or procedures.

# FIRST AID AND MEDICAL EMERGENCY PROCEDURES

The company shall always ensure the availability of trained persons to render first aid for its employees. At least one trained person shall be available on each shift while on Southern Fluid Solutions, LLC property.

Every work site shall have access to at least one first-aid kit in a weatherproof container. The first-aid kit will be inspected regularly to ensure that it is well stocked, in sanitary condition, and any used items are promptly replaced. First-aid dressings shall be sterile and in individually sealed packages.

The designated first aid person on each site will always be available to render appropriate first aid for injuries and illnesses. Proper equipment for the prompt transportation of the injured or ill person to a physician or hospital where emergency care is provided, or an effective communication system for contacting hospitals or other emergency medical facilities, physicians, ambulance and fire services, shall also be provided.

Each employee shall be informed of the procedures to follow in case of injury or illness. employees must report all work-related injuries to their Supervisor immediately, even if they do not feel that it requires medical attention.

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

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

1. For severe accidents call 911
2. Secure the scene and prevent no further harm to the victim or rescuers.
3. The supervisor, employee, and first aid person should determine whether outside medical attention is needed. When uncertainty exists on the part of any individual, the employee should be sent for professional medical care.
4. If medical attention is not desired or the employee refuses treatment, you must still fill out your company’s “Accident Report" in case complications arise later.

# FIRE PREVENTION AND EMERGENCY ACTION PLAN

Southern Fluid Solutions, LLC requires all employees to follow the requirements outlined in 29 CFR 1926.24 Fire Prevention Program and 29 CFR 1926.35 Emergency Action Plan. See attached Fire Prevention Program.

In the event of an emergency such as earthquake or fire, all employees are expected to evacuate the premises immediately. Southern Fluid Solutions, LLC management or the designated contractor or utility company should be responsible for the task of shutting off the gas or electricity, if needed. At no time will any employee be expected to jeopardize their own safety to do this.

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

1. Fire alarm
2. Intercom
3. Emergency horn
4. Direct voice communication

The following procedures will be used to prevent fires on Southern Fluid Solutions, LLC property.

1. All accumulated combustible trash and debris will be removed as soon as practical.
2. Flammable liquids will only be stored and dispensed from UL approved safety containers designed for that purpose.
3. All rags soaked with flammable or combustible liquids will be properly disposed of.
4. Appropriate precautions will be taken to prevent fires when torch cutting, welding or soldering.
5. Compressed gas cylinders containing flammable or explosive gases will be properly stored in the upright position with their caps on and protected from heat or puncture.
6. Smoking or open lights are prohibited within 50 feet of flammable liquid or gas storage and dispensing areas.
7. Portable fire extinguishers shall be inspected monthly by an employee trained in fire extinguisher inspections. The fire extinguisher shall be serviced at least annually by a person licensed or registered by the State Fire Marshal.
8. A fire extinguisher shall be available near any welding or cutting operation.

**HOUSEKEEPING**

1. Do not place materials such as tools, boxes, buckets, or trash in walkways and passageways.
2. Do not kick objects out of your pathway; pick them up or push them out of the way.
3. Do not throw matches, cigarettes or other smoking materials into trash bins.
4. Do not store or leave items on stairways.
5. Do not block or obstruct stairwells, exits, or accesses to safety and emergency equipment such as fire extinguishers or fire alarms.
6. Do not leave loose tools, lunch boxes or other items on rooftop. Return tools to their storage places after use.
7. Keep walking surfaces of elevated working platforms, such as scaffolds and equipment access pads on roofs, clear of tools and materials that are not being used.
8. Remove protruding nails or bend them down into the lumber by using a claw hammer.
9. Do not use gasoline for cleaning purposes.
10. Sweep up scraps and debris from around equipment such as drill presses, punches, or power shears by using a broom and a dustpan.
11. Do not drop debris through roof top openings unless the area below has been barricaded at least 6 feet out from all edges of the opening.
12. Keep trash, spit cups, empty plastic bottles, rags, etc. cleaned out of your trucks at the end of each shift. Properly dispose of these in proper waste bins.

**PERSONAL PROTECTIVE EQUIPMENT**

1. Do not drill holes in or paint your hard hat.
2. Do not wear hard hats that are dented or cracked.
3. Wear the chemical goggles when using, applying, or handling chemical liquids or powders from containers labeled "Caustic" or "Corrosive."
4. Do not continue to work if your safety glasses become fogged. Stop work and clean the glasses until the lenses are clear and defogged.
5. Wear your earplugs or earmuffs in areas posted "Hearing Protection Required."
6. When handling hot tar, wear clothing made of cotton or non-synthetic fibers. Wear long sleeve shirts, long pants, and gloves.
7. Use lifelines, safety harnesses, or lanyards when you are working higher than 6 feet off the ground.
8. Wear safety goggles while reaming, drilling, welding or cutting metal.
9. Wear leatherwork gloves when handling rough, sharp-edged, or abrasive material such as chains, cables ropes, or slings. Wear snug fitting gloves with cuffs that will extend up under the buttoned shirtsleeves.
10. Always wear laced high-top work boots except when working on roofs steeper than 4:12 or when applying special roofing materials that require other types of shoes.
11. Always wear your hard hats when someone is working above you.
12. Wear safety goggles when tearing off roofs, when using power tools or when installing coal tar pitch roofing material.
13. Use face cream when working with coal tar pitch.
14. Do not take work clothes home when exposed to coal tar pitch volatiles.
15. Change your work clothes before leaving the job site.
16. Place work clothes contaminated with coal tar pitch volatiles in a closed labeled container approved by your employer.
17. Wear the face shield over your goggles or safety glasses during open furnace, welding, soldering or gas cutting operations.
18. Do not continue to work if your safety glasses become fogged. Stop work and clean the glasses until the lenses are clear and defogged.
19. Wear the welding helmet or welding goggles during welding operations.
20. Wear the dielectric gloves when working on electric current.
21. Wear your earplugs or earmuffs in areas posted "Hearing Protection Required."
22. Safety goggles must be worn while welding or cutting metal.
23. Do not wear long sleeve shirts that do not have button-down cuffs.
24. Do not wear jewelry or coats with metal zippers to work

See attached Personal Protective Equipment Plan.

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# HEAT ILLNESS AND PREVENTION

High heat procedures are to be followed when the temperature exceeds 95 degrees Fahrenheit. High heat procedures shall include, but are not limited to:

* Effective communication by voice, observation or electronic means,
* Close observation of employees for alertness and signs/symptoms of heat illness often,
* Reminding employees to drink water throughout the shift,
* The provisions of this procedure.

 Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in enough quantity at the beginning of the work shift.

 Employees suffering from heat illness or those who believe a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall always be permitted

* If a community water container is used, the lid of the container shall be sanitized, taped and dated each day. Employees should be instructed to not remove the lid which will contaminate the ice and water.
* Disposable/single use drinking cups will be provided to employees or provisions will be made to supply employees with their own cups.
* Supervisors will set-up an adequate number of umbrellas, canopies or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed at those locations where natural shade is not provided.

Working hours may be modified to work during the cooler hours of the day, when possible.

Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called. They will check that all means of communication are functional at the worksite prior to each shift.

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# BLOODBORNE PATHOGENS

Southern Fluid Solutions, LLC requires s to have a person training in first aid / CPR / first responder on each shift. Because of this requirement, the must have a written Bloodborne Pathogen program and must provide a copy of this program to Southern Fluid Solutions, LLC upon request. The Bloodborne Pathogen Program shall follow the requirements as set forth in OSHA 29 CFR 1910.1030. See attached Bloodborne Pathogen Program.

* Employees must wash hands and other applicable body parts as soon as potentially contaminated gloves or other PPE are removed to further prevent contamination. Hand washing facilities shall be readily available at all work locations except those that cannot support or simply do not have such facilities. In these cases, appropriate antiseptic solutions and / or disinfectant wipes must be available for use.
* All equipment and surfaces that have had contact with blood or other infectious materials must be properly cleaned and decontaminated.
* All emergency responder, first aid or other potentially infectious supplies must be disposed of immediately and appropriately.
* First Aid supplies shall be provided protective gloves. All first aid supplies shall be reviewed periodically to ensure supplies are not contaminated and expiration dates, where applicable, have not expired.
* Masks and eye protection (such as goggles, face shields, etc.) shall be used whenever splashes or sprays may generate droplets of infectious materials.
* All exposures shall be documented per the requirements in 1910.1030.
* Exposed employees shall be provided treatment as required in 1910.1030.
* Exposures are considered incidents and should be investigated and reported to Southern Fluid Solutions, LLC management.

# ASBESTOS AWARENESS

* 1. Employees performing work shall comply with the requirements of OSHA 29 CFR 1910.1001 and all applicable environmental regulatory requirements. See attached Asbestos Awareness Program.
	2. The following documents must be obtained at least 10 working days (or as soon as possible) prior to beginning the asbestos abatement work:
		1. Copy of the 's State 's License (renewed annually)
		2. Safety Data Sheet (SDS) for material used for the abatement process
		3. Copy of all asbestos Notifications (if required)
		4. Copies of asbestos sample analysis (if performed by)
	3. The following are required upon completion of work:
		1. Work Summary Report, including daily work summaries.
		2. Results of all independent third-party air sampling, including asbestos material sampling, personnel air monitoring, clearance sampling results.
		3. Waste Shipment Records.
	4. Every asbestos job must be assigned a competent person to monitor asbestos work and to assure compliance with all applicable regulations and requirements.
	5. An independent third party shall be contracted to perform all required air sampling for asbestos removal.
	6. Those who are not involved in ACM work, but who may be inadvertently exposed to ACM on Southern Fluid Solutions, LLC Energy property are to be informed of this potential and advised on proper methods to avoid exposure.

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# COMPRESSED GAS CYLINDERS

Compress gas cylinders shall be handled and used in a safe manner. All operators of equipment should report any equipment defect or safety hazard and discontinue its use until it is safely repaired or replaced. If repairs are made, they should be done by either the manufacturer or qualified person. The requirements of 29 CFR 1926.101-104 shall be followed. The following are guidelines to follow in using and inspecting equipment.

1. Cylinder contents must be properly identified with appropriate label. Do not accept any cylinder that is not clearly labeled with its contents. Do not deface or remove any markings, labels, decals, tags, or stencil marks used for identification of content.
2. Always keep the cylinder valve closed, except when the cylinder is in active use.
3. Where removable caps are provided for valve protection, such caps should always be kept on cylinders except when cylinders are in use.
4. Do not lift cylinder by the cap.
5. Cylinder storage areas should be prominently posted with the names of the gases to be stored. Cylinders should be grouped by types of gas.
6. Oxygen cylinders in storage shall be separated from fuel, gas cylinders or combustible materials (especially oil or grease) by a minimum of 20 feet or by a noncombustible barrier at least 5 feet high having a fire resistance rating of at least one-half hour.
7. Charged and empty cylinders should be stored separately with empty cylinders clearly marked.
8. Secure cylinders upright by chain or cable to a rigid support.
9. Ensure that all connections are free of leaks. Never use a flame to detect flammable gas leaks, use leak detector or soapy water.
10. Do not use oil or grease on valves, reducers, regulators, or lines in an oxygen system.
11. Open cylinder valves slowly. Point the valve opening and/or the glass-covered gauge faced away from yourself or other persons. Close cylinder valves when stopping work, moving cylinders, or when cylinders are empty.
12. Acetylene cylinders should be used and stored in an upright position to avoid loss of acetone.

# CONFINED SPACE OPERATIONS

Employees may be required to enter a confined space as defined in OSHA 1926.146. Therefore, employees must adhere to the requirements covered under OSHA 29 CFR 1926.146. See attached Confined Space Program.

## Prior to Confined Space Entry

1. Written, understandable operating and rescue procedures shall be developed and shall be provided to Southern Fluid Solutions, LLC management and affected employees. The operating procedures shall include provision for the surveillance of the surrounding area to avoid hazards such as drifting vapors from tanks, piping and sewers.
2. All employees, including standby persons if needed, will be trained in the operating and rescue procedures, including instructions as to the hazards they may encounter.
3. Any lines, pipes or hoses which may convey flammable, injurious, or incapacitating substances into the space shall be disconnected, blinded, or blocked off by other positive means to prevent the development of dangerous air contamination and/or oxygen deficiency within the space. The disconnection or blind shall be so located or done in such a manner that inadvertent reconnection of the line or removal of the blind is effectively prevented.
4. The space shall be emptied, flushed, or otherwise purged of flammable, injurious or incapacitating substances to the extent feasible.
5. The air shall be tested with an appropriate device or method to determine whether dangerous air contamination and/or an oxygen deficiency exists, and a written record of such testing results shall be made and kept at the work site for the duration of the work. Affected employees and/or their representative shall be afforded an opportunity to review and record the testing results.

## Confined Space Entry if Tests Show No Hazard

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

1. Air testing, in accordance with the pre-entry procedures, shall be conducted with enough frequency to ensure that the development of dangerous air contamination and/or oxygen deficiency does not occur during the performance of any operation.
2. Work stops, employee exits, and additional precautions are taken if dangerous air contamination and/or oxygen deficiency does develop.

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

**CRANES AND HOISTS & LIFTING EQUIPMENT**

1. Do not use load hooks or chains that are cracked, bent, elongated, or broken.
2. Do not use cranes that do not have their rated load capacity indicated on each side of the crane or on its load block.
3. Passengers are not permitted to ride inside the operator's cab of a truck crane.
4. Keep crane windows clean. Do not use a crane if its windows are broken.
5. Do not exceed posted weight limits on hoists.
6. Do not operate a crane on soft ground without cribbing and mats.
7. Fully extend outriggers before attempting a lift.
8. Stay outside the barricades of the posted swing radius.
9. Do not perform any crane retrofits or modifications without the manufacturer's approval.
10. Do not leave the crane unattended with a hoisted load.
11. Do not hoist loads over people.
12. Do not drive on the road shoulders.
13. Wear high visibility vests.
14. Wear the prescribed personal protective equipment such as hardhat, goggles, gloves, dust masks, and hearing protection when operating a hoist.
15. Replace the belts, gears or rotating shaft guards after servicing a crane; do not use the crane if guards are missing from these areas.
16. Do not use chain slings if links are cracked, twisted, stretched, or bent.
17. Fabricate all wire in wire rope slings by using thimbles; do not form eyes by using wire clips or knots.
18. Do not shorten slings by using makeshift devices such as knots or bolts.
19. Do not use a kinked chain.
20. Protect slings from the sharp edges of their loads by placing pads over the sharp edges of the items that have been loaded.
21. Do not place your hands between the sling and its load when the sling is being tightened around the load.
22. Wear work gloves when handling rough, sharp-edged, or abrasive material such as chains, cables, ropes, or slings.
23. Do not alter or remove the safety latch on hooks. Don’t use a hook that does not have a safety latch or if the safety latch is bent.
24. Lift the load from the center of the hooks, not from the point.
25. Do not use a ground-operated hoist in which the safety latch on the hook has been removed, is bent, or is otherwise visibly damaged.

**ELECTRICAL SAFETY**

 1. Do not use power equipment or tools on which you have not been trained.

 2. Keep power cords away from the path of drills, metal shears, power presses, grinders, and other tools or equipment that can splice or cut the power cord.

 3. Do not use cords that have splices, exposed wires, or cracked or frayed ends.

 4. Do not carry plugged in equipment or tools with your finger on the switch.

 5. Do not carry equipment or tools by the cord.

 6. Disconnect the tool from the outlet by pulling on the plug, not the cord.

 7. Turn the tool off before plugging or unplugging it.

 8. Do not leave tools that are "On" unattended.

 9. Do not handle or operate electrical tools when your hands are wet or when you are standing on wet floors.

 10. Do not operate spark inducing tools such as grinders, drills, or saws near containers labeled "Flammable" or in an explosive atmosphere such as a paint spray booth.

 11. Turn off the electrical tool and unplug it from the outlet before attempting repairs or service work. Tag the tool "Out of Service."

 12. Do not use extension cords or other three-pronged power cords that have a missing prong.

 13. Do not use an adapter such as a cheater plug that eliminates the ground.

 14. Do not plug multiple electrical cords into a single outlet.

 15. Do not run extension cords through doorways, through holes in ceilings, walls, or floors.

 16. Do not stand in water or on wet surfaces when operating power hand tools or portable electrical appliances.

 17. Do not use a power hand tool to cut wet or water-soaked building materials.

 18. Do not use a power hand tool while wearing wet cotton gloves or wet leather gloves.

 19. Never operate electrical equipment barefooted. Wear rubber-soled or insulated work boots.

 20. Do not operate a power hand tool or portable appliance that has a frayed, worn, cut, improperly spliced, or damaged power cord.

 21. Do not operate a power hand tool or portable appliance if a prong from the three-pronged power plug is missing or has been removed.

 22. Do not operate a power hand tool or portable appliance that has a two-pronged adapter or a two-conductor extension cord.

 23. Do not operate a power hand tool or portable appliance while holding a part of the metal casing or while holding the extension cord in your hand. Hold all portable power tools by the plastic handgrips or other nonconductive areas designed for gripping purposes.

See attached Electrical Safety Program.

**EXCAVATION OR TRENCHING Procedures**

Southern Fluid Solutions, LLC requires that s follow the requirements of 29 CFR 1926.650-652 before and during any excavation or trenching process where employees are required to enter such areas 4 feet deep or greater. A written plan and/or an excavation dig plan may be required by Southern Fluid Solutions, LLC detailing these OSHA requirements. See the Excavation Program attached.

There shall be no excavating of any kind, mechanical or by hand, without first obtaining locates. If private lines exist, they too must be properly located. In some cases, 811 may need to be called.

All lines exposed during excavation must be supported to prevent damage.

Before backfilling, extra caution must be taken to remove large rocks, sharp objects, and large chunks of hard packed clay or dirt. No trash or pieces of abandoned lines should be backfilled into the trench.

A competent person required by the regulations shall always be in visible site of the excavation while employees are in the trench.

# FALL PROTECTION

Employees may be required to work at heights greater than 6 feet. Therefore, employees must adhere to the requirements covered under OSHA 29 CFR 1926.500, 1926.501, 1926.502, and 1926.503. See the Fall Protection Program attached.

The company has the following requirements for fall protection at all our worksites.

When working where there is a hazard of falling more than 6 feet from a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces, tops of tanks, outside of handrails, etc. fall protection is also required. Also, fall protection is required when working in boom lifts.

One of the following four types of fall protection systems will be used when our employees are exposed to fall hazards in excess of 6 feet:

1. Standard guardrails, cables or floor hole covers
2. Personal fall arrest system
3. Positioning devices
4. Fall restraint systems
5. The company shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
6. Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
7. Personal fall arrest systems shall not be attached to guardrails, unless the guardrail is capable of safely supporting the load.
8. Each personal fall arrest system shall be inspected before each use by the user and again not less than annually by a competent person in accordance with the manufacturer's recommendations. The date of each inspection shall be documented.

# FLEET AND DRIVER SAFETY

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

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

Drivers must follow the requirements outlined in this program.

The company has established the following policies pertaining to company vehicles:

1. Personal and off duty use of company vehicles is prohibited.
2. Only authorized employees may drive company vehicles.
3. Non- employee passengers are not permitted in company vehicles at any time, unless they are business related.
4. Seat belts must always be worn in company vehicles.
5. No employee is permitted to drive company vehicles while impaired by alcohol, illegal or prescription drugs, or over the counter medications.
6. All accidents involving company vehicles must be reported to the office immediately.

All company vehicles must be inspected by the driver prior to each use. Mechanical defects will be repaired immediately. Southern Fluid Solutions, LLC management or its designated representatives may periodically spot check company vehicles to determine their condition.

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

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# HAND AND POWER TOOLS

*HAND TOOLS*

 1. Use tied-off containers to keep tools from falling off scaffolds and other elevated work platforms.

 2. Keep the blades of all cutting tools sharp.

 3. Carry all sharp tools in sheaths or holsters.

 4. Tag worn, damaged, or defective tools "Out of Service" and do not use them.

 5. Do not use a tool if its handle has splinters, burrs, cracks, splits or if the head of the tool is loose.

 6. Do not use impact tools such as hammers, chisels, punches, or steel stakes that have mushroomed heads.

 7. When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.

 8. Do not chop at heights above your head when working with a hand axe.

 9. Do not carry sharp or pointed hand tools such as screwdrivers, scribes, aviation snips, scrapers, chisels or files in your pocket unless the tool or pocket is sheathed.

 10. Do not perform "make-shift" repairs to tools.

 11. Do not use "cheaters" on load binders or "boomers."

 12. Do not carry tools in your hand when climbing. Carry tools in tool belts or hoist the tools to the work area with a hand line.

 13. Do not throw tools from one location to another, from one employee to another, from scaffolds or other elevated platforms.

*POWERED TOOLS*

 1. Do not use power equipment or tools on which you have not been trained.

 2. Keep power cords away from the path of drills, saws, vacuum cleaners, floor polishers, mowers, slicers, knives, grinders, irons, and presses.

 3. Do not carry plugged-in equipment or tools with your finger on the switch.

 4. Do not carry equipment or tools by the cord.

 5. Disconnect the tool from the outlet by pulling on the plug, not the cord.

 6. Turn the tool off before plugging or unplugging it.

 7. Do not leave tools that are "On" unattended.

 8. Do not handle or operate electrical tools when your hands are wet or when you are standing on wet floors.

 9. Do not operate spark inducing tools such as grinders, drills, or saws near containers labeled "Flammable" or in an explosive atmosphere such as a paint spray booth.

 10. Turn off electrical tools and disconnect the power source from the outlet before attempting repairs or service work. Tag the tool "Out of Service."

 11. Do not connect multiple electrical tools into a single outlet.

 12. Do not run extension cords through doorways, through holes in ceilings, walls, or floors.

 13. Do not drive over, drag, step on or place objects on a cord.

 14. Do not operate a power hand tool or portable appliance with a two-pronged adapter or a two-conductor extension cord.

 15. Do not use a power hand tool while wearing wet cotton gloves or wet leather gloves.

 16. Never operate electrical equipment barefooted. Wear rubber-soled or insulated work boots.

 17. Do not operate a power hand tool or portable appliance while holding a part of the metal casing or holding the extension cord in your hand. Hold all portable power tools by the plastic handgrips or other nonconductive areas designed for gripping purposes.

 18. Do not operate a power hand tool or portable appliance that has a frayed, worn, cut, improperly spliced, or damaged power cord.

 19. Do not operate a power hand tool or portable appliance if the ground pin from the three-pronged power plug is missing or has been removed.

**HAZWOPER**

The employees shall comply with OSHA 29 CFR 1910.120 regarding any hazardous waste operations. Emergency response efforts on land or water to releases of chemicals or petroleum products originating from Southern Fluid Solutions, LLC Energy facilities or in the course of transportation will comply with the requirements of 29 CFR 1910.120(q). The primary concern in emergency response is the safety and security of responding personnel. See attached Hazwoper Program.

# HAZARD COMMUNICATION PROGRAM

The Hazard Communication Program was developed to ensure that all employees receive adequate information about the possible hazards that may result from the various materials used in our operations.

Copies of Safety Data Sheets (SDS) for all hazardous substances to which employees may be exposed will be kept in a binder either in a vehicle on the job site or accessible in a reasonable timeframe from another location. These SDS must be made available to all employees, always, upon request. Copies of the most commonly used products are recommended to be kept by the Supervisor at the work site.

No container containing any chemical will be used unless the container is correctly labeled and the label is legible.

To ensure that employees are not exposed to Southern Fluid Solutions, LLC hazardous materials, and to ensure the safety of the employees, it will be the responsibility of the Southern Fluid Solutions, LLC management to provide SDS upon request on any hazardous substances under our control that the employees may be exposed to while at the work site.

See attached Hazard Communication Program.

**HEARING CONSERVATION**

1. Occupational hearing loss is a cumulative result of repeated or continued absorption of sound energy by the ear; employee protection is based on reduction of the noise level at the ear or limiting the employee’s exposure time.

1. All employees, who work in areas where the exposure to noise levels are 85 decibels or greater for the 8 hour time-weighted average of 85 decibels, must wear hearing protection and shall implement a monitoring program to identify employees to be included in the hearing conservation program. Employees will wear hearing protection in all areas with posted signage.
2. An employee shall receive an annual audiogram every year they work in a position that is exposed to TWA noise 85 decibels or greater.
3. Earmuffs and earplugs shall be made available to employees in sizes and configurations that will be comfortable to the employee. These hearing protection devices shall be made available to all employees exposed to an 8-hour time-weighted average of 85 dBs or greater at no cost to employees. Hearing protectors shall be replaced as necessary. Employees shall be instructed how to obtain the proper fit. Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by the company.
4. A training program shall be established to inform employees who are exposed to a noise action level or work in high noise levels, on an annual basis, of the effect of noise on hearing; the purpose of hearing protectors, including the advantages, disadvantages and alternatives of various types, including instructions on selection, fitting, use and care and the purpose of audiometric testing and an explanation of test procedures.

See the Hearing Conservation Plan attached.

**HYDROGEN SULFIDE (H2S)**

1. Each person entering a H2S designated location, regardless of the concentration, shall wear a personal H2S monitor that is set to alarm at 10 PPM.
2. Southern Fluid Solutions, LLC Energy shall be consulted and possibly will not be involved when work requires opening any equipment on location that has the potential of releasing concentrations of H2S at 100 PPM or higher.
3. Maintain compliance with permit requirements.
4. Verify that proper safety equipment is available, functioning properly and is utilized.
5. Check and remain aware of wind conditions and direction.
6. Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity.
7. Check for other personnel and ignition sources.
8. Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities.
9. Keep all non-essential personnel away from work areas.
10. Immediately evacuate the area when any H2S monitor sounds. Evacuate by moving crosswind and then upwind.

See the Hydrogen Sulfide Plan attached.

**JOB SITE SAFETY**

 1. Do not walk under partially demolished walls or floors.

 2. Stop working outdoors and seek shelter during lightning storms.

 3. Do not begin working until barricades, warning signs or other protective devices have been installed to isolate the work area.

 4. Do not throw or toss debris outside barricaded areas.

 5. Walk around or step over holes, rocks, and roots in your pathway.

 6. Stay clear of all trucks, forklifts, cranes, and other heavy equipment when in operation.

 7. Do not approach any heavy equipment until the operator has seen you and has signaled to you that it is safe to approach.

 8. Walk around or duck under protruding branches and limbs.

 9. Do not walk on fallen trees; walk on the ground.

 10. Do not clear brush by hand within 100 ft. of heavy equipment operations.

 11. Keep combustible liquids stored and covered in approved containers.

**LADDER SAFETY**

1. Do not use ladders that have loose rungs, cracked or split side rails, missing rubber footpads or are otherwise visibly damaged.
2. Keep ladder rungs clean of grease. Remove buildup of material such as dirt, debris, or mud.
3. When performing work from a ladder, face the ladder and do not lean backward or sideways from the ladder.
4. Do not stand on the top two rungs of any ladder.
5. Do not stand on a ladder that wobbles or that leans to the left or right.
6. Do not try to "walk" a ladder by rocking it. Climb down the ladder, and then move it.
7. One person shall be on the ladder at a time.
8. Do not use a ladder as a horizontal platform.
9. Secure the ladder in place by having another employee hold it.
10. Face the ladder when climbing up or down.
11. Always maintain a three-point contact by keeping both hands and one foot or both feet and one hand on the ladder when climbing up or down.
12. Do not carry items in your hands while climbing up or down a ladder.
13. Read and follow the manufacturer's instructions label affixed to the ladder if you are unsure how to use the ladder.
14. Do not use a metal ladder on rooftops or within 50 feet of electrical power lines.
15. Do not use scrap lumber, bundles of shingles, or any other types of makeshift stacks or bundles of building materials as improvised climbing devices.

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# LOCK-OUT / TAG-OUT PROGRAM

Employees may be required to lock out or block a possible energy source. Therefore, all employees must adhere to the requirements covered under OSHA 29 CFR 1910.147. See the Lockout Tagout Program attached.

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

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

1. Notifying all involved personnel.
2. Locking the disconnecting means in the "open" position with the use of lockable devices, such as padlocks, combination locks or disconnecting of the conductor(s) or other positive methods or procedures which will effectively prevent unexpected or inadvertent energizing of a designated circuit, equipment or appliance.
3. Tagging the disconnecting means with suitable accident prevention tags.
4. Effectively blocking or valve-locking the operation or dissipating the energy of all stored energy devices which present a hazard, such as capacitors or pressured lines.

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

1. Reason for placing tag.
2. Name of person placing the tag and how that person may be contacted.
3. Date tag was placed.

# RESPIRATORY PROTECTION

Employees may be required to wear a cartridge-type or self-contained respirator per various tasks. Therefore, all employees must adhere to the requirements covered under OSHA 29 CFR 1910.134. See attached Respiratory Protection Program.

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

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

Whenever respirators are required, the company shall provide Southern Fluid Solutions, LLC with a written Respiratory Protection Program. As part of the written Respiratory Protection Program, the company will provide a medical evaluation to determine the employee’s ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace.

1. The company shall ensure that each employee required to use a respirator can demonstrate knowledge of at least the following:
2. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
3. What the limitations and capabilities of the respirator are;
4. How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
5. How to inspect, put on and remove, use, and check the seals of the respirator;
6. What the procedures are for maintenance and storage of the respirator;
7. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

# SCAFFOLDS

When work cannot be performed safely from the ground, or from solid construction, scaffolds must be supplied and erected according to the applicable standards set forth in 29 CFR 1926.450-454. All employees who erect, dismantle, inspect or use scaffolds shall follow the requirements set forth in 29 CFR 1926.450-454.

Scaffolds must be erected by a qualified individual (someone who can certify that the scaffolding is safe to use).

Only use scaffolds (and components) that are capable supporting (without failure) at least four times the maximum intended load. All scaffold components must comply with OSHA requirements 29 CFR 1910.28 and 29 CFR 1926.451.

Scaffolding must be inspected by a qualified individual as per the manufacturer’s recommendations. The qualified individual must also conduct inspections prior to each use and periodically throughout each shift.

The qualified individual shall tag the scaffold with a weather resistant tag that is secured to the scaffolding structure at the base of each access location at about eye level. A red tag should be used to designate that the scaffold is not to be used. A green tag will designate that the scaffold is safe to use. The yellow tag designates that the scaffold is safe to use provided each user wears an approved safety harness and the harness is attached to an approved tie-off point.

**WELDING AND CUTTING**

The companywill ensure that work practices that involve Welding, Cutting and Brazing equipment/operations are evaluated to determine if proper safety precautions are instituted. The requirements of 29 CFR 1926.350-353 shall be followed.

The company shall address the issues of using, evaluating and identifying the specific hazards where hot work is performed, communicating information concerning these hazards, and establishing appropriate procedures, and protective measures.

1. Basic safety precautions. The below listed basic safety precautions will be followed by all employees performing welding, cutting, brazing operations. The basic precautions for fire prevention in welding or cutting work are:
2. If the object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards shall be used to confine the heat, sparks, and slag, and to protect the immovable fire hazards.
3. Wherever there are floor openings or cracks in the flooring that cannot be closed, precautions shall be taken so that no readily combustible materials on the floor below will be exposed to sparks which might drop through the floor.
4. Suitable fire extinguishers shall be maintained in a state of readiness for instant use.
5. Fire watchers shall be required whenever welding or cutting is performed
6. Fire watchers shall have fire extinguishing equipment readily available and be trained in its use. They shall watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available. A fire watch shall be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires.
7. Before cutting or welding is permitted, the area shall be inspected by the individual responsible for authorizing cutting and welding operations. He/she shall designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit.
8. No welding, cutting, or other hot work shall be performed on used drums, barrels, tanks, or other containers until they have been cleaned so thoroughly as to make absolutely certain that there are no flammable materials present or any substances such as greases, tars, acids, or other materials which when subjected to heat, might produce flammable or toxic vapors. Any pipelines or connections to the drum or vessel shall be disconnected or blanked.
9. Welding cables. employees shall place welding cables and other equipment so that it is clear of passageways, ladders, and stairways.
10. Proper PPE shall be properly used.

**ATTACHMENTS**

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**Asbestos Awareness Program**

1. Purpose
	1. To provide basic precautions and protections for employees to avoid exposure to asbestos-containing material (ACM) or presumed asbestos containing material (PACM).
2. Scope
	1. This program applies to all SOUTHERN FLUID SOULTIONS, LLC employees. When work is performed on a non-owned or operated site, the operator’s program shall take precedence, however, this document covers SOUTHERN FLUID SOULTIONS, LLC employees and contractors and shall be used on owned premises, or when an operator’s program doesn’t exist or is less stringent.
3. Definitions
	1. *Asbestos* – an incombustible, chemical-resistant, fibrous mineral used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters.
	2. *Asbestos containing material (ACM)* – any material containing more than 1% asbestos.
	3. *Friable Asbestos* - used for fireproofing, insulation, or sound proofing are friable, and they readily release airborne fibers if disturbed.
	4. *Non- friable Asbestos* - vinyl-asbestos floor tile or roofing felts are considered non-friable and generally do not emit airborne fibers unless subjected to sanding or sawing operations.
	5. *Class I -Asbestos work* - Activities involving the removal of thermal system insulation (TSI) and surfacing asbestos containing material.
	6. *Class II - Asbestos work* - Activities involving the removal of ACM that is not TSI or surfacing material. This includes removal of asbestos-containing gaskets, packing, wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
	7. *Class III - Asbestos work* - Includes repair and maintenance operations where ACM, including TSI and surfacing material, is likely to be disturbed to the extent that renders ACM friable or generates visible debris. Class III asbestos work is limited to cutting away small amounts of ACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of disturbed ACM exceed that which can be contained in one glove bag or waste bag measuring 60 inches in length and width.
	8. *Class IV - Asbestos work* - Includes custodial activities during which employees are involved in clean-up activities of waste and debris containing asbestos containing material.
	9. *Competent Person* - A designated SOUTHERN FLUID SOULTIONS, LLC employee who has the authority to take prompt corrective actions and has received training and certification equivalent to the EPA’s Model Accreditation Plan and equivalent training as conducted by the National Asbestos Center, at the manager or supervisor level, and thereby is knowledgeable in:
		1. Identifying asbestos hazards in the workplace.
		2. Selecting appropriate control strategies for asbestos exposure.
		3. The contents of the OSHA asbestos regulations.
		4. Work practices for safe asbestos removal/clean-up.
	10. *Presumed asbestos containing material (PACM)* – thermal insulation and surfacing material found in buildings constructed no later than 1980.
	11. *Surfacing material* – material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members or other materials on surfaces for acoustical, fireproofing and other purposes).
	12. *Thermal system insulation* – ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.
4. Key Responsibilities

### Managers/Supervisors

* + 1. Ensure owners or operators are notified of PACM.
		2. Prohibit SOUTHERN FLUID SOULTIONS, LLC employees from working until material in question is confirmed as non-asbestos or abated.
		3. Ensure proper employee training is completed.
		4. Ensure that all requirements of this program are understood and followed by those working under his/her direction.
		5. Perform duties of the Competent Person for asbestos work.

### All Employees

* + 1. All employees are required to act in strict compliance with the requirements of this program and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.
1. Procedure

### Health Effects

* + 1. Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon. Fibrotic Scaring of the lung tissue

### General

* 1. SOUTHERN FLUID SOULTIONS, LLC employees shall not work or otherwise handle asbestos containing material designated as Class I, III, IV work. Class II work is limited to removal of asbestos containing gaskets and packing materials.
	2. All asbestos abatement work, other than the limited scope of Class II work, shall be awarded to qualified asbestos abatement contractors.
	3. Client owned and/or operated equipment and facilities, where surfacing material or insulation is present, must be confirmed non-asbestos before SOUTHERN FLUID SOULTIONS, LLC employees disturb that material.
	4. Where surfacing material or insulation cannot be confirmed non-asbestos, the client or owner must test, and where necessary abate, the material before SOUTHERN FLUID SOULTIONS, LLC employees are permitted to work.
	5. Signs shall be posted, and employees will abide warning signs and labels and will not disturb the Asbestos Containing Material.

### Approved ACM or PACM Handling

* + 1. The following procedures must be followed when removing gasket or packing materials (Class II asbestos work) containing or presumed to contain asbestos:
			1. All employees must fulfill appropriate training, respiratory protection and medical surveillance requirements to handle ACM or PACM.
			2. Class II asbestos work, which employees are permitted to perform, is limited to removal of asbestos gasket and packing materials, unless special training for other Class II work has been provided.
			3. Removal of gaskets and/or packing shall only be performed by employees that have been properly trained. When gaskets are visibly deteriorated, they are to be removed via wet methods and/or glove bagging.
1. Training
	1. All employees will receive documented training prior to or at their initial assignment and at least annually thereafter who are exposed to airborne concentrations at or above the PEL. Training shall include:
		1. The ability to understand health effects associated with exposure to asbestos.
		2. Information on the relationship between smoking & exposure to asbestos producing lung cancer.
		3. The appropriate personal protective equipment (PPE) and its limitations (such as improper respirator fit). as described in the SOUTHERN FLUID SOULTIONS, LLC PPE Program and its associated training.
		4. The Asbestos Control Plan and any associated work practices.
	2. A certificate of training shall be provided & maintained.
	3. The Southern Fluid Solutions, LLC written training program shall be made readily available to all affected employees.
2. Contractors
	1. Asbestos contractors shall be pre-screened and approved by the group responsible for contracting the work.
	2. Contractors performing work shall comply with the requirements of this standard and all applicable OSHA and environmental regulatory requirements.
	3. The following documents must be obtained at least 10 working days (or as soon as possible) prior to beginning the asbestos abatement work:
		1. Copy of the contractor's State Contractor's License (renewed annually)
		2. MSDS for material used for the abatement process
		3. Copy of all asbestos Notifications (if required)
		4. Copies of asbestos sample analysis (if performed by contractor)
	4. The following are required upon completion of work by the contractor (If an asbestos project completion report is provided by the contractor, these items are often a part of it.):
		1. Work Summary Report, including daily work summaries.
		2. Results of all independent third-party air sampling, including asbestos material sampling, personnel air monitoring, clearance sampling results.
		3. Waste Shipment Records.
	5. Every contracted asbestos job must have assigned a competent person to monitor asbestos work and to assure compliance with all applicable regulations and requirements.
	6. An independent third party shall be contracted to perform all required air sampling for contracted asbestos removal.
	7. Contractors who are not involved in ACM work, but who may be inadvertently exposed to ACM on SOUTHERN FLUID SOULTIONS, LLC property are to be informed of this potential and advised on proper methods to avoid exposure.
3. Asbestos Exposure Control
	1. Asbestos exposure controls are designed to eliminate or minimize an employee's exposure to airborne asbestos fibers using work practices and engineering controls. If the TWA and/or excursion limit is exceeded, a written Asbestos Exposure Control Program to reduce employee exposure shall be implemented containing means of engineering & work practice controls & the use of respiratory protection.
	2. Prior to initiating any asbestos work the Competent Person must perform an asbestos exposure assessment. Subsequent to the exposure assessment, the engineering controls and work practices to be employed shall be identified.
	3. Prior to commencement of work, the affected employees shall be briefed on the engineering controls and work practices designed to reduce/maintain the exposure below TWA for the asbestos work. This briefing shall be documented and maintained with the job documentation. Where engineering controls are not feasible work practices such as exhaust systems for hand tools, wet methods, clean-up procedures & PPE shall be used.
	4. Wet methods will be employed for all asbestos work to minimize potential airborne exposure wherever possible. ACM shall be wetted from the initiation of the maintenance or renovation operation and wetting agents shall be used continually throughout the work period to ensure that any dry ACM exposed in the course of the work is wet and remains wet until final disposal.
	5. Wetting agents, usually a surfactant (dish soap), are generally prepared by mixing 1 to 3 ounces of wetting agent to 5 gallons of water.
4. Regulated Areas
	1. Access to regulated asbestos areas shall be controlled with established barriers, tape, OSHA approved warning signs and other physical controls when airborne concentrations of asbestos are present.
	2. The limit shall comply with that of the TWA and/or excursion limit. Access is limited to regulated areas.
	3. All employees who perform work in regulated areas shall be covered by this procedure. Employees who perform housekeeping activities during and after construction activities are also covered by this procedure.
	4. If employees working immediately adjacent to a Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such job, SOUTHERN FLUID SOULTIONS, LLC shall either remove the employees from the area until the enclosure breach is repaired; or perform an initial exposure assessment pursuant to 1926.1101(f).
5. Personnel Air Monitoring
	1. Monitoring shall occur to ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) in 30 minutes.
	2. An independent/third party air sampling person shall perform all required air sampling during contractor asbestos work and provide the results to the SOUTHERN FLUID SOULTIONS, LLC Competent Person. Note: Air sampling is not required for glove bag activities that are covered under a Negative Exposure Initial Assessment.
	3. The air quality is to be determined from breathing zone air samples. The samples shall be representative of the 8-hour TWA and 30-minute short-term exposure. Measurements are required for documentation.
	4. Affected employees and/or their designated representatives are to be provided the opportunity to observe asbestos exposure monitoring.
	5. Air sampling analysis shall be performed by an American Industrial Hygiene Association (AIHA) accredited laboratory.
	6. Where the asbestos exposure assessment (in the absence of quantitative personnel monitoring results) does not present objective, convincing data that indicates the ACM to be handled will not (under the worst circumstances) release airborne fibers, personnel air monitoring shall be performed to quantify exposure.
	7. If personnel monitoring is considered necessary during the asbestos exposure assessment, to verify exposures would be maintained below the PEL/excursion limit, respiratory protection shall be utilized until such time that enough sampling results verify that respiratory protection is not required.
	8. The SOUTHERN FLUID SOULTIONS, LLC Safety Manager is to be consulted for advice and assistance in performing personnel air sampling activities.
	9. The number of samples necessary to be considered "representative" is dependent upon many factors and must be determined in consultation with the SOUTHERN FLUID SOULTIONS, LLC Safety Manager, certified Industrial Hygienist consultant, or a third-party air sampling professional.
	10. Affected employees shall be notified of monitoring results, which represent the employee's exposure, as soon as possible following receipt of the monitoring results.
	11. Employees shall be notified in writing either individually or by posting at a centrally located place that is accessible to affected employees.
	12. Once representative sampling indicates that exposure levels for that activity are consistently below the OSHA established permissible limit and/or excursion limit, the requirement for respiratory protection may be waived.
	13. It is imperative that accurate personnel air sampling records are maintained in order to justify any relaxation of respiratory protection requirements.
	14. Results of air sampling data must be maintained in the asbestos job documentation.
6. Medical Surveillance Program
	1. All SOUTHERN FLUID SOULTIONS, LLC employees who for a combined total of 30 or more days per year are engaged in Class II asbestos work or who are exposed at or above the permissible exposure limit for a combined 30 days or more per year shall be included in the SOUTHERN FLUID SOULTIONS, LLC medical surveillance program.
	2. Note: For purposes of this requirement, any day in which an employee is engaged in Class II or Class III work or a combination thereof for one hour or less and, while doing so, adheres fully to the work practices specified in this standard, shall not be counted. The medical surveillance program shall be made available according to the following schedules:
		1. Prior to assignment of an employee to an asbestos area where negative pressure respirators are worn.
		2. Where exposure to asbestos may be at or above the permissible exposure level for 30 or more days per year, or where employees are engaged in Class II asbestos work for 30 or more days per year, at least annually thereafter, if exposures exist.
		3. Asbestos medical examination must be given within ten (10) working days following the thirtieth day of exposure.
		4. If an examining physician determines that any of the examinations should be provided more frequently than specified, they shall be provided at the periodicity specified by the physician.
	3. No asbestos medical examination is required when complete records of such examination, performed less than twelve months prior to commencement of asbestos work are available.
	4. As part of the medical surveillance, the attending physician shall provide a written opinion of the results of the medical examination to AJC and the Contract Medical Surveillance Provider, who in turn will provide a copy to the affected employee within 30 days.
	5. In accordance with OSHA regulations, once employees are no longer exposed to asbestos their inclusion in the medical surveillance program is no longer required.
7. Respiratory Protection and Personal Protective Equipment
	1. The use of approved respirators shall be at no cost to the employee and will be used in conjunction with work practice controls, work operations, to reduce exposure and in emergencies.
	2. The respirator shall be provided at no cost to the employees and shall be chosen in accordance with the SOUTHERN FLUID SOULTIONS, LLC Respiratory Protection Program and shall be approved by NIOSH. Powered, air-purifying respirators shall be available when the employees choose to use this type or the hazard assessment process requires this type, or when the respirator will provide more adequate protection. Prerequisites for use of respiratory equipment, regarding asbestos, include:
		1. Successfully passing a respiratory physical.
		2. Successfully completing annual respiratory protection training.
		3. Successfully passing a respirator fit test.
	3. Additional PPE when above the TWA shall include:
		1. Protective coveralls
		2. Gloves
		3. Head coverings / Foot coverings
		4. Vented goggles / Face Shields
		5. And others based on the hazard
8. Waste Disposal
	1. Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers.
	2. Bags or containers shall be imprinted and clearly labeled with the following OSHA asbestos hazard warning and address:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

SOUTHERN FLUID SOULTIONS, LLC NAME

Site Address

Contractor’s Name

Contractor’s Address

* 1. Bags/containers shall be clearly labeled, for DOT, as: RQ, Asbestos, 9, NA2212, PG III
	2. Containers shall have a DOT number 9 diamond label on the container if the shipping container is greater than 66 pounds. For assistance with DOT labeling requirements, contact the SOUTHERN FLUID SOULTIONS, LLC Safety Manager.
	3. An Asbestos Waste Shipment Record shall be utilized. Check with the landfill prior to shipping to see if they require their own shipping record or use a Waste Manifest – contact the Safety Director for copies.
	4. Asbestos shall be transported to an approved landfill that accepts asbestos. A licensed waste hauler may be used to transport the packaged ACM. Transport vehicles shall either be enclosed or covered. Do not use vehicles with compactors to transport ACM.
	5. A shipping form shall Southern Fluid Solutions, LLC the ACM, during transport, to the landfill.
1. Record Keeping
	1. All records relating to any asbestos activity shall be maintained by SOUTHERN FLUID SOULTIONS, LLC permanently.
	2. The following records shall be maintained:
		1. Exposure Assessments that are being relied upon to support a location's position that asbestos work (specific or generic) will not result in exposures above the PEL or excursion limit.
		2. Employee asbestos exposure records (personnel air monitoring).
		3. Medical Surveillance records.
		4. Training records.
		5. Shipping papers and disposal records.
		6. Copies of notification letters sent to Governmental agencies.
		7. Pre-project asbestos sampling results.
		8. Post-project clearance sampling results.
		9. Daily Work Summaries.
		10. Project Completion Closure Report, if provided.

**Bloodborne Pathogens Exposure Control Plan**

**Regulation:** 29 CFR 1910.1030

**Scope**

All employees not working in a healthcare facility with potential exposure to bloodborne pathogens, including all employees who are trained in first aid.

**Policy Statement**

It is the policy of Southern Fluid Solutions, LLC to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with federal and state regulations. The Bloodborne Pathogens Exposure Control Plan (ECP) is a key document to assist our organization in implementing and ensuring compliance with the standard, thereby protecting our employees.

**Plan Administration**

**ECP Administrator.** Management is responsible for implementation of the ECP, and will maintain, review, and update the ECP at least annually, and whenever necessary, to include new or modified tasks and procedures and to reflect new or revised employee positions with occupational exposure. Management will also provide and maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by regulation and company policies and will ensure that adequate supplies and PPE are available in the appropriate sizes.

The Employee's immediate Supervisor will be responsible for ensuring that all medical actions required by the regulations are performed, and that appropriate employee health and OSHA records are maintained.

Consultant/Trainer (currently Field Safety Resource, Inc. (FSR)) will be responsible for training and documentation of training.

The Employees Immediate Supervisor will act as the initial contact for reporting exposure incidents and ensure that the appropriate response is carried out.

Those employees determined to have occupational exposure to blood or other potentially infectious materials (OPIMs) will comply with the procedures and work practices outlined in this ECP.

**Plan Review and Update**

This ECP will be reviewed and updated annually, and whenever new hazards are introduced in the workplace or conditions change that would result in a change in occupational exposure by employees. For example, the ECP will be amended when it is determined that additional job classifications or tasks are likely to or may have occupational exposure to bloodborne pathogens.

**Definitions**

*Bloodborne pathogens*-microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV) which causes acquired immune deficiency syndrome (AIDS).

*Exposure incident*-a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral (i.e., needlestick) contact with blood or other potentially infectious material that results from the performance of an employee’s duties.

*Other potentially infectious material (OPIM)*-bodily fluids visibly contaminated with blood, including saliva in dental procedures, semen, vaginal secretions, amniotic fluid, and other such material where it is difficult to differentiate between bodily fluids.

*Personal protective equipment (PPE)*-protective covering for the head, eyes, hands, feet, and body, such as nitrile or other liquid-resistant gloves, a face mask, or an apron.

*Sharp*-any sharp objects including needles, wood or metal splinters, nails, and broken glass, contaminated with blood or OPIM.

**ECP Implementation**

***Access to the ECP***

Employees covered by bloodborne pathogens rules and policies will receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training.

All employees can review this Plan at any time during their work shifts by contacting their Supervisor. A copy of the ECP will be provided free of charge to any employee who requests it.

***Universal Precautions***

All employees will use universal precautions in order to prevent contact with blood or OPIM during the administration of first aid, the removal of materials and waste from the first-aid station, clean-up of any blood or OPIM, and housekeeping of any areas recently (i.e., same day) contaminated with blood or OPIM. All blood and OPIM will be considered infectious regardless of the perceived status of the source.

***Engineering Controls and Work Practices***

Engineering controls and work practices will be implemented to prevent or minimize exposure to bloodborne pathogens. Immediate Supervision is responsible for ensuring that the engineering controls and work practices are implemented and updated as necessary.

Engineering Controls/Work Practices/Housekeeping:

 Wash hands immediately after contact with blood or OPIM.

 Due to employee being in company vehicles sometimes handwashing facilities are not immediately available after exposure. Antiseptic alternatives such as towelettes are made available to employees if handwashing is not available. Exposed employees will wash their hands with running water and soap as soon as possible after using the antiseptic alternatives.

 When skin or mucous membranes are exposed to blood or OPIM, those areas of the body will be washed or flushed with running water as soon as possible after contact.

 After removal of PPE used during exposure to blood or OPIM, the employee(s) will wash hands or other exposed skin areas with running water and soap as soon as possible.

 Wash hands immediately or as soon as feasible after removing gloves or other PPE.

 Remove PPE after it becomes contaminated and before leaving the work area.

 Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.

 Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.

 Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eyes, nose, or mouth.

 Remove immediately or as soon as possible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

***PPE***

All PPE is provided to employees at no cost to them. PPE will be chosen based on the anticipated exposure to blood or OPIM. The PPE will be considered appropriate only if it does not permit blood or OPIM to pass through or reach the employee’s clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which it will be used.

**Provision of PPE to Employees**

|  |  |  |  |
| --- | --- | --- | --- |
| **How Provided** |  | **Procedures Requiring PPE** | **Type of PPE Required** |
| Available at office or issued |  | Any first aid | Medical Gloves, safety glasses - |

All PPE will be cleaned, laundered, and disposed of by the employer at no cost to employees. All repairs and replacements will be made by the employer at no cost to employees.

All PPE will be removed prior to leaving the work area. If visibly contaminated, PPE will be placed in an appropriately designated area or container for storage, washing, decontamination or disposal. The designated areas are:

 *all contaminated material will be returned to the office. Supervision will assist in disposal.*

*Blood- or OPIM-contaminated PPE*

If PPE or personal clothing is splashed or soaked with blood or OPIM, the person wearing the PPE or clothing will remove the contaminated clothing as soon as possible. This clothing will be laundered at the employer’s expense. The clothing would be identified as contaminated and any employee exposed to it would be notified and protected from exposure.

*Gloves*

Gloves will be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, nonintact skin, and mucous membranes.

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

*PPE Training*

All employees covered under the requirements of this Plan will be trained to properly use, put on, take off, decontaminate, maintain, and store PPE. Training in the use of the appropriate PPE is provided by the Consultant/Trainer.

***Housekeeping***

Work areas are employees company vehicles. Employees should keep their vehicles in condition with good housekeeping. If the vehicle gets contaminated, it will be cleaned thoroughly before any future contact with employees.

Decontamination of work areas will be accomplished by using the following materials:

 Material to Be Used (e.g., bleach solutions or EPA-registered germicides)

 Other

All contaminated work surfaces will be decontaminated after completion of procedures and immediately or as soon as possible after any spill of blood or OPIM, as well as the end of the work shift if the surface may have become contaminated since the last cleaning.

***Hepatitis B Vaccination***

All employees who have been identified as having exposure or potential exposure to blood or OPIM will be offered the hepatitis B vaccine, at no cost to the employee. The hepatitis B vaccination series of shots is available at no cost after initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section of this ECP.

Consultant/Trainer will provide training to employees on hepatitis B vaccinations-addressing safety, benefits, efficacy, methods of administration, and availability.

When an employee elects to be vaccinated, a licensed healthcare professional will conduct a medical evaluation.

Vaccination is encouraged unless:

 Documentation exists that the employee has previously received the series;

 Antibody testing reveals that the employee is immune; or

 Medical evaluation shows that vaccination is contraindicated.

Following the medical evaluation, a copy of the healthcare professional’s written opinion will be obtained and provided to the employee within 15 days of the completion of the evaluation. The evaluation will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered.

Vaccination will be provided by Licensed Healthcare Professional.

**Declination of the vaccine.** If an employee declines the vaccination, the employee must sign a declination form.

***Vaccination for First-Aid Providers***

The full hepatitis B vaccination series will be made available to all unvaccinated first-aid providers who assisted in an incident involving the presence of blood or OPIM no later than 24 hours after the incident, regardless of whether exposure has occurred.

***Exposure Incident Report***

Any incident that results in occupational exposure to blood or OPIM will be reported immediately (no later than the end of the work shift) to the immediate supervisor. The report will include the names of all first-aid providers who rendered assistance, and the time and date of the incident. The report will include a determination of whether an exposure has occurred. If so, a post-exposure evaluation will be performed.

A report that lists all first-aid incidents will be readily available to employees who request it.

***Post-Exposure Evaluation and Follow-up***

Should an exposure incident occur, a confidential medical evaluation and follow-up will be conducted by Licensed Healthcare Professional or Service. Following initial first aid (e.g., clean the wound, flush eyes or other mucous membrane), the following activities will be performed by Southern Fluid Solutions, LLC:

 Document the routes of exposure and how the exposure occurred.

 Identify and document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).

 Obtain consent and plan to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual’s test results were conveyed to the employee’s healthcare provider.

 If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.

 Assure that the exposed employee is provided with the source individual’s test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).

 After obtaining consent, collect exposed employee’s blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status.

If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, the baseline blood sample will be preserved for at least 90 days. If the exposed employee elects to have the baseline sample tested during this waiting period, testing will be performed as soon as possible.

***Administration of Post-Exposure Evaluation and Follow-up***

Management will ensure that healthcare professional(s) responsible for employee’s hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of the bloodborne pathogens regulation and this ECP. Management will ensure that the healthcare professional evaluating an employee after an exposure incident receives:

 A description of the employee’s job duties relevant to the exposure incident

 A description of route(s) of exposure

 Circumstances of exposure

 If possible, results of the source individual’s blood test

 Relevant employee medical records, including vaccination status

Management will provide the employee with a copy of the evaluating healthcare professional’s written opinion within 15 days after completion of the evaluation.

***Procedures for Evaluating the Circumstances Surrounding an Exposure Incident***

Management will review the circumstances of all exposure incidents to determine the:

 Engineering controls in use at the time

 Work practices followed

 Description of the device being used (including type and brand)

 Protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)

 Location of the incident

 Procedure or task being performed when the incident occurred

 Employee’s training

**Employee Training**

All employees who have occupational exposure to bloodborne pathogens and OPIM will receive initial and annual training conducted the - Consultant/Trainer.

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

 A copy and explanation of the OSHA bloodborne pathogen standard

 An explanation of our ECP and how to obtain a copy

 An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident

 An explanation of the use and limitations of engineering controls, work practices, and PPE

 An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE

 An explanation of the basis for PPE selection

 Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge

 Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM

 An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available

 Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident

 An explanation of the signs and labels and/or color coding required by the standard and used at this facility

 An opportunity for interactive questions and answers with the person conducting the training session

Training materials for this facility are available at the Center, Texas location.

**Recordkeeping**

***Training Records***

Training records are completed for each employee upon completion of training. These documents will be kept for at least 3 years at the nearest company facility where work is performed.

Training records will include the:

 Dates of the training sessions

 Contents or a summary of the training sessions

 Names and qualifications of persons conducting the training

 Names and job titles of all persons attending the training sessions

Employee training records will be provided upon request to the employee or the employee’s authorized representative within 15 working days. Such requests should be addressed to Southern Fluid Solutions, LLC.

***Medical Records***

Medical records are maintained for each employee with occupational exposure in accordance with the employee exposure and medical records regulation. Management is responsible for maintenance of the required medical records. These confidential records are kept in Main Company Office for at least the duration of employment plus 30 years.

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

Southern Fluid Solutions, LLC

***OSHA Recordkeeping***

An exposure incident will be evaluated to determine if the case meets OSHA’s recordkeeping requirements (29 CFR 1904). This determination and the recording activities are done by local Southern Fluid Solutions, LLC Management.

**Bloodborne Pathogens Exposure Incident Report**

**EMPLOYEE INSTRUCTIONS**

You are completing this form because you have experienced an actual or a potential exposure to blood or other potentially infectious material. An evaluation of this exposure is required by regulation.

Please complete all the information below. Take this form with you when you go to a physician or other healthcare provider for the evaluation of the exposure. The information contained on this form is crucial to a proper evaluation of the exposure. Please take the time and care in completing the form to ensure that the information is clear and accurate. If you need information on where to have this medical evaluation performed, please contact your supervisor.

The medical evaluation for a suspected exposure to blood or other potentially infectious material should be done *as soon as possible* after the exposure. The effectiveness of certain vaccines or other medication which might prevent any illness resulting from these exposures is greatest if given shortly after the exposure.

Complete the appropriate accident report for your supervisor.

**Employee's Statement: (Please Print)**

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

Job Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Work Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Description of Exposure Incident

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

Time: \_\_\_\_\_\_\_\_\_\_\_\_ am / pm

City/Town: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

State: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Describe Incident (Please include the type of infectious material to which you were exposed and the circumstances of the exposure):

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

**Supervisor's Statement: (Please Print)**

Employee's Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Supervisor Identification.

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

Work Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Description of Incident

(Please describe the employee’s duties as they relate to the exposure incident):

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

Hepatitis B Status

The employee named above has / has not (circle one) received a three-dose series of hepatitis B Vaccine. If yes, the series was completed on\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (date).

Investigation of Source

Please describe what information is known about the source of the exposure (the person’s name, address, telephone number, or other contact point), the result(s) of the blood testing of the source person (if known), or why blood testing of the source person is not feasible. Also, if the source person is known to have or test positive for hepatitis B or human immunodeficiency virus (HIV), please indicate this fact. The source person must be tested for these agents unless such testing is not legally possible.

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

**Confined Space Entry Plan (Permit Required)**

**Authority and Scope**

**Regulation:** 29 CFR 1910.146

**Scope:** This plan applies to all personnel, including contractors, who enter or work in confined spaces, or supervise such activities.

**Policy Statement**

It is the policy of Southern Fluid Solutions, LLC to establish a uniform procedure for safe entry into confined spaces and ensure that proper protection is taken for all employees, contractors, subcontractors, and employees of contractors working in or near confined spaces. The company will consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program and provide them with all information required for program development.

**Plan Administrator.** The plan administrator is responsible for implementing this plan and has authority to make decisions to ensure the success of this program. The plan administrator will:

* Evaluate the workplace to determine which spaces, if any, are permit-required confined spaces.
* Develop a written confined space entry plan to protect the safety and health of all affected employees.
* Perform the initial and periodic evaluation of the hazards associated with each confined space.
* Inform employees via signs and other means where the confined spaces are located and the hazards they pose.
* Determine what effective measures will be taken to prevent unauthorized employees from entering permit spaces.
* Authorize entry for non-permit confined spaces and jointly approve entry with the supervisor (or designee) for permit-required confined spaces.
* Determine which employees will enter permit-required confined spaces and authorize their entry.
* Monitor the effectiveness of the plan.
* Provide all testing, data management, and personal protective equipment.
* Provide employee training and technical assistance as needed.
* Maintain copies of all confined space entry work permits for at least 1 year.
* Maintain the inventory of permit-required confined spaces.
* Review confined space programs submitted by subcontractors.

**Entry Supervisor.** The entry supervisor is qualified and authorized to approve permit-required confined spaces. The entry supervisor will be identified on the permit and sign it before any entry begins and is authorized to terminate entry when a prohibited condition arises in the confined space.

**Rescue Team Members.** The rescue team members will be trained to respond to rescue calls by any person recognizing a need for rescue from a confined space. Rescue team members that are employees of Southern Fluid Solutions, LLC will have current certification in first aid and CPR, have received the same training as authorized space entrants, and have completed training in a simulation of the confined space before the issuance of the confined space permit.

***Plan Review and Update***

The confined space plan will be reviewed and updated when:

* Changing conditions cause the current plan to lose its maximum protection.
* A review of confined space permits (using cancelled permits retained within 1 year after each entry) indicates revision is necessary.

Copies of the plan are available for review at each work site.

**Definitions**

*Attendant*--an individual stationed outside one or more permit-required confined spaces who monitors the authorized entrants and who performs all attendant’s duties assigned in the employer’s permit space program.

*Authorized entrant*--an employee who is authorized by the employer to enter a permit-required confined space.

*Confined space*--a space that:

* Is large enough and configured so that an employee can bodily enter and perform assigned work
* Has limited or restricted means for entry or exit (For example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.)
* Is not designed for continuous employee occupancy

*Entry*--the action by which 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.

*Entry permit*--the written or printed document that is provided by the employer that allows and controls entry into a permit space and that contains the information specified in this section.

*Entry supervisor*--the 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 entry operations, and for terminating entry as required by this section.

*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:

* Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL)
* Airborne combustible dust at a concentration that meets or exceeds its LFL

*Hot work permit*--the employer’s written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

*Immediately dangerous to life or health (IDLH)*--any condition that poses an immediate or delayed threat to life, that would cause irreversible adverse health effects, or that would interfere with an individual’s ability to escape unaided from a permit space.

*Non-permit confined space*--a confined space neither contains nor, with respect to atmospheric hazards, has the potential to contain any hazard capable of causing death or serious physical harm.

*Permit-required confined space (permit space)* --a confined space that has one or more of the following characteristics:

* Contains or has a potential to contain a hazardous atmosphere
* Contains a material that has the potential for engulfing an entrant
* Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section
* Contains any other recognized serious safety or health hazard

**Evaluation of Confined Spaces**

Each confined space at the facility will be evaluated to determine its classification as a permit-required confined space. No one may enter any confined space until it has been evaluated.

**Confined Space Entry Requirements**

***Non-Permit Confined Space Entry***

*General Requirements*

Employees entering a non-permit confined space need not comply with the permit requirements for confined spaces or duties of authorized personnel provided that:

* It has been demonstrated and documented that the only hazard is actual or potentially hazardous atmosphere.
* It has been determined that the forced air ventilation alone is enough to maintain safe entry.
* The monitoring and inspection data required by the plan are being used.
* Test data collection that requires an initial entry must be performed in compliance with the permit-required confined space and entry supervisor requirements.
* The determinations and data required are documented and available to employees who enter the space.

*Entry*

Entry without a permit must be performed in accordance with the general requirements for non-permit space entry and the following specific requirements:

* Any condition making it unsafe to remove an entrance cover will be eliminated before the cover is removed.
* Before covers are removed, the entrance will be promptly guarded by a barrier that will prevent an accidental fall through the opening and will protect employees in the space from foreign objects entering the space.
* If it is necessary to enter a confined space to collect initial monitoring data or inspect for hazards, the full provisions for entering a permit-required confined space must be implemented.
* Before an employee enters the space, the internal atmosphere will be tested for the following conditions, in the order given, with a calibrated direct-reading instrument:
* Oxygen content
* Flammable gases and vapors ­ Potential toxic air contaminants
* Other
* There must be no hazardous atmosphere within the space whenever any employee is inside the space.
* Continuous forced air ventilation will be used as follows:
* An employee may not enter the space until forced air ventilation has eliminated a hazardous atmosphere.
* Forced air ventilation will be directed to ventilate the immediate areas where an employee is or will be and will continue until all employees have left the space.
* The air supply for the ventilation will be clean and may not increase the hazard.
* The atmosphere within the space will be continuously tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.
* If a hazardous atmosphere is detected during entry:
* Each of the employees will leave the space immediately.
* The space will be evaluated to determine how the hazardous atmosphere developed.
* Measures will be implemented to protect employees from the hazardous atmosphere before a subsequent entry.
* Before each entry, the employer will verify that the space is safe for entry and that the measures above have been taken, with a written certification giving the date, location of the space, and signature of the person providing the certification.

*Pre-Entry Certification*

Project Manager or designee will verify that pre-entry measures have been followed through a written certification that contains the date, the location of the space, and the signature of the person providing the certification. The certification will be made before entry and will be made available to each employee entering the space or to that employee’s authorized representative.

*Reclassification of a Permit-Required Space*

A space classified as a permit-required space may be reclassified as a non-permit space if:

* The permit space poses no actual or potential atmospheric hazards and if all hazards are eliminated without entering the space.
* Testing and inspection demonstrate that the hazards have been eliminated.
* Project Manager or designee has documented that the basis for determining that all hazards have been eliminated through a certification that contains the date, location of the space, and the signature of the person making the determination.

If it is necessary to enter the permit space to eliminate hazards, such entry will be performed under the permit-required confined space requirements of this plan.

**New hazards.** When hazards arise within a permit-required space that has been declassified to a non-permit space, anyone in the space must exit.

***Permit-Required Confined Space***

The following measures will be implemented by Project Manager or designee to ensure the safety of entrants and to prevent unauthorized entry into a confined space:

* Identify and evaluate the hazards of the permit spaces before employees enter them by performing atmospheric testing.
* Post danger signs outside of confined spaces such as “DANGER—PERMIT-REQUIRED CONFINED SPACE—AUTHORIZED ENTRANTS ONLY” or an equally effective means will be used.
* Designate the persons who are to have active roles in entry operations, their duties, and provide each with the training required by this program.
* Summon rescue and emergency services for rescuing entrants and for preventing unauthorized personnel from attempting rescue.
* Coordinate entry operations when employees of more than one employer are entering a permit space so that they do not endanger each other.
* Prepare, issue, use, and cancel entry permits.
* Coordinate entry after operations are completed.
* There will be at least one attendant outside the permit space for the duration of entry operations.
* When a single attendant monitors multiple spaces, enable the attendant to respond to an emergency in one or more spaces without distraction from the attendant’s responsibilities.

*Equipment*

Entrants, attendants, and any other support personnel will be provided with all equipment necessary to work in a confined space safely, at no cost to them. Following is a list of the type of equipment that will be provided as needed:

* Testing and monitoring equipment
* Ventilating equipment needed to obtain acceptable entry conditions
* Communications equipment
* Personal protective equipment if feasible engineering and work practice controls do not adequately protect employees
* Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency
* Barriers and shields as required
* Equipment, such as ladders, needed for safe entry and exit by authorized entrants
* Rescue and emergency equipment, except to the extent that the equipment is provided by rescue services
* Other

**Permit System**

Before entry is authorized, Project Manager or designee will prepare an entry permit that describes the means, procedures, and practices necessary for safe entry, including:

* Specifying acceptable entry conditions, including recording of gas detector readings;
* Isolating the permit space;
* Purging, flushing, or ventilating the permit space to eliminate or control atmospheric hazards;
* Providing barriers as necessary to protect entrants from external hazards; *and*
* Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.

Before entry, the entry supervisor will sign the permit to authorize entry. The completed permit will be made available to all authorized entrants to confirm that pre-entry preparations have been completed. The duration of the permit will not exceed the time required to complete the assigned task or job.

The entry supervisor will terminate entry and cancel the permit when:

* Operations have been completed; *or*
* A condition that is not allowed under the entry permit arises in or near the permit space.

The entry supervisor will retain each entry permit for at least 1 year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation will be noted on the permit so that appropriate revisions to the plan can be made.

*Entry Permit*

No one may enter a permit-required confined space except authorized entrants working under a valid permit. The entry permit that authorizes entry into a permit space will contain the following items:

* A description of the space to be entered
* The purpose of the entry
* The date and authorized duration of the entry
* The authorized entrants
* The personnel serving as attendants
* The individual serving as the entry supervisor
* The hazards of the permit space to be entered
* The measures used to isolate the space and eliminate or control hazards before entry
* The acceptable entry conditions
* The results of initial and periodic tests performed, including: *[Include the Project Manager or designees or initials of the testers and indicate when the tests were performed.]*
* Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that if isolation of the space is infeasible because the space is larger or is part of a continuous system (such as sewer), pre-entry testing will be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions will be continuously monitored in the areas where authorized entrants are working.
* Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during entry operations.
* When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, then for toxic gases and vapors.
* The rescue and emergency services that can be called and how to call them
* The communication procedures used by entrants and attendants to maintain contact with each other
* Equipment, such as testing equipment, to be provided for compliance with the confined space regulation
* Any other information necessary to ensure employee safety
* Any additional permits, such as hot work permits, issued for work in the space

**Permit duration.** The duration of the permit will not exceed the time required to complete the assigned task or job identified on the permit.

*Canceled Permit*

The entry supervisor will cancel entry permits when work in the confined space is completed or when a condition exists in the space that is not allowed by the permit. New conditions will be noted on the canceled permit and used in revising the permit space program.

*Contractors*

Project Manager or designee will ensure that each contractor or subcontractor hired to enter a confined space is:

* Informed that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program
* Trained to enter the space
* Aware of all hazards associated with the space
* Given a copy of the permit entry requirements
* Provided with all the precautions and procedures to be followed when in or near a confined space
* Coordinating entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces
* Debriefed at the conclusion of the entry operations concerning the permit space program and about any hazards confronted or created in permit spaces during entry operations

Each contractor that performs permit-required confined space entry will:

* Obtain any available information regarding permit space hazards and entry operations from Project Manager or designee.
* Coordinate entry operations with Project Manager or designee when company employees and contractor personnel jointly work in or near permit spaces.
* Inform Project Manager or designee of the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces method, either through a debriefing or during the entry operation.

**Employee Training**

Southern Fluid Solutions, LLC will ensure training is provided so that employees acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned while working in or near confined spaces.

***General Training***

Training will be provided to all employees whose work is regulated by the confined space plan:

* Before the employee is first assigned confined space duties
* Before there is a change in assigned duties
* Before there is a change in permit space operation that presents a hazard about which an employee has not previously been trained
* Whenever the employer has reason to believe there are deviations from the confined space procedures or inadequacies in the employee’s knowledge of the procedures

The training will establish employees’ proficiency in their duties and introduce new or revised procedures, as necessary, to comply with the confined space rules.

**Specific training program elements.** A training program has been established for:

* Entrants, Attendants
* Entry supervisors
* Rescue teams

***Contractor Training***

Contractors, subcontractors, and employees of contractors must receive the same level of training appropriate to their duties as required for employees of Southern Fluid Solutions, LLC. No contractors will be allowed to enter or work near confined spaces without the required training.

***Rescue Team Training***

In addition to the specific duties, rescue team members will be trained to:

* Understand the rescue plan and procedures for each type of confined space at the facility.
* Learn the access ways and configurations of confined spaces in order to minimize response time.

All rescue team members will be certified in first aid and CPR.

***Trainee Certification***

Project Manager or designee will certify that the training required has been accomplished and that the employee is proficient in his or her authorized duties. The certification will contain each employee’s Project Manager or designee, the signatures or initials of the trainers, and the dates of training. It will be available for inspection by employees and their authorized representatives.

***Training Program Assessment***

Assessments of the effectiveness of employee training will be periodically conducted by Project Manager or designee. Copies of the assessments will be maintained for duration of employment.

***Refresher Training***

Refresher training will be provided as needed to maintain employee proficiency in entry procedures and safety.

**Duties of Entry Personnel**

***List of Authorized Personnel***

See attached document for a list of authorized entrants, attendants, and other personnel who are authorized to work in or near permit-required confined spaces.

***Authorized Entrants***

All authorized entrants will:

* Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
* Properly use testing, monitoring, ventilating, communications, lighting, and personal protective equipment, barriers and shields, ladders, and any other equipment necessary for safe entry and exit.
* Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.
* Alert the attendant whenever he or she recognizes any warning sign or symptom of exposure to a dangerous situation or detects a prohibited condition.
* Leave the permit space as quickly as possible whenever:
* An order to evacuate is given by the attendant or the entry supervisor.
* The entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
* The entrant detects a prohibited condition.
* An evacuation alarm is activated.
* The attendant can no longer perform his or her duties due to injury, illness, or another emergency.
* A condition outside the confined space exists that could endanger the entrant.

***Attendants***

All attendants will:

* Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
* Know the behavioral effects of the hazards on entrants.
* Keep an accurate count of how many entrants are in a permit space at any given time and ensure an accurate means of identifying a specific entrant who is in the space.
* Remain outside the permit space when operations are under way until relieved by another attendant.
* Enter the space for rescue only if trained and equipped for rescue operations and if relieved by another attendant.
* Communicate with entrant(s) as necessary.
* Monitor activities inside and outside the permit space to determine if it is becoming dangerous, and order the entrant(s) to evacuate if:
* A prohibited condition is detected;
* The entrant shows behavioral effects of hazard exposure;
* A situation outside the space could endanger the entrant(s); *or*
* The attendant cannot safely perform all his or her duties.
* Summon rescue and emergency services if the entrant needs help to escape the confined space.
* Take the following steps when unauthorized persons attempt to enter the confined space:
* Warn such persons away from the area;
* Advise the unauthorized person(s) to exit the space if they have entered it; *or*
* Inform authorized entrants and the entry supervisor that an unauthorized person has entered the space.
* Perform non-entry rescues as specified under the rescue procedures (see the Rescue Services section).
* Perform no other activities that might interfere with the primary duty of monitoring and protecting authorized entrants.

***Entry Supervisors***

Each entry supervisor will:

* Know and understand the hazards that may be faced during entry.
* Verify, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
* Terminate the entry and cancel the permit as required by this program.
* Verify that rescue services are available and that the means for summoning them are operable.
* Remove unauthorized individuals who enter or attempt to enter the permit space during operations.
* Determine that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

***Rescue Services***

*Rescue Personnel List*

This information will be added for each project and posted at the project location.

*Rescue Requirements for Contract Services*

When Southern Fluid Solutions, LLC, arranges to have an off-site rescue service perform rescue operations, Project Manager or designee will:

* Inform the rescue service of the hazards they may confront when called on to perform a rescue, *and*
* Provide the rescue service with access to all permit spaces from which rescue may be necessary to allow them to develop rescue plans and practice rescues.

*Entrant Retrieval System*

In order to facilitate non-entry rescue, retrieval systems or methods will be used whenever an authorized entrant enters a permit space, unless this would increase risk or would not assist the rescue. Each authorized entrant will use a chest or full-body harness with a retrieval line.

Wristlets may be used in lieu of a harness if it can be demonstrated that they are a safer, more effective alternative. The other end of the retrieval line will be attached to a mechanical device or fixed point outside the permit space so that rescue can begin as soon as it becomes necessary.

*Attendant Responsibilities*

Attendants may attempt a non-entry rescue using the retrieval system to remove an entrant from the confined space only if all the following conditions apply:

* The entrant is unable to self-rescue.
* A life-threatening danger to the entrant is imminent.
* The attendant always remains outside the confined space.
* The entrant is attached to the retrieval system.
* The attendant can visually or verbally confirm from outside the confined space that the retrieval system is disentangled from objects in the confined space and free of other obstructions.

**Contractor Safety Plan**

**POLICY STATEMENT**

All firms contracted by Southern Fluid Solutions, LLC will provide safe and healthy employment to their employees while working on our property. Accordingly, we will provide each contractor with warnings of hazards and information about our programs for abating occupational hazards, and the contractor will be informed of all safety, health, and environmental requirements at our facilities. We will ensure all work is conducted in a safe and responsible manner in compliance with applicable federal and state regulations and host facility requirements and policies.

**PLAN ADMINISTRATION**

**Southern Fluid Solutions, LLC Management.**  The Management of Southern Fluid Solutions, LLC is responsible for developing and revising the Plan as necessary and has overall responsibility for ensuring that the requirements of the Plan are followed. Management will monitor the contractor's compliance with the written contractor's agreement.

Management will ensure that:

* Each contractor is provided with warnings of hazards and information about facility programs for abating these hazards.
* Each contractor is informed of facility safety, health, and environmental requirements.
* Work is conducted in a safe and responsible manner in compliance with applicable regulations and facility requirements.

The responsible Management Person may appoint a qualified designee with the authority to implement the policies and procedures in this Contractor Safety Plan.

**Management.** Management will:

* Communicate the contractual, statutory, and other environmental, health, and safety requirements to the contractor before the start of the contract.
* Ensure that the safety and health plan is submitted with the bid package.
* Ensure that such requirements are addressed in the contract paperwork.
* Ensure that all regulatory and contractual safety and health requirements are observed.
* Upon receipt of a report of a noncompliance or any condition that poses a serious or imminent danger to health or safety, issue a request for immediate corrective action from the contractor.
* Before the start of the contract, inform the contractor of the requirement to observe all environmental, health, and safety provisions specified in the contract, provided by statutes/regulations or otherwise required.
* Monitor the contractor's work performance and determine if the contractor is complying with the contract health and safety plan and pertinent environmental, health, and safety regulations.
* Ensure that all required permits are completed by the contractor and provided for review and signature of an authorized person.
* Notify the Administrator immediately of accidents and provide him or her with a copy of the contractor's accident reports.
* Notify the Administrator immediately of a safety or health complaint and/or inspection of the contractor's jobsite.

**Contractor.** A firm or individual contracted to the facility is responsible for meeting all contractual agreements and for providing a safe and healthy workplace for its employees while working at the host facility. The contractor will:

* Provide for regular safety inspections of the worksites, materials, and equipment by competent employees.
* Notify Southern Fluid Solutions, LLC Management of accidents in a timely manner.
* Notify Southern Fluid Solutions, LLC Management of complaint notifications and/or regulatory agency inspection of the jobsite.
* Maintain OSHA 300 Injury and Illness recordkeeping forms and keep them up to date and available for review by Southern Fluid Solutions, LLC Management or their designee.

**CONTRACTOR PREQUALIFICATIONS**

Each contractor who submits a bid for work at the host facility must provide the following occupational safety and health information to Southern Fluid Solutions, LLC Management:

* Written Safety and Health Plan
* OSHA 300A Annual Summary forms for the 4 most recent years
* Certificate of Workers' Compensation Insurance

**Contractor Written Safety and Health Plan**

Any contractor awarded work on the property of the host facility must comply with applicable federal, state, and local codes and standards, including occupational safety and health requirements, as well as any additional special requirements invoked by contract.

When required by the contract, the contractor must develop and implement a comprehensive health and safety plan for his or her employees that cover all aspects of on-site operations and activities associated with the contract. The contractor's plan must comply with all applicable health and safety regulations and any project-specific requirements specified by the host facility. The contractor must provide Southern Fluid Solutions, LLC Management with a copy of the plan with the contract bid package.

***Written Plan Elements***

The contractor's prepared plan must, at a minimum, include the following elements:

* Identification of work to be performed and location of expected operations
* Description of the safety program, safety monitoring responsibilities, organizational structure, and contact information for on-site personnel
* The method for conducting hazard analysis of the worksite and operations to be performed
* A description of required safety training and communication programs
* Emergency response plans and procedures that relate to protection of employees and property
* How and where records of the hazard assessment, inspections, training, and other safety and health documents will be kept and made available to Southern Fluid Solutions, LLC Management or their designee.

Acceptance of the contractor's health and safety plan only signifies that the plan generally conforms to the requirements of the contract. It does not relieve the contractor of the responsibility for providing employees with a safe and healthful work environment.

***Phased Work***

The contractor will not initiate any new or modified phase of work until a safety and health program for that portion of the work has been accepted by Southern Fluid Solutions, LLC Management. Original and supplemental submissions covering hazardous operations and/or activities, such as working at heights over 4 feet, use of hazardous chemicals, electrical exposure, and work in confined spaces, will include a standard operating procedure and hazard analysis. The procedure will break down the operation or activity into specific basic steps. The hazard analysis will define the hazards associated with each basic step and proposed method(s) for eliminating or minimizing the hazard. At a minimum, such methods will outline employee training requirements, methods to regularly communicate hazards and controls to employees, PPE requirements, procedural changes, and methods for evaluating program effectiveness.

**PRE-JOB COMMENCEMENT MEETING**

Representatives of the contractor will meet with Southern Fluid Solutions, LLC Management before the start of contract work to review safety and health requirements and discuss implementation of all health and safety provisions pertinent to the work under contract.

During the meeting, Southern Fluid Solutions, LLC Management or their designee will review the contractor's site-specific safety and health plan with the contractor as well as review all required safety data sheets (SDS's) submitted for proposed hazardous chemical products to be used by the contractor.

Southern Fluid Solutions, LLC Management or their designee will, as prescribed by OSHA standard 29 CFR 1910.1200, *Hazard Communication Standard*, provide information to contractors on any chemical hazards present at the worksite. This information will be made available to the contractor in the project specifications as well as at the preconstruction meeting.

Southern Fluid Solutions, LLC Management or their designee will, during the preconstruction meeting, provide the contractor with copies of the host facility's written safety and health procedures and hazard communication plan.

**Emergencies**

Southern Fluid Solutions, LLC Management or their designee will inform the contractor of the proper procedures for employees to follow if an evacuation or fire alarm is heard, and of any procedures the contractor's employees must initiate to alert others if they observe a fire, hazardous substance spill, or other emergency.

**HAZARDOUS SUBSTANCE COMMUNICATION/RIGHT TO KNOW**

**Southern Fluid Solutions, LLC Responsibilities**

Southern Fluid Solutions, LLC Management or their designee will inform the contractor of any exposure or potential exposure to hazardous substances that the contractor and his or her employees may encounter during their work at Southern Fluid Solutions, LLC and provide the contractor with a copy of the facility's Hazard Communication Plan and all other information and procedures, including substance labeling and engineering controls, related to working safely with hazardous substances.

**Contractor Responsibilities**

The contractor will provide Southern Fluid Solutions, LLC Management or their designee with the following information:

* How he or she will inform contract employees about all physical and chemical hazards of the workplace
* How SDS's will be made available for each hazardous chemical that host facility or contractor employees may be exposed to while working
* Precautionary protective measures that the contractor will need to take under the facility's normal conditions and in foreseeable emergencies
* Any other hazards discovered or known to be present, even if the hazard was preexisting, to the workplace before the workers come on-site
* The type of hazardous substance labeling used by the contractor in the work area

**Contractor-Supplied Hazardous Substances**

Each contractor bringing hazardous substances on-site must provide Southern Fluid Solutions, LLC Management or their designee with the appropriate hazard information for these substances, including SDS's, labels, and precautionary measures to be taken when working with or around such substances.

**Contractor Tools and Equipment**

All equipment and tools provided by the contractor to his or her employees must be fully compliant with all OSHA regulatory requirements and Southern Fluid Solutions, LLC requirements and in excellent working condition. All electrical or spark-producing equipment or internal combustion engines must be approved by Southern Fluid Solutions, LLC Management or their designee for use in any area.

**CONTRACTOR SAFETY PERSONNEL**

When the contract does not require the contractor to provide a full-time safety professional, the contractor must designate in writing a competent safety representative to administer the safety program.

If Southern Fluid Solutions, LLC Management or their designee considers the contractor's safety effort inadequate, Southern Fluid Solutions, LLC Management may require the contractor to employ the services of safety and health specialists where special or technical expertise is required.

**SAFETY MEETINGS**

**Southern Fluid Solutions, LLC - Contractor Safety Meetings**

Southern Fluid Solutions, LLC Management or their designee and a representative of the contractor must participate in safety meetings Weekly, Monthly or Periodically. Participants will review the effectiveness of the contractor's safety effort, resolve health and safety problems, and discuss or plan future safety activities. At no time will safety meetings be required at a time interval less than Monthly unless circumstances such as a pattern of violations warrants. Safety meeting intervals and times must be established before the contractor work begins on Southern Fluid Solutions, LLC property.

**SAFE WORK PRACTICES**

**Prohibit Unsafe Conditions**

No contractor employee will be permitted to work in areas with known occupational hazards without proper information and training, engineering and administrative controls, safe work practices, and PPE enough to protect him or her from unsafe conditions.

The contractor must prohibit the use of any machinery, tool, material, chemical, or equipment that is not safe and/or is not in compliance with applicable regulatory standards or the provisions of this Plan.

**Inspections**

The contractor must ensure competent employees conduct safety and health inspections Daily or at a minimum Weekly of the worksite(s), materials, and equipment.

The contractor must maintain detailed written inspection records and make them available for review by the Administrator or designee. Also, a detailed written description of corrections for any applicable hazards noted during the inspections must be maintained and made available to Southern Fluid Solutions, LLC Management within a timely manner after each inspection.

**ACCIDENT MANAGEMENT**

Southern Fluid Solutions, LLC Management or their designee and the contractor will coordinate responsibility for reporting accidents that result in occupational injury or death. Unless Southern Fluid Solutions, LLC Management and contractor agree in writing on an alternative reporting process, the procedures described below must be followed.

**Accident Reporting**

The contractor must report all accidents or incidents resulting in a fatality, injury, illness, and/or damage to or loss of property to Southern Fluid Solutions, LLC Management or their designee, in addition to fulfilling regulatory reporting requirements for fatalities and multiple hospitalizations under workplace safety and health rules (29 CFR 1904.39).

All contractors, including those exempt from standard recordkeeping or reporting requirements under workplace safety and health rules, must report in person or by telephone any accident resulting in one or more fatalities or the hospitalization of three or more employees under their direct supervision to the nearest OSHA area office within 8 hours of either the occurrence of the accident or the time it became known to any agent of the contractor. If the OSHA area office is closed, contractors must call OSHA toll-free at 800-321-6742.

The contractor is responsible for providing or obtaining appropriate medical and emergency assistance and for notifying emergency response personnel, law enforcement, safety and health regulators, and family members, when appropriate.

**Accident Scene Procedures**

Except for rescue and emergency measures, the contractor must not disturb the scene of the accident or incident and must cease all operations in or related to the immediate area of the accident until authorized to resume by Southern Fluid Solutions, LLC Management or their designee.

**Accident Investigation**

When ordered by Southern Fluid Solutions, LLC Management or their designee, the contractor must conduct a separate and complete independent investigation of an accident or incident and submit a comprehensive report of findings and recommendations to Southern Fluid Solutions, LLC Management or their designee. The contractor must arrange and be financially responsible for the independent investigation and any equipment or material inspections or tests conducted by contractor investigators.

If Southern Fluid Solutions, LLC Management or their designee initiates and supervises an investigation of an accident in an area under the supervision of the contractor, the contractor will cooperate fully and assist Southern Fluid Solutions, LLC Management or their designee until the investigation is completed.

**Accident and Incident Summary Report**

The contractor must submit, at a time to be determined at the beginning of each project, a report that summarizes all serious and non-serious incidents and accidents during the report interval to Southern Fluid Solutions, LLC Management or their designee.

**PPE**

Unless otherwise specified in this Plan or supplemental documentation, the contractor is responsible for providing all necessary PPE needed by its employees for adequate protection from recognizable hazards where they cannot be protected by engineering or administrative controls. This equipment must meet all applicable regulatory requirements for PPE and be in good working order.

The contractor will:

* Perform an assessment identifying hazards or potential hazards and determine necessary PPE for activity(s) to be performed.
* Comply with all host facility documentation requiring use of PPE.
* Provide adequate PPE for all its employees.
* Properly maintain, use, and store PPE.
* Remove damaged and/or defective PPE from service.

The costs to purchase, maintain, and replace required PPE will be borne by the contractor and be in accordance with regulatory requirements for payment for protective equipment (see 29 CFR 1910.132(h)).

The contractor will not substitute PPE for engineering and administrative controls. Such controls must be implemented where feasible to mitigate the hazard so that the need for PPE is reduced or eliminated. The contractor must receive written approval from Southern Fluid Solutions, LLC Management or their designee for any deviation from this requirement.

**Respiratory Equipment**

Where respirators are required, the contractor must prepare and implement a written respiratory protection program and make the document immediately available to Southern Fluid Solutions, LLC Management or their designee on request.

**PPE Training**

The contractor will ensure that its employees have received appropriate training on the use and maintenance of PPE before its use. Failure to correctly use appropriate safety equipment is a violation of the contract and may result in default of the contract.

**TRAINING REQUIREMENTS**

The contractor must ensure that its employees have completed appropriate health and safety training when required by law and host facility requirements and provide documentation of such training when required by the contract.

**RECORDKEEPING**

Unless Southern Fluid Solutions, LLC Management or their designee and contractor agree in writing to an alternative recording process, the recordkeeping procedures described below must be followed.

**OSHA 300 Injury and Illness Records**

Southern Fluid Solutions, LLC Management or their designee and the contractor will coordinate responsibility for recording occupational injuries to and illnesses of contractor employees. The contractor is responsible for recording all occupational injuries to and illnesses of employees beyond first aid who are directly supervised by the contractor on the contractor's illness and injury recordkeeping forms. The contractor is not responsible for recording injuries to and illnesses of Southern Fluid Solutions, LLC employees that could be supervised by the contractor.

**Safety Records**

The contractor must provide Southern Fluid Solutions, LLC Management or their designee, on request, with documentation of all required training, medical exams, permits, (SDS's), and other safety-related documents for his or her employees and operations.

**NONCOMPLIANCE WITH SAFETY AND HEALTH REQUIREMENTS**

If during the course of the contract Southern Fluid Solutions, LLC Management or their designee notes any situations of noncompliance with the contractor's safety and health plan or host facility's safety and health requirements, Southern Fluid Solutions, LLC Management or their designee will verbally communicate the problem to the contractor and will immediately follow up in writing. Failure to correct the violation or continued violations could be grounds for termination of the contract.

If after notifying the contractor in writing of deficiencies in any health, safety, or environmental requirements, or Southern Fluid Solutions, LLC Management or their designee find continued violations of those requirements or find actions that pose an imminent danger, an immediate order to stop work will be issued. Such violations may result in the default of the contract.

Southern Fluid Solutions, LLC Management or their designee will document all violations brought to the attention of the contractor.

**Disciplinary Action Plan**

**Regulation:**

29 CFR Part 2202 Remedial Action

**Purpose**

The purpose of this program is to establish a firm but fair disciplinary action policy to enforce the safety system.

**Scope**

This document is applicable to all Southern Fluid Solutions, LLC employees.

**Responsibilities**

* + It is the responsibility of each, and every person employed by Southern Fluid Solutions, LLC to work in a safe and efficient manner. The safety system provides guidelines and procedures to help ensure that safe work practices are observed. In the event that any employee violates provisions of the Southern Fluid Solutions, LLC safety system or works in a manner that threatens his own health and safety or the health and safety of the employees around him, he will be subject to disciplinary action, up to and including termination of employment.
	+ The HR or Site Manager, Operations Manager, and Supervisors are responsible for enforcing the safety system and for issuing disciplinary action as required by this section of the safety manual.
	+ Southern Fluid Solutions, LLC is committed to safety and senior management holds all supervisory staff responsible and accountable for safety within their respective areas.

**Requirements**

* + Safety is a core value and a condition of employment at Southern Fluid Solutions, LLC. The following actions constitute a safety violation:
		- Not following verbal or written safety procedures, guideline or rules of Southern Fluid Solutions, LLC
		- Horseplay, failure to wear required PPE, and, or abuse of PPE
		- Being under the influence of drugs or alcohol during work
		- Bringing weapons or illegal drugs on the job site
		- Failure to report incidents or injuries
		- Attempted or actual physical force to cause injury, threatening statements or other actions to cause an employee to feel they are at risk of injury.

**Procedure**

* + The following procedures will be followed issuing a safety violation notice:
		- The first offense will result in a verbal warning. The employee is to be informed that he or she is being issued a verbal warning and informed why. Proper procedures will be discussed to clarify the situation and allow the employee to correct their behavior. The person making this verbal warning will inform his or her manager that this warning has been issued so the manager may make a written record of the warning.
		- The second offense will result in a written reprimand and additional training. The reprimand will be in writing and will describe the unsafe activity or behavior that needs correction. Refer to the section of the safety program that was violated (when applicable). The employee receiving the reprimand has the right to submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records.
		- The third offense will result in another written reprimand (using the standard form) and punitive layoff, the duration of which will be decided at the time of the disciplinary action and is to be weighed by the severity of the offense. Again, the employee may submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records.
		- The fourth offense may result in the termination of the offending employee.
	+ The above actions are to be placed against a sliding twelve-month scale. i.e. If an employee receives a reprimand on January 28th and commits his fourth offense on or before January 27th of the next year, they could be terminated. The employee does not have to commit the same violation each time to receive further reprimands. They could receive a verbal reprimand for smoking in a no smoking area on his first offense and get a written reprimand for his second offense which might be a forklift violation and yet another for failing to use proper personal protective equipment. The employee will be terminated upon their fourth offense in the last twelve months.
	+ In the case of serious safety violations such as by-passing guarding or other unsafe activities that put the violator or other employees at serious risk of injury, the manager may move the violator directly to the second or third warning level. If the violator’s actions put them or others at risk of death or dismemberment the manager has the option to terminate the employee with no further warning.

**Safety Reprimand Form**

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Reprimand # \_\_\_\_

Issued To: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Issued By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Violation (Describe in Detail):

Supervisor Action Plan:

Employee Action Plan:

Follow up Training: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Presented by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Training: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**Electrical Safety Plan**

**Policy Statement**

It is the policy of Southern Fluid Solutions, LLC to protect all employees from electrical hazards, including shock, electrocution, arc flash, arc blast, and fires. All electrical work will be conducted in a manner consistent with existing regulations and with recognized safe work practices. This Plan establishes safe work practices for routine operations. Operations that involve high voltage and other unique hazards will need additional procedures for the specific situation.

**Authority and Scope**

***Authority***

This Plan complies with electrical safety regulations at 29 CFR 1910.331 to 1910.335

***Scope***

The Electrical Safety Plan covers electrical safe work practices for qualified persons (i.e., persons trained to avoid the electrical hazards of working on or near exposed energized parts) and unqualified persons (i.e., persons with little or no training) who work on or near machines, equipment, or circuits that have not been placed in an electrically safe work condition (i.e., not locked/tagged out). It applies to:

* Premise wiring (i.e., installations of electric conductors and equipment within or on buildings or other structures and on other premises such as yards, parking and other lots, and industrial substations)
* Wiring for connection to supply
* Installations of other outside conductors on the premises
* Installations of optical fiber cable where such installations are made along with electric conductors

This Plan does not apply to electrical generation, transmission, and distribution systems.

**Manager.**  The Electrical Work Manager or their qualified designee will provide safe work procedures and permits for electrical work as required and provide and implement other critical procedures such as lockout/tagout, testing, and safety-related work practices as required by regulation. Specifically, the Manager or designee will:

* Ensure that employees who work or who may potentially work near exposed energized parts are trained and qualified.
* Ensure that approved, maintained, and tested personal protective equipment (PPE) and other electrical safety equipment are provided, available, and used properly.
* Establish, implement, and maintain procedures that will ensure electrical safe work practices.
* Establish and maintain records as required.

The Manager or their designee will also ensure that workers of all disciplines and their immediate supervisors working with, or in proximity to, electrical equipment receive:

* Electrical safety awareness training
* General and job-specific training in safe electrical work practices
* Training in NFPA and ANSI codes and standards

**Supervisor(s).** Supervisors will:

* Ensure applicable training is completed.
* Ensure that employees follow all electrical safety practices and procedures.
* Ensure that employees receive required training at the prescribed times.

**Employees.** All employees, including employees of contractors working at Southern Fluid Solutions, LLC work sites, are responsible to comply with all safety rules and policies as directed by Southern Fluid Solutions, LLC management that apply to their own actions and conduct, including immediate reporting to management of unsafe and unhealthful conditions.

***On-Site Contractors and Subcontract***

All references in the Plan to "employees" or "workers" apply to the employees of on-site contractors and subcontractors.

All on-site contractors and subcontractors will ensure that they and their employees:

* Have received electrical safety training corresponding to each employee's work requirements, and that such training is documented
* Report all electrical hazards to Supervision.
* Report all electrical injuries, including but not limited to shocks, burns and arc flashes to Supervision.
* Read, understand, and follow applicable electrical safety-related operating procedures prescribed by electrical safety regulations and by Southern Fluid Solutions, LLC.
* Adopt and implement safe electrical work practices.
* Use appropriate PPE and electrical safety equipment.

***Program Review and Update***

Plan will be reviewed and updated periodically and whenever:

* New types of electrical utilization systems or equipment are introduced into the workplace
* Evaluations of workplace hazards, injuries, and near misses demonstrate that the current plan is outdated or not effective.
* When regulatory or national consensus standards change that require this Plan to be updated

**Definitions**

*Circuit breaker (600 volts nominal, or less)* --a device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined overcurrent without injury to itself when properly applied within its rating.

*Circuit breaker (over 600 volts, nominal)* --a switching device capable of making, carrying, and breaking currents under normal circuit conditions, and making, carrying for a specified time, and breaking currents under specified abnormal circuit conditions, such as those of short circuit.

*Certified equipment* --equipment that:

1. has been tested and found by a nationally recognized testing laboratory to meet nationally recognized standards or to be safe for use in a specified manner, or
2. is of a kind whose production is periodically inspected by a nationally recognized testing laboratory, and
3. it bears a label, tag, or other record of certification.

*Electrically safe work condition* --a state in which the conductor or circuit part to be worked on or near has been disconnected from energized parts, locked/tagged in accordance with established standards, tested to ensure the absence of voltage, and grounded if determined necessary.

*Equipment*--material, fittings, devices, appliances, fixtures, and apparatus used as part of, or in connection with, an electrical installation.

*Ground*--a conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth.

*Ground-fault circuit-interrupter (GFCI)*--A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit

*Qualified person*--an employee familiar with the construction and operation of the equipment and the hazards involved.

*Buddy*--a person whose specific duties are to observe workers and operations that involve electrical work.

*Unqualified person*--an employee with no familiarization with or training in the construction and operation of the electrical equipment and hazards involved.

*Utilization equipment*--utilizes electric energy for mechanical, chemical, heating, lighting, or similar useful purpose, and includes laboratory and shop equipment, appliances, or other devices that operate from an electrical energy source.

**Safe Work Practices**

***Basic Safety Practices***

Exposed energized parts will first be de-energized, locked/tagged out, and tested by a qualified person to verify that an electrically safe work condition exists. If it is not feasible to de-energize, a written live work permit will first need to be prepared that establishes the safe work practices that must be followed.

Only a qualified person will de-energize, lock/tag out, and test electrical parts and equipment. Only a qualified person will work on or near exposed live parts following the requirements of the live work permit.

***General Safe Work Practices***

All employees working on or near electrical equipment will follow general safe work practices, including:

* Maintain good housekeeping procedures.
* Plan and analyze for safety in each step of a project.
* Document work.
* Use properly rated test equipment and verify its condition and operation before and after use.
* Practice applicable emergency procedures.
* Become qualified in cardiopulmonary resuscitation (CPR) and first aid and maintain current certifications.
* Always wear appropriate PPE when working on or near electrical equipment.
* Refer to system drawings and perform system walkdowns.
* Maintain electrical equipment in accordance with the manufacturer's instructions.
* Plan work projects through an approved work control process.

*Housekeeping Duties*

Where live parts present an electrical contact hazard, employees may not perform housekeeping duties at such close distances to the parts that there is a possibility of contact, unless adequate safeguards (such as insulating equipment or barriers) are provided. Electrically conductive cleaning materials (including conductive solids such as steel wool, metalized cloth, and silicon carbide, as well as conductive liquid solutions) may not be used in proximity to energized parts unless procedures are followed which will prevent electrical contact.

*Conductive Materials and Equipment*

Conductive materials and equipment that are in contact with any part of an employee's body will be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee is expected to handle long dimensional conductive objects (such as ducts and pipes) in areas with exposed live parts, the following work practices will be implemented to minimize the hazard:

* Insulate the conductive objects
* Provide guarding against contact
* Implement material handling techniques

**Portable ladders.** Portable ladders will have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized parts.

*Flammable or Ignitable Materials*

Where flammable materials are present only occasionally, electric equipment capable of igniting them will not be used, unless measures are taken to prevent hazardous conditions from developing. Such materials include, but are not limited to flammable gases, vapors, or liquids; combustible dust; and ignitable fibers or flying’s.

*[Electrical installation requirements for locations where flammable materials are present on a regular basis are contained in 29 CFR 1910.307.]*

*Illumination*

Adequate illumination will be provided to work areas that contain exposed energized parts to enable workers to perform their tasks safely.

*Alerting Techniques*

**Safety signs and tags.** Safety signs, safety symbols, or accident prevention tags will be used where necessary to warn employees about electrical hazards which may endanger them. Such signs and tags will be designed and used in accordance with regulations (29 CFR 1910.145).

**Barricades.** Barricades will be used in conjunction with safety signs where it is necessary to prevent or limit employee access to work areas exposing employees to uninsulated energized conductors or circuit parts. Conductive barricades may not be used where they might cause an electrical contact hazard.

**Attendants.** If signs and barricades do not provide enough warning and protection from electrical hazards, an attendant will warn and protect employees.

*Portable Equipment and Extension Cords*

Portable equipment will be handled in a manner that will not cause damage. Flexible electric cords connected to equipment may not be used for raising or lowering the equipment. Flexible cords may not be fastened with staples or otherwise hung in such a fashion as could damage the outer jacket or insulation.

**Inspection.** Portable cord and plug-connected equipment and flexible cord sets (extension cords) will be visually inspected before use on any shift for external defects (such as loose parts, deformed and missing pins, or damage to outer jacket or insulation) and for evidence of possible internal damage (such as pinched or crushed outer jacket). Cord and plug connected equipment and flexible cord sets (extension cords) which remain connected once they are put in place and are not exposed to damage need not be visually inspected until they are relocated.

If there is a defect or evidence of damage that might expose an employee to injury, the defective or damaged item will be removed from service, and no employee may use it until repairs and tests necessary to render the equipment safe have been made.

When an attachment plug is to be connected to a receptacle, the relationship of the plug and receptacle contacts will first be checked to ensure that they are of proper mating configurations.

**Grounding-type equipment.** A flexible cord used with grounding-type equipment will contain an equipment grounding conductor. Attachment plugs and receptacles may not be connected or altered in a manner that would prevent proper continuity of the equipment grounding conductor at the point where plugs are attached to receptacles. Additionally, these devices may not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors. Adapters which interrupt the continuity of the equipment grounding connection may not be used.

**Conductive work locations.** Portable electric equipment and flexible cords used in highly conductive work locations (such as those inundated with water or other conductive liquids), or in job locations where employees are likely to contact water or conductive liquids, will be approved for those locations.

**Connecting attachment plugs.** Employees' hands may not be wet when plugging and unplugging flexible cords and cord and plug connected equipment, if energized equipment is involved. Energized plug and receptacle connections may be handled only with insulating protective equipment if the condition of the connection could provide a conducting path to the employee's hand (if, for example, a cord connector is wet from being immersed in water). Locking type connectors will be properly secured after connection.

*Test Instruments and Equipment*

Only qualified persons may perform testing work on electric circuits or equipment.

**Visual inspection.** Test instruments and equipment and all associated test leads, cables, power cords, probes, and connectors will be visually inspected for external defects and damage before the equipment is used. If there is a defect or evidence of damage that might expose an employee to injury, the defective or damaged item will be removed from service, and no employee may use it until repairs and tests necessary to render the equipment safe have been made.

**Rating of equipment.** Test instruments and equipment and their accessories will be rated for the circuits and equipment to which they will be connected and will be designed for the environment in which they will be used.

*Electric Power and Lighting Circuits*

**Routine opening and closing of circuits.** Load rated switches, circuit breakers, or other devices specifically designed as disconnecting means will be used for the opening, reversing, or closing of circuits under load conditions. Cable connectors not of the load break type, fuses, terminal lugs, and cable splice connections may not be used for such purposes, except in an emergency.

**Reclosing circuits after protective device operation.** After a circuit is de-energized by a circuit protective device, the circuit may not be manually reenergized until it has been determined that the equipment and circuit can be safely energized. The repetitive manual reclosing of circuit breakers or reenergizing circuits through replaced fuses is prohibited. Note: When it can be determined from the design of the circuit and the overcurrent devices involved that the automatic operation of a device was caused by an overload rather than a fault condition, no examination of the circuit or connected equipment is needed before the circuit is reenergized.

**Overcurrent protection modification.** Overcurrent protection of circuits and conductors may not be modified, even on a temporary basis, beyond that allowed by the installation safety requirements for overcurrent protection. *[See regulation 29 CFR 1910.304(e) for more information about safe work practices for overcurrent protection.]*

*Interlocks*

Only a qualified person may defeat an electrical safety interlock, and then only temporarily while he or she is working on the equipment. The interlock system will be returned to its operable condition when this work is completed.

*Overhead Lines*

If work will be performed near energized overhead lines, either adequate clearance distance must be maintained, the lines must be de-energized and grounded, or other safety measures must be taken to protect all employees from electrical hazards. Protective measures may include:

* Keep vehicles, mechanical equipment, and unqualified persons at least 10 feet from overhead lines, adding 4 inches for every additional 10,000 volts. Qualified personnel must maintain approach distances as per OSHA Table S-5 (located in 29 CFR1910.333(c)(3)).
* Guard or place barriers between the lines and work areas.
* Have the lines insulated with brush guards by the company that supplies the power and follow the company's requirements for working near the insulated lines.

*Confined Spaces*

Southern Fluid Solutions, LLC will provide, and employees will use approved protective shields, protective barriers, or insulating materials to protect employees from contact with energized parts when working in confined spaces. Doors, hinged panels, and other moveable objects that may move and push a person towards electrical hazards need to be secured.

***Electrical Maintenance and Repair Operations***

Only qualified persons will perform repair or maintenance work on electrical conductors or circuits. If an electrical hazard is discovered while repairs or maintenance work is performed, any further work must be suspended until the hazard is addressed and corrective actions instituted.

Qualified persons performing such tasks as electrical repairs, modifications, and tests on energized conductors and circuit, parts, and equipment will comply with the following work practices.

*Energized Parts and Equipment*

* All circuits and equipment are considered energized until opened, locked/tagged out, and tested by a qualified person who verifies with an approved testing device that it is de-energized.
* Energized parts to which an employee might be exposed will first be de-energized and locked/tagged out unless Southern Fluid Solutions, LLC can demonstrate that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. If live work is demonstrated, the live work permit needs to be completed.
* Optional Policy Operation of circuit breakers by employees is prohibited except in case of personal emergency.

*Lockout/Tagout*

Before repair or maintenance work is performed on electrical equipment, the electrical energy isolating device will be turned off, and locked/tagged. See the **Lockout/Tagout Plan** for information about lockout/tagout procedures used at the facility.

*Tools*

 Electrically insulated-rated tools and insulated protective equipment, such as gloves, blankets, sleeves, and mats, will be used while working on energized circuits. Employees will use tools and protective equipment with the proper rating for the task (see NFPA 70E standard). Tools will be inspected and tested according to the manufacturers' specifications.

 Electrical tools will be plugged into ground fault circuit interrupter (GFCI) receptacles.

 Extension cords are for temporary use with portable appliances, tools, and similar equipment that are not normally used at one specific location. Extension cords will not to be used as a substitute for fixed wiring.

**Preventive Maintenance**

The Maintenance Manager will establish an electrical preventive maintenance program to ensure safe and reliable operation of electrical wiring, protection devices, and operating equipment such as switches, circuit breakers, utilization equipment, flexible cords, and appliances. The manager will ensure that adequate resources are available to provide for compliance with applicable codes and standards. In addition, the manager will ensure that:

* Procedures are established for EPM intervals, inspections, tests, and servicing requirements.
* Records are maintained of all tests, inspections, servicing, and inventories.
* Documentation, tests, test intervals, and procedures are guided by the recommendations of NFPA 70B, manufacturer's recommendations, industry standards, or Southern Fluid Solutions, LLC -adopted standards or regulations.
* Copies of all manufacturer's installation, operating, and maintenance instructions are maintained in a department file.
* Electrical preventive maintenance work is performed only by qualified persons.

**Personal Protective Equipment**

All managers and supervisors will ensure that adequate resources are available to provide employees with PPE in compliance with applicable codes and standards. Furthermore, they will ensure that employees use the appropriate PPE for their assigned task.

***Selection and Use***

Personnel will wear or use PPE and protective clothing that is appropriate for safe performance of work. Qualified workers will use appropriate arc-fault PPE whenever they work near electrical equipment that could create an arc flash hazard.

Managers and supervisors will ensure that:

* Employees are trained in PPE use in accordance with documented procedures.
* Procedures are established and implemented for documented controls of PPE such as inventory, storage, maintenance, inspection, and testing.
* PPE requirements and usages are specified in the safe operating procedures.
* PPE is inspected prior to each use.
* Flame resistant clothing and other PPE rated for the specific arc flash category that will be worked in are inspected.
* Electrical insulating PPE and other protective equipment will be inspected before each use and tested as per the manufacturers' and OSHA requirements (1910.137).
* Specialized PPE for voltage equipment will be inspected prior to each use according to appropriate recognized standards

***Inspection***

All PPE will be inspected by employees prior to initial use for a work task. Employees will visually inspect rubber-insulated PPE at the beginning of each workday prior to use and after any work performed that could damage the equipment.

*Other Electrical Equipment*

Grounding equipment, cables, clusters, and sticks will be inspected annually and prior to each use.

***Storage***

Electrical insulating and protective clothing and equipment should be stored lying flat, undistorted, right-side out, and unfolded, as appropriate, in protective containers. Blankets may be stored rolled provided the inner diameter of the roll is at least 2 in. Rubber goods will be stored in a location as cool, dark, and dry as possible. The location must be as free as practicable from ozone, chemicals, oils, solvents, damaging vapors and fumes, and away from electrical discharges and sunlight. Rubber gloves should be stored cuff-down in a bag, box, or container designed for rubber glove storage. Rubber gloves may be kept inside of leather protectors.

***Cleaning and Electrical Testing***

Rubber-insulated PPE issued for use will receive periodic cleaning and electrical testing in accordance with *ANSI/ASTM standards, used for cleaning and testing PPE*. The intervals of retest for rubber goods issued for service will not be more than 6 months for gloves and 12 months for sleeves and blankets. Gloves or sleeves that have been electrically tested but not issued for service will not be placed into service unless they have been electrically tested within the previous 12 months.

All testing methods, apparatus, and facilities shall meet the applicable ANSI/ASTM Standard. The method used and the results of such tests shall be documented and made available for inspection. Testing apparatus will be operated and maintained by personnel trained for such work.

Retested rubber-insulated PPE will be identified to indicate the date of the latest test or date of retest in accordance with the appropriate standard. Manufacturer's recommendations will be followed on the type of paint or ink to be used.

***Emergency Removal of Tag and Lock***

In the event of an emergency in which the person responsible for removing the tag and lock cannot be located, the employee's Supervisor may remove the device. Details for removal are provided in Lockout/Tagout plan.

***Certified Equipment***

All electrical equipment and materials for facility wiring as defined by NFPA 70 will be certified and approved in accordance with the Applicable Codes or Code Sections for the facilities affected.

***Utilization Equipment***

Utilization equipment is subject to the same approval and acceptance requirements as that of electrical equipment. To be acceptable for installation and use, utilization equipment will be listed or labeled by a nationally recognized testing laboratory. Utilization equipment that is not listed or labeled will meet one of the requirements of 29 CFR 1910.399, Acceptable, (i)(ii), or (iii). Utilization equipment that is not listed or labeled will be examined, accepted, and documented by a qualified person. Utilization equipment will be used in accordance with its listing and labeling requirements.

**Training**

Qualified persons will be trained before they are permitted to perform work on electrical utilization systems or equipment. Unqualified persons will be trained before they work near electrical utilization systems or equipment.

***Qualified persons***

Electrical training for qualified persons will include on-the-job demonstrations, exercises, and classroom sessions. Qualified employees will be trained on:

* Safety-related work practices, including proper selection and use of PPE, that pertain to their respective job assignments
* Skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment
* Skills and techniques necessary to determine the nominal voltage of exposed live parts, clearance distances, and the corresponding voltages to which the qualified person will be exposed
* The clearance distances specified by regulation (29 CFR 1910.333(c)) State Rule, If Applicable and the corresponding voltages to which the qualified person will be exposed
* Procedures on how to perform their jobs safely and properly
* How to lockout/tagout energized electrical circuits and equipment safely

*The following additional topics could apply according the job description and equipment specified to be worked on.*

* National Electrical Code (NFPA 70) (2005)
* National Electrical Safety Code (ANSI C2) (2002)
* Standard for Electrical Safety in the Workplace (NFPA 70E) (2004)
* Use of temporary protective grounding equipment
* Use of testing equipment
* Work permit and work authorization procedures
* Use, inspection, and care of personal protective equipment
* Proper clothing and other PPE required for arc flash or arc blast protection

 *[29 CFR 1910.332 also requires training for persons other than qualified persons if their job assignments bring them close enough to exposed parts of electrical circuits operating at 50 V or more to ground for a hazard to exist.]*

***Unqualified persons***

Unqualified employees will be trained in and familiar with the safety-related work practices that pertain to their respective job assignments.

Any employees who are at risk of electric shock but who are not qualified persons will be trained in:

* Electricity-related safety practices that pertain to their job and work area
* Any electricity-related safety practices not specifically addressed in the OSHA rule but that are necessary for their safety

***Refresher Training***

Refresher training will be given to qualified and unqualified persons at least once every year to provide an update on new regulations and electrical safety criteria. Additional training will be provided whenever:

* New types of electrical utilization systems or equipment are introduced to the workplace
* A new hazard is identified
* New electrical tasks are created
* Electrical injuries occur

***Recordkeeping***

Training for all qualified and unqualified persons will be documented. Training documents will be kept in the office area nearest the employees work location.

**Emergency Action Plan**

This Emergency Action Plan (EAP) covers the actions and procedures that Southern Fluid Solutions, LLC facility personnel will follow when responding to an emergency. See the Fire Prevention Plan for information about fire prevention procedures and systems for preventing fires.

**Policy Statement**

Southern Fluid Solutions, LLC will provide its employees and other personnel at its facility with a clear plan of action in the event of an emergency. The plan will comply with applicable emergency action regulations.

**Authority and Scope**

**Regulation:** 29 CFR 1910.38, Emergency Action Plan, 30 CFR 77.1701-1702

**Scope:** This plan covers emergency actions for all work areas and facilities for the protection of employees and others from emergencies.

**EAP Administrator.** The EAP Administrator will:

* Coordinate an orderly evacuation of personnel.
* Perform an accurate head count of personnel reported to the designated area.
* Determine a rescue method to locate missing personnel.
* Provide the fire response personnel with the necessary information about the facility.
* Perform adverse weather assessments and coordinate office emergency closing procedures due to adverse weather.
* Ensure that designated evacuation monitors and special needs assistants have received adequate information and training for performing their tasks.

**Plan Review and Update**

The EAP will be reviewed annually and updated whenever:

* New hazards are identified or existing hazards change
* There are changes to the facility layout or infrastructure
* There are changes to emergency action and evacuation procedures

**Definitions**

*Exit*--the portion of an exit route that is generally separated from other areas to provide a protected way of travel to the exit discharge. An example of an exit is a 2-hour fire resistance-rated enclosed stairway that leads from the fifth floor of an office building to the outside of the building.

*Exit route*--a continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas). An exit route consists of three parts: the exit access; the exit; and the exit discharge. (An exit route includes all vertical and horizontal areas along the route.)

**Reporting**

The types of emergencies, no matter how small, to be reported to Southern Fluid Solutions, LLC management and to facility personnel are:

* Medical
* Fire
* Severe weather
* Bomb threat
* Chemical spill
* Other, e.g., Terrorist Attack, Hostage Taking

**Evacuation**

***Evacuation Routes***

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

* Emergency exits
* Primary and alternative evacuation routes
* Locations of fire extinguishers
* Fire alarm pull stations' locations
* Employee assembly areas

All employees shall be trained concerning the evacuation plan for their work areas.

***Evacuation Procedures***

Description of the Alarm Signal, (e.g., Fire Alarm Bells, Repeating Buzzer, Horn) is the signal that all facility personnel must evacuate the facility. Whenever the alarm sounds, all personnel must evacuate according to the designated primary routes or alternative routes to the predetermined assembly areas. All designated primary and alternative routes are illustrated in the evacuation plan. A full evacuation drill for all personnel will be held frequently.

The supervisor will ensure the safe evacuation of personnel with special needs or disabilities.

After personnel are evacuated and have reached the assembly areas, the monitors will conduct a thorough head count of all personnel. The name(s) of any missing persons and suspected locations for unaccounted or injured people will be immediately communicated to Site Management.

**Medical Emergency**

Employees must follow the procedure below during a medical emergency.

1. Call 911; or the Appropriate Medical Emergency Phone Number for Facilities with In-House Emergency Responders
2. Provide the following information:
	1. Nature of the medical emergency
	2. Location of the emergency (e.g., address, building, and/or room number)
	3. Your name and phone number where you may be reached
3. Do not move the victim unless necessary.
4. All personnel are trained in cardiopulmonary resuscitation (CPR) and first aid and will aid before the arrival of the professional medical help.

**Fire Emergency**

Following are the procedures for responding to a fire at the facility:

* *Activate the nearest fire alarm.*
* *Notify the local Fire Department*
* *Notify the site personnel about the fire emergency by voice communication, radio, phone paging, or other means.*

Nonemergency personnel may fight the fire ONLY if both of the following conditions apply:

* The fire is small (e.g., trash can) and is not spreading to other areas; and
* The fire extinguisher is in working condition and personnel are trained to use it.

Upon being notified about the fire emergency, occupants must:

* Leave the building using the designated escape routes.
* Assemble in a prior planned designated area.
* Remain at the designated area until an authorized person has announced that it is safe to reenter.

**Hazardous Chemical Spill**

In the event of ANY chemical spill, the site facility management/environmental coordinator shall be notified immediately. Southern Fluid Solutions, LLC will follow the requirements as designated from this coordinator.

***Large Spill***

The following procedure must be followed by all employees when a large spill that involves more than 5 gallons of hazardous chemicals has occurred:

* Immediately notify the facility manager or environmental coordinator.
* Contain the spill with available equipment (e.g., pads, booms, and absorbent).
* Secure the area and alert other site personnel.
* Do not attempt to clean the spill unless trained to do so.
* Attend to injured personnel and call the medical emergency number, if required.
* Evacuate the building as necessary.

***Small Spill***

The following procedure will be followed by all employees when a small chemical spill less than 5 gallons has occurred:

* Notify the Emergency Coordinator and/or supervisor.
* If toxic fumes are present, secure the area (with caution tapes or cones) to prevent other personnel from entering.
* Deal with the spill in accordance with the instructions described in the MSDS.
* Small spills must be handled in a safe manner, while wearing the proper PPE.
* Review the general spill cleanup procedures.

**Bomb Threat**

All employees will be evacuated from the facility in the event of a bomb threat.

**Severe Weather and Natural Disasters**

In the event of severe weather or other natural disaster, all employees will be instructed to follow the specific procedures for each type of event.

**Training**

Southern Fluid Solutions, LLC will designate and train an enough employee to assist in the safe emergency evacuation of all personnel or perform emergency shutdowns, and will review the EAP with all employees covered by the EAP:

* When the EAP is implemented
* Whenever the designated actions or responsibilities of personnel covered under the EAP change
* Whenever the EAP is changed

**Excavation and Trenching Plan**

**Scope**

This **Excavation and Trenching Plan** addresses the requirements and safe practices to ensure the safety of employees and contractors who work in or around trenching and excavation activities performed on Southern Fluid Solutions, LLC properties. These requirements apply to all work involving excavation, digging, and trenching, grading, or ditching operations.

**Policy**

Southern Fluid Solutions, LLC will provide safe work areas for employees, contractors, visitors, and others who are or may be exposed to hazards in or around trenches and other excavation areas. All trenching and excavation activities will be evaluated to eliminate or minimize the potential of cave-ins, review environment contamination, and contact with underground utilities or other subsurface impediments. No digging, trenching, or excavation activities will be performed unless the requirements of federal rules for excavations (29 CFR 1926.650 to 1926.652) and employee training (29 CFR 1926.20(b)(1) and 29 CFR 1926.21(b)(1)) and this organization's safety and environmental policies are met.

**Southern Fluid Solutions, LLC Management.** Management or their designee will ensure at each applicable excavation that a competent person will:

* Review and approve the digging, trenching, and excavation drawing and permit.
* Ensure that known underground utilities and structures have been identified and physically located and marked.
* Ensure that precautions will be taken to protect existing underground utilities and structures.
* Ensure that all responsible organizations have given their input for the proposed excavation site.
* Ensure that adequate safety control measures have been identified and implemented.
* Approve (by signature) or disapprove trenching-related permits.
* Monitor the overall effectiveness of the program through audits and annual reviews.
* Conduct atmospheric testing, other technical assistance, or equipment selections needed.
* Provide or assist with arranging site worker training, competent person training, and retraining of those who may be involved in excavations.
* Conduct periodic audits of the trenching program.
* Maintain records relating to training and audits.
* Investigate and document all reported accidents and/or near-miss accidents that are directly or indirectly related to trenching.

Management or their designee may designate a competent person with the authority to administer or implement one or more components of this Plan.

**Competent person.** The competent person must be able to demonstrate the training, experience, and knowledge of soil analysis, use of protective systems, and the requirements of this Plan and all relevant local, state, and federal regulatory requirements, including the federal rules for excavations at 29 CFR Part 1926, Subpart P.

The competent person will be able to:

* Evaluate soil conditions and select appropriate protective measures.
* Construct protective systems in accordance with the excavation regulatory requirements.
* Preplan, such as contact utilities (gas, electric) to locate underground lines; plan for traffic control, if necessary; and determine proximity to structures that could affect choice of protective systems.
* Test for low oxygen, hazardous fumes, and toxic gasses, especially when gasoline engine-driven equipment is running, or the dirt has been contaminated by leaking lines or storage tanks.
* Ensure adequate ventilation or respiratory equipment, if necessary.
* Provide safe access into and out of the excavation.
* Provide appropriate protection if water accumulation is a problem.
* Inspect the site daily at the start of each shift, following a rainstorm, or after any other hazard-increasing event.
* Keep excavations open the minimum amount of time needed to complete operations.

The competent person must be able to detect:

* Conditions that could result in cave-ins
* Failures in protective systems
* Hazardous atmospheres
* Other hazards, including those associated with confined spaces.

The competent person will have the authority to take prompt corrective measures to eliminate existing and predictable hazards and stop work when required.

**Supervisor.** A supervisor may be classified as a competent person and can oversee each excavation. The supervisor will:

* Successfully complete training for classification as a competent person for trenching operations.
* Implement the Excavation and Trenching Plan for work areas under their control.
* Act as the competent person for excavation sites under his or her control.
* Ensure that the equipment necessary to complete an excavation safely is available and in good condition.
* Conduct soil tests to determine soil type.
* Ensure that all underground utility installations are located and marked before excavation begins.
* Receive written approval from the relevant utilities and landowners for digging, trenching, or excavating operations.
* Ensure that underground installations are protected, supported, or removed while the excavation is open. Notify the appropriate agencies when utility systems are exposed during the excavation process to allow the location and condition of the utility to be evaluated.
* Ensure worker protection and compliance with other applicable safety plans or programs.
* Ensure protection of the public with appropriate barricades.
* Determine what protective systems will be used to prevent cave-ins.
* Conduct daily inspections of excavations, the adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions.
* Immediately notify Name if a utility system is damaged during the trenching or excavation process.

**Employee.** Each employee engaged in trenching or other excavation-related activities must:

* Complete training, and request assistance when uncertain about any activity he or she must perform.
* Use appropriate personal protective equipment (PPE).
* Adhere to the requirements of the Plan.
* Report all workplace injuries and unsafe conditions to the supervisor or competent person.

**Plan Review and Update**

This Plan will be reviewed periodically by Southern Fluid Solutions, LLC Management or their designee to ensure the program's effectiveness and will be updated as determined by the review. This Plan will also be updated whenever:

* New types of protective systems or equipment are introduced to an excavation site.
* Evaluations of workplace hazards, injuries, and near misses demonstrate that the current plan is outdated or not effective.
* When regulatory or national consensus standards adopted as part of the Plan change.

**DEFINITIONS**

*Competent person* means someone who can identify existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt, corrective measures to eliminate them.

*Confined space* means a space that is large enough and so configured that an employee can bodily enter and perform work and has limited or restricted means of entry or exit and is not designed for continuous employee occupancy.

*Excavation* means any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal.

*Hazardous atmosphere* means an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen-deficient, toxic, or otherwise harmful that may cause death, illness, or injury to persons exposed to it.

*Protective system* means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

*Registered professional engineer* means a person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer who is registered in any state is deemed to be a "registered professional engineer" within the meaning of federal rules when approving designs for "manufactured protective systems" or "tabulated data" to be used in interstate commerce.

*Shield (trench box)* means a structure that can withstand the forces imposed on it by a cave-in and thereby protects employees within the structures. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, shields can be either pre-manufactured or job-built in accordance with the OSHA regulations at 29 CFR 1926.652(c)(3) or 29 CFR 1926.652(c)(4). Shields used in trenches are usually referred to as trench boxes or trench shields. Trench boxes or shields protect employees from cave-ins that might occur by providing sheltered space where employees may work. They are not designed to prevent cave-ins. A typical shield consists of two steel plates separated by structural members to form a box open at the top, bottom, and both ends. The box is lowered into the trench so that the steel plates face the trench's sidewalls. Employees then climb into the protected area defined by the steel plates. As the work progresses, the box is dragged along the bottom of the trench by a chain or cable suspended from a backhoe above the ground.

*Shoring system* means a structure such as a metal hydraulic mechanical or timber shoring system that supports the sides of an excavation and is designed to prevent cave-ins.

*Sloping* means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavations to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environment conditions of exposure, and application of exposure and application of surcharge loads.

*Support system* means structures such as underpinning, bracing, and shoring that provide support to an adjacent structure or underground installation or to the sides of an excavation or trench.

*Surface encumbrance* means anything that creates a hazardous surcharge load on the sides of a trench or excavation, such as equipment, building materials, vehicles, soil, and sources of vibration, foundations, streams, water tables, or geological anomalies, that could cause it to cave in and injure or kill those inside.

*Trench* means a narrow underground excavation that is deeper than it is wide, and no wider than 15 feet (ft) (4.5 meters (m)). In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 ft (4.6 m). If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 ft (4.6 m) or less (measured at the bottom of the excavation), the excavation is also considered to be a trench.

**EXCAVATION AND TRENCHING SAFETY PROGRAM**

**Hazard Assessment**

Excavation and trenching work present serious hazards to all workers involved. Cave-ins pose the greatest risk and are much more likely than other excavation-related accidents to result in worker fatalities. Other potential hazards include falls, falling loads, hazardous atmospheres, and incidents involving mobile equipment.

Before work begins on an excavation or trench, the competent person(s) will evaluate the specific hazardous conditions at the worksite through jobsite studies, observations, test borings for soil type or conditions, and consultations with local officials and utility companies. The following factors will be considered to determine the hazards associated with specific site conditions:

* Traffic
* Proximity and physical conditions of nearby structures
* Soil
* Surface water and groundwater
* Location of the water table
* Overhead and underground utilities
* Weather

**Soil Classification**

Before any work begins in an excavation or trench, the soil classification will be determined by the competent person and in accordance with the attached (29 CFR 1926 Subpart P, Appendix A).

The supervisor or other competent person will determine the soil type using the visual test and at least two of the OSHA and industry recognized manual tests listed below.

***Visual Test***

The entire excavation site, including the soil adjacent to the site, will be observed. During the visual test, the designated supervisor will check for crack-line openings along the failure zone that indicate tension cracks and observe the open side of the excavation for indications of layered geologic structuring. Other conditions to look for are signs of bulging, boiling, or sloughing, as well as signs of surface water seeping from the side of the excavation or from the water table.

***Manual Tests***

**Thumb penetration test.** When the thumb is pressed firmly into the soil and penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. This is the least accurate of the manual test methods.

**Dry strength test.** If a sample of dry soil is crumbled freely or with moderate pressure into individual grains, it is considered granular, or Type C. Dry soil that falls into clumps that subsequently break into smaller clumps is probably clay in combination with gravel, sand, or silt (Type B).

**Plasticity or wet thread test.** A moist sample of the soil is molded into a ball and then rolled into a thin thread approximately 1/8 inch in diameter by 2 inches in length. If the soil sample does not break when held by one end, it may be considered Type B. If the soil sample does break, it is considered Type C.

**Soil compression strength test.** A pocket penetrometer, shear vane, or torvane may also be used to determine the unconfined compression strength of soils.

**Surface Encumbrances**

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

**Underground Installations**

The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, will be determined before opening an excavation.

Utility companies or owners will be contacted within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations before the start of actual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 48 hours or cannot establish the exact location of these installations, the excavation work may proceed provided that such work is done with caution, and detection equipment or other acceptable means to locate utility installations are used.

When operations approach the location of underground utilities, excavation will progress with caution until the exact location of the utility is determined. While the excavation is open, underground installations will be protected, supported, or removed as necessary to safeguard employees.

**Safety Procedures**

***General Requirements***

If evidence of a situation that could result in possible cave-ins, slides, failure of protective systems, hazardous atmospheres, or other hazardous condition is identified, exposed workers will be removed from the hazard and all work in the excavation or trench stopped until all necessary safety precautions have been implemented.

**Competent person.** A competent person will oversee work performed at any excavation to ensure compliance with this Plan.

**Worker training.** Employees who work in or around excavations will be provided training according to their work activities.

**Protective systems.** The excavation or trench must either be sloped or supported as required to comply with OSHA worker protection requirements.

**Personal protective equipment (PPE).** Employees must use PPE as required by their job task.

**Electrical installations.** Work conducted on or around electrical utilization systems must be performed in accordance with the procedures from the **Electrical Safety Plan**.

**Lockout/tagout.** Work that may impact existing utilities that need to be locked and tagged out may be performed by following procedures from the **Lockout/Tagout Plan**.

**Welding.** Work requiring welding, cutting, or brazing could require a Hot Work Permit before the start of any work of this nature in or around the trench, ditch, or excavated site.

***Safe Access and Exit***

Workers will be provided with safe access into and exiting from trenches or excavations that are more than 4 ft deep.

**Access.** The means of access and the design specifications for such access will be determined by the competent person and in accordance with the following guidelines:

* Ladders used as access to a trench or excavation will extend from the bottom of the excavation to not less than 3 ft (0.9 m) above the surface.
* Ramps used solely for personnel access will be a minimum width of 4 ft (1.2 m) and provided with standard guardrails.
* Ramps used for equipment access will be a minimum width of 12 ft (3.6 m). Curbs not less than 8-in x 8-in (20.3-cm x 20.3-cm) timbers, or equivalent protection, will be provided. Equipment ramps will be designed and constructed in accordance with accepted engineering practice.

**Exit route.** The means of exit and the design specifications for such exit will be determined by the competent person and in accordance with the following guidelines:

* A stairway, ladder, ramp, personnel hoist, or other safe means of exit will be in trench excavations that are 4 ft (1.2 m) or more in depth.
* Exit route(s) will be placed within 25 lateral ft of workers.
* When two or more components form a ramp or runway, they must be connected to prevent displacement and be of uniform thickness.
* Cleats or other means of connecting runway components must be attached in a way that would not cause tripping (e.g., to the bottom of the structure).
* Structural ramps used in place of steps must have a nonslip surface.
* Earthen ramps may be used as a means of exit only if a worker can walk them in an upright position and only if they have been evaluated by a competent person.

***Perimeter Protection***

Protection will be provided to prevent personnel, vehicles, and equipment from falling into excavations.

***Fall Protection***

All wells, calyx holes, pits, and shafts will be barricaded or covered.

Excavations will be backfilled as soon as possible. Upon completion of exploration and similar operations, test pits, temporary wells, and calyx holes will be backfilled immediately.

Walkways or bridges will be provided with standard guardrails where people or equipment are required or permitted to cross over excavations.

***Falling Loads***

Workers and other personnel must be prevented from passing or standing underneath loads handled by lifting or digging equipment. They must stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped to provide adequate protection for the operator during loading and unloading operations.

***Falling Material***

Employees will not be permitted to work on the faces of sloped or benched excavations at levels above other employees except when employees at lower levels are adequately protected from the hazard of falling material or equipment.

**Placement of excavated material.** Excavated material will be placed at least 2 ft (0.6 m) from the edge of an excavation or will be retained by devices that are enough to prevent the materials from falling into the excavation. In any case, material will be placed at a distance to prevent excessive loading on the face of the excavation. Materials such as boulders or stumps that may slide or roll into the excavation will be removed or made safe.

***Hazardous Atmospheres***

Workers will not be permitted to work in or near hazardous atmospheres unless required testing and monitoring, worker precautions, and rescue services are in place. Work conducted in enclosed areas where hazardous atmospheres or gases could accumulate (e.g., landfills, manure pits, gas distribution lines, or hazardous materials storage locations) must be done in accordance with the **Confined Spaces Plan**.

**Types of atmospheres.** Such atmospheres include those with the following:

* Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent
* A combustible gas concentration greater than 10 percent of the lower flammable limit
* Concentrations of hazardous substances that exceed those specified in the threshold limit values (TLVs) for airborne contaminants established by the American Conference of Governmental Industrial Hygienists (ACGIH)

**Atmospheric tests.** Air quality tests will be taken before employees enter excavations more than 4 ft in deep when a hazardous atmosphere exists or could be expected to exist. If there is any possibility that the trench or excavation could contain a hazardous atmosphere, the supervisor or other competent person will ensure that:

* Atmospheric testing is conducted before worker entry and continuously during work.
* Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, the atmospheres in the excavation will be tested before employees enter excavations greater than 4 ft (1.2 m) deep.
* Tests will be conducted as often as necessary to ensure the quality and quantity of the atmosphere, including checks for flammable gases and oxygen deficiency.
* A log of all test results will be maintained at the worksite.

**Worker precautions.** Suitable precautions will be taken as necessary to protect workers in areas where hazardous atmospheres exist or potentially exist. These precautions will include the following:

* Engineering controls such as ventilation
* Respiratory protection in accordance applicable laws and company policies
* Full body harnesses and lifelines

**Rescue equipment.** Where hazardous atmospheres exist or may reasonably be expected to exist, emergency rescue equipment will be on the worksite and readily accessible to rescue personnel.

**Daily inspections.** Daily inspections for hazardous atmospheres must be conducted by a competent person.

***Walkways and Guardrails over Excavations***

Walkways will be provided where workers or equipment can cross over excavations. Guardrails will be provided on walkways used by the general public regardless of the height above the excavation. Guardrails will be provided on walkways used only by on-site personnel if the walkway is 4 ft or more above lower levels. If workers pass below a walkway, guardrails and toe boards will be provided.

***Confined Spaces***

Employees entering excavations classified as confined spaces or that otherwise present the potential for emergency rescue, such as bell-bottom pier holes or similar deep and confined footing, will wear rescue equipment and maintain communication with the confined space attendant. See the **Confined Space Plan** for more information about safety procedures related to confined spaces.

***Water Accumulation***

**Control measures.** Employees will not work in excavations in which there is accumulated water or in which water is accumulating unless the water hazards posed by accumulation is controlled. Freezing, pumping, draining, and similar control measures will be planned and directed by a registered engineer. Consideration will be given to the existing moisture balances in surrounding soils and the effects on foundations and structures if the soil is disturbed.

**Drainage.** Diversion ditches, dikes, or other means will be used to prevent surface water entering an excavation and to provide good drainage of the area adjacent to the excavation.

**Water control equipment.** When continuous operation of groundwater control equipment is necessary, an emergency power source will be provided. Water control equipment and operations will be monitored by a competent person to ensure proper operation.

***Mobile Equipment and Motor Vehicle Traffic Precautions***

Traffic around the excavation or trench site must be controlled and barricades, signs, and/or flag persons used as needed to control both vehicular and pedestrian traffic.

**High visibility PPE.** Workers exposed to public vehicular traffic will be provided with and will wear warning vests or other suitable garments marked with or made of reflective or high-visibility material.

**Barricades.** When vehicles or mobile equipment are used or allowed adjacent to an excavation, substantial stop logs or barricades will be installed. The use of a ground guide is recommended.

**Loading/unloading vehicles.** Workers will stand away from vehicles being loaded or unloaded to avoid being struck by spillage or falling materials.

**Hoisting operations.** Excavating or hoisting equipment will not be allowed to raise, lower, or swing loads over or adjacent to personnel in the excavation without substantial overhead protection. Personnel will maintain a safe distance from a hoisting operation until the load has been placed.

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

***Stability of Adjacent Structures***

**Protective systems.** If the stability of adjoining buildings or walls is endangered by excavations, shoring, bracing, or underpinning will be provided to ensure the stability of the structure and to protect employees.

**Support systems.** Sidewalks, pavements, and related structures will not be undermined unless a support system is provided to protect employees and the sidewalk, pavement, or related structure.

**Excavation below the level of adjacent structures.** Excavations below the level of the base of footing of any foundation or retaining wall will not be permitted unless:

* A support system, such as underpinning, is provided to ensure the stability of the structure and to protect employees involved in the excavation work or in the vicinity thereof; *or*
* The excavation is in stable rock; *or*
* A registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation to be unaffected by the excavation or determines that the excavation will not pose a hazard to employees.

**SITE INSPECTIONS**

When personnel will be in or around an excavation, a competent person will inspect the excavation, the adjacent areas, and protective systems daily:

* Before each work shift
* Periodically throughout the work shifts as dictated by the work being done
* After every rainstorm
* After other events that could increase hazards (e.g., snowstorm, windstorm, thaw, earthquake)
* When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur
* When there is a change in size, location, or placement of the spoil pile
* Where there is any indication of change in adjacent structures

The competent person will use the attached *Excavation Site Inspection Checklist* or equivalent form when conducting inspections. All completed inspection forms will be maintained at the worksite during construction and stored at Location after excavation work is completed.

**PROTECTIVE SYSTEMS**

**General Requirements**

**Excavations less than 5 ft deep.** For excavations less than 5 ft (1.5 m) deep, the competent person will examine the excavation for potential cave-in hazards and determine if a protective system is needed.

**Excavations 5 ft deep or deeper.** All workers in an excavation or trench 5 ft deep or deeper will be protected from cave-ins by an adequate protective system. Protective systems will have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

**Excavations more than 20 ft deep.** Protective systems for all excavations more than 20 ft (6.0 m) deep will be designed and approved by a **Registered Professional Engineer**.

**Protective System Selection**

The competent person will select the method of protection that is most suitable for the excavation site, taking into consideration soil type and surrounding structures. See the ***Soil Classification*** subsection of this Plan for more information.

**Types of protective systems.** Excavations in which employees could potentially be exposed to cave-ins will be protected by:

1. Sloping or benching the sides of the excavation; *or*
2. Supporting or shoring the sides of the excavation; *or*
3. Placing a shield between the side of the excavation and the work area.

**Exempt Excavations**

The following excavations do not require protective systems:

* Excavations made entirely in stable rock; *or*
* Excavations are less than 5 ft (1.52 m) deep and examination of the ground by a competent person provides no indication of a potential cave-in.

A fixed means to safely exit exempt excavations will be provided for workers.

**Sloping and Benching Systems**

The competent person or supervisor will select and construct slopes and configurations of sloping and benching systems from one of four options.

Option 1

***Slope the walls of the excavation at an angle so that soil does not roll into the excavation.*** *The degree of the sloping angle needed depends on the stability of the soil at the site. The maximum allowable slopes for excavations less than 20 ft deep based on soil type and angle to the horizontal are as follows:*

|  |  |  |
| --- | --- | --- |
| **Soil Type** | **Height/Depth Ratio** | **Slope Angle** |
| B | 1:1 or less | 45 |
| C | 11/2:1 | 34 |

*Examples:*

*In Type B soil, a 10-ft deep trench must be sloped to a 45-degree angle. The total distance across such a trench would be 20 ft plus the width of the trench.*

*In Type C soil, the 10-ft deep trench would be sloped at a 34-degree angle. The total width of the trench would be 15 ft in both directions, for a total of 30 ft across plus the width of the trench. Sloping will be greater if the areas near the excavation are subject to heavy loads (e.g., soil piles and vehicles).*

*Excavation in an Unclassified Soil*

*If the soil is not classified, the excavation must be sloped according to the requirements for Type C soil.*

Option 2

***Determine maximum slope with site-specific variables.*** *Determine the maximum slope based on site-specific variables.*

Option 3

***Use tabulated data to determine the slope.*** *Use tabulated data, such as tables and charts approved by a registered professional engineer, to design the excavation. These data will be in writing and include enough explanatory information to enable the user to select, including the criteria for determining the selection and limits of the data. A copy of the information will be kept at the worksite during construction of the protective system.*

Option 4

***Use a registered professional engineer.*** *Use a registered professional engineer to design the sloping or benching system based on professional judgment.*

End Options

***Benching Systems***

Benching is not permitted in Type C soil.

Benching may be one of two types:

* Single level or step not exceeding 4 ft high; *or*
* Multiple levels or steps, each not exceeding 4 ft high.

Benching may be used in conjunction with simple sloping. Benches must be below the maximum allowable slope for that soil type. For example, a 10-ft-deep trench in Type B soil must be benched back 10 ft in each direction with the maximum 45-degree angle.

***Worker Safeguards***

Workers must not work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

**Shoring and Shielding Systems**

Option 1

*Design the shoring system using the soil classification, timber shoring, and aluminum shoring of the OSHA excavation rule or applicable state regulations. Designs for timber shoring in trenches will be determined according to the conditions and requirements of Appendices A and C of the OSHA excavation rule. Designs for aluminum hydraulic shoring must be according to the manufacturer's tabulated data, but if such data cannot be used, designs must follow the requirements of Appendix D of the rule. The system must be approved by a registered professional engineer.*

Option 2

*Design using the system manufacturer's tabulated data. Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data will be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer, and the data will be in written form and kept at the jobsite during construction of the protective system. The system must be approved by a registered professional engineer.*

Option 3

*Design using other tabulated data. Designs of protective systems will be selected from and be in accordance with tabulated data, such as tables and charts approved by a registered professional engineer. These data must be in writing and must include enough explanatory information to enable the user to select, including the criteria for determining the selection and limits of the data. A copy of the information must be kept at the worksite during construction of the protective system. Upon completion of the system, the data may be stored away from the jobsite but must be made available to regulatory staff on request.*

Option 4

*Use a registered professional engineer to design the shoring and shield protective systems. Designs must be in the form of a written plan kept at the jobsite during construction of the protective system.*

End Options

***Shoring***

Shoring is used when the location or depth of the trench makes sloping back to the maximum allowable slope impractical. Shoring will be used for unstable soil or depths greater than 5 ft (1.5 m) unless benching, sloping, or another acceptable plan is accepted by the competent person.

***Installation and Removal of Shoring or Support Systems***

Installation of a shoring or support system will be closely coordinated with the excavation of trenches. All shoring will be installed from the top down and removed from the bottom up.

**Installation procedures.** Members of shoring or support systems will be securely connected to prevent sliding, falling, kick-outs, or other predictable failure.

Support systems will be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system. Individual members of support systems will not be subjected to loads exceeding those that those members were designed to withstand.

**Removal procedures.** Before temporary removal of individual members begins, additional precautions will be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.

Removal will begin at, and progress from, the bottom of the excavation. Members will be released slowly to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

**Backfilling procedures.** Backfilling will progress together with the removal of support systems from excavations.

Excavation of material to a level no greater than 2 ft (0.6 m) below the bottom of the members of a support system will be permitted, but only if the system is designed to resist the forces calculated for the full depth of the trench and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.

***Shields***

A trench shield may be used if the protection it provides is equal to or greater than the protection that would be provided by the appropriate shoring system. The competent person or supervisor must follow manufacturer's instructions for premade boxes and shields once a design has been chosen.

Shields may be used in conjunction with sloping or benching.

**Load requirements.** Shield systems will not be subjected to loads exceeding those that the system was designed to withstand.

**Installation requirements.** Shields will be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

**Worker protections.** Workers will be protected from the hazard of cave-ins when entering or exiting the areas protected by shields. Workers will not be allowed in shields when shields are being installed, removed, or moved vertically.

**Excavations below the depth of the shield.** Excavations of earth material to a level not greater than 2 ft (.6 m) below the bottom of a shield will be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

**Protective System Materials and Equipment**

***Maintenance of Materials and Equipment***

Materials and equipment used for protective systems will be free from damage or defects that might impair their proper function. Manufactured materials and equipment used for protective systems will be used and maintained in a manner that is consistent with the recommendations of the manufacturer and in a manner that will prevent employee exposure to hazards.

***Damaged Materials and Equipment***

When material or equipment that is used for protective systems is damaged, a competent person will examine the material or equipment and evaluate its suitability for continued use. If the competent person cannot ensure that the material or equipment is able to support the intended loads or is otherwise suitable for safe use, such material or equipment will be removed from service and will be evaluated and approved by a registered professional engineer before being returned to service.

**EMERGENCY RESCUE OPERATIONS**

In the event of any emergency requiring rescue from an excavation, workers will not attempt to enter an unprotected excavation or trench to perform rescue. Local emergency services will be notified using the standard reporting system.

Rescue operations that can be performed safely from outside the excavation, such as hoisting a harnessed victim, will be carried out. Other personnel in the excavation will exit immediately and may aid only when their own safety is ensured.

**CONTRACTORS**

All contractors and contractor employees must have their own excavation and trenching safety policies that follow federal and any applicable state and local regulations. They must also comply with the requirements of this Plan and any additional requirements stipulated by Southern Fluid Solutions, LLC Management or their designee, competent person, or the *Contractor Health and Safety Agreement*.

**TRAINING**

All employees, including contractors, involved in trenching or excavation work must be trained in the requirements of this Plan or applicable OSHA laws and requirements before any trenching- or excavation-related activities begin.

**Supervisor Training**

All supervisors of trenching and excavation activities must satisfy OSHA requirements for a competent person. Such supervisors must attend competent person training conducted by a trainer approved by the plan administrator or designee.

**Employee Training**

Personnel who perform work in trenches or excavations must comply with the requirements of this Plan and receive appropriate training that will include:

* Safe work practices during work in excavations
* The use of personal protective equipment (PPE) that will typically be required during work in excavations
* Procedures to be followed if a hazardous atmosphere exists or could reasonably be expected to develop during work in an excavation
* Emergency and non-entry rescue methods and procedures for calling rescue services

**Refresher Training**

Refresher training will be performed whenever worksite inspections conducted by the supervisor or Southern Fluid Solutions, LLC Management or their designee indicate that an employee or contractor does not have the necessary knowledge or skills to safely work in or around excavations.

**RECORDKEEPING**

The competent person or supervisor will ensure that the following records and documents are kept for each excavation or trench project in a place accessible for inspection by authorized personnel and regulatory agency staff:

* The credentials of the competent person(s)
* Soil classification methodology and results of tests
* Methodology and background information used to determine which protective systems are required and the type of systems used
* Records of the employee training program, including dates of training and attendee lists
* Safety program enforcement activities
* Worksite inspection reports or logs
* The aspects of the protective systems that have been designed or approved by a registered professional engineer, including the name of such individual or, if a firm, the firm's name, the name of the engineer of record that approved the work for the firm, and the registration number
* Where applicable, evidence that the registered professional engineer of record is in fact working within a discipline applicable to the excavation work
* Accident investigation and near-miss incident reports
* Copies of related safety and health plans
* Injury and illness records

**Excavation/Trench Daily Inspection Log**

Project: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Inspection: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Competent Person: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Weather: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Soil Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Depth: \_\_\_\_\_\_\_\_\_\_\_\_

Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Width: \_\_\_\_\_\_\_\_\_\_\_

Protective System(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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| --- | --- | --- |
| **Yes, No, N/A** | **Excavation/Trench Safety Procedures** | **Deficiencies/Corrections** |
| Y, N, N/A | Safe access provided and for workers to enter. |  |
| Y, N, N/A | Competent person has authority to remove workers from the excavation/trench immediately. |  |
| Y, N, N/A | Surface encumbrances supported or removed. |  |
| Y, N, N/A | A means of exit is provided within 25 ft of each person in the excavation/trench. |  |
| Y, N, N/A | Workers protected from loose rock or soil. |  |
| Y, N, N/A | Classified as permit-required confined space. |  |
| Y, N, N/A | If a permit-required confined space, reviewed the *Confined Space Entry Permit*. |  |
| Y, N, N/A | Surrounding area has been properly protected and barricaded. |  |
| Y, N, N/A | Hard hats worn by all workers. |  |
| Y, N, N/A | Spoils, materials, and equipment set back a minimum of 2 ft from edge of excavation. |  |
| Y, N, N/A | Barriers provided at all remote excavations, wells, pits, shafts, etc. |  |
| Y, N, N/A | Guardrails on walkways and bridges over excavations 6 ft deep or more. |  |
| Y, N, N/A | Warning vests or other highly visible PPE provided and worn by all workers exposed to vehicular traffic. |  |
| Y, N, N/A | Workers prohibited from working or walking under suspended loads. |  |
| Y, N, N/A | Corrective measures taken to eliminate existing or anticipated hazards identified in previous inspections, accident investigations, hazard analysis, or enforcement actions. |  |
| Y, N, N/A | Warning system established and used when mobile equipment is operating near edge of excavation. |  |
| Y, N, N/A | Workers received daily briefing on special requirements and hazards. |  |

|  |  |  |
| --- | --- | --- |
| **Yes, No, N/A** | **Protective System(s)** | **Deficiencies/Corrections** |
| Y, N, N/A | Inspected by competent person daily, before start of work. |  |
| Y, N, N/A | Excavation/trench properly sloped and/or shored. |  |
| Y, N, N/A | Shielding properly placed and in good condition |  |
| Y, N, N/A. | Surface encumbrances supported or removed. |  |
| Y, N, N/A | Workers prohibited from working on faces of sloped or benched excavations above other workers. |  |
| Y, N, N/A | Foundations, structures, and appurtenances supported or underpinned. |  |
| Y, N, N/A | Shoring and/or shielding complies with the manufacturer's instructions or engineering designs. |  |
| Y, N, N/A | Checked for evidence of failure (e.g., soil distress, structural member damage, soil fissures). |  |

|  |  |  |
| --- | --- | --- |
| **Yes, No, N/A** | **Utilities(s)** | **Deficiencies/Corrections** |
| Y, N, N/A | Utility companies contacted and/or utilities located. One call made at a minimum of 48 hours prior to excavating activities |  |
| Y, N, N/A | Exact location of utilities marked when near excavation. |  |
| Y, N, N/A | Underground installations protected, supported, or removed when excavation is open. |  |

|  |  |  |
| --- | --- | --- |
| **Yes, No, N/A** | **Wet Conditions** | **Deficiencies/Corrections** |
| Y, N, N/A | Precautions taken to protect workers from accumulation of water. |  |
| Y, N, N/A | Water removal equipment monitored by competent person. |  |
| Y, N, N/A | Surface water controlled or diverted. |  |
| Y, N, N/A | Inspection made after each rainstorm. |  |

**Fall Protection Program**

**Policy Statement**

It is the policy of Southern Fluid Solutions, LLC that all employees will be protected from exposure to fall hazards by incorporating engineering controls whenever possible, and by installing or implementing fall protection systems. Fall protection is required for every worker exposed to a fall of 6 feet or more from unprotected sides or edges, holes, leading edges, wall openings, and other fall hazards. All employees and contractors will comply with all requirements related to safely working from elevated work locations. Southern Fluid Solutions, LLC management will review and approve the use of any elevated work platforms not addressed in this program. Southern Fluid Solutions, LLC will provide a training program for each employee potentially exposed to a fall hazard. The program will enable employees to recognize the hazards of falling and will train them in the procedures to follow to minimize these hazards.

**Authority and Scope**

Authority: 29 CFR 1926.500 – 503, 30 CFR 77.1710(g)

Scope: All employees with potential exposure to falls of greater than 6 feet, except when an employee is inspecting, investigating, or assessing workplace conditions prior to the actual start of work or after all work has been completed.

**Site Management** is responsible for administering the fall protection program. Duties of Site Management include:

* Identify work areas, processes, or tasks that require fall protection.
* Evaluate fall hazards.
* Select appropriate fall protection systems.
* Monitor fall protection use to ensure that fall protection systems are used properly.
* Arrange for and/or conduct training.
* Evaluate the fall protection program.
* Update the written fall protection plan as needed.

**Supervisors.** Supervisors are responsible for ensuring that fall protection is properly provided in their areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors will also ensure that the program is understood and followed by the employees under their charge. Supervisor will:

* Ensure that employees under their supervision (including new hires) have received appropriate training.
* Ensure the availability of appropriate fall protection equipment.
* Be aware of tasks requiring the use of fall protection.
* Enforce the proper use of fall protection when necessary.
* Ensure that fall protection equipment is properly cleaned, maintained, and stored.
* Continually monitor work areas and operations to identify fall hazards.
* Coordinate with Site Management on how to address fall hazards or other concerns as they arise.

**Training coordinator.** Southern Fluid Solutions LLC Management will develop and update training programs and maintain a schedule of training for all employees who may be exposed to fall hazards.

 **Employees.** Employees who may be exposed to fall hazards will:

* Ensure that all fall hazards are addressed before working in an area where they may be exposed.
* Inform the supervisor or Site Management of any fall hazards that they feel are not adequately addressed in the workplace and of any other concerns regarding the program.
* Care for and maintain fall protection equipment as instructed.

***Plan Review and Update***

This Plan will be reviewed whenever:

* Changes at the worksite(s) render any section of this Plan obsolete.
* There are changes in the types of fall protection systems or equipment to be used by employees.
* Incidences of falls resulting in injury demonstrate inadequacies in the design or use of fall protection systems or equipment.

**Definitions**

*Anchorage*—a secure point of attachment for lifelines, lanyards, or deceleration devices.

*Body harness*—straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a personal fall arrest system.

*Competent person (qualified person)*—a person capable of identifying existing and predictable hazards in the work area and conditions, and who understands how to control or minimize those hazards.

*Connector*—a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabiner, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

*Controlled access zone (CAZ)*—an area in which certain work (e.g., overhand bricklaying, installing decking, etc.) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled.

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

*Deceleration distance*—the additional vertical distance a falling employee travels from the moment of activation (at the onset of fall arrest forces) of the deceleration device to the location of the employee when he/she comes to a full stop.

*Free fall*—the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

*Free fall distance*—the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

*Guardrail system*—a barrier erected to prevent employees from falling to lower levels.

*Hole*---a gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, roof, or other walking/working surface.

*Infeasible*—it is impossible to perform the construction work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

*Lanyard*—a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

*Leading edge*—the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is an "unprotected side and edge" during periods when it is not actively and continuously under construction.

*Lifeline*—a component consisting of a flexible line for connection to an anchorage. A vertical lifeline attaches to an anchorage at one end and hangs vertically. A horizontal lifeline attaches to an anchorage at each end and stretches horizontally. Both horizontal and vertical lifelines provide a point of connection for lanyards.

*Lower level*—those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

*Mechanical equipment*—all motor or human propelled wheeled equipment used for roofing work, except wheelbarrows and mop carts.

*Opening—*a gap or void 30 inches (76 cm) or higher and 18 inches (48 cm) or wider, in a wall or partition, through which employees can fall to a lower level.

*Personal fall arrest system (PFAS)*—a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, and a body harness, and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

*Positioning device system*—a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

*Roof*—the exterior surface on the top of a building.

*Roofing work*—the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the roof deck.

*Safety monitoring system*—a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

*Self-retracting lifeline/lanyard*—a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

*Snap hook*—a connector comprised of a hook-shaped member with a normally closed keeper. Snap hooks will be equipped with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection.

*Toe board*—a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls of personnel.

*Unprotected sides and edges*—any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches high.

*Walking/working surface*—any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork, and concrete reinforcing steel, but not including ladders, vehicles, or trailers, on which employees will be located in order to perform their job duties.

*Warning line system*—a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area.

**Determination of Need for Fall Protection**

Fall protection is required wherever the potential to fall 6 feet or more exists. Site Management has conducted or overseen a job hazard analysis (JHA) for each activity that has the potential for fall hazards. The survey includes a list of locations and/or activities at Site Management worksites where the potential to fall exists.

Site Management has identified the following activities where fall hazards exist and fall protection is required:

* Flat and low sloped roof locations, when within 6 feet of the roof edge or during roof repair/maintenance
* Exterior and interior equipment platforms, catwalks, towers, etc. 6 feet or more above the lower level
* Exterior and interior fixed ladders above 20 feet
* Mezzanine and balcony edges
* Open excavations or pits
* Tasks requiring use of articulating aerial lifts
* Tasks requiring employees to lean outside vertical rails of ladders
* Scaffolding erection 10 feet in height or greater
* Wall openings when the outside bottom edge of the wall opening is (6) feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface
* Steel erection for heights 15 feet or greater
* Installation of metal decking for leading edges 30 feet or greater

**Fall Protection Program**

Fall protection is a concept that describes the systems, processes, procedures, equipment, and regulations used to protect employees from falls and to reduce the risk of falling. There are five classes of fall protection employed at Southern Fluid Solutions, LLC worksites. Each is based on the risk of exposure to hazards, and level of knowledge required by the employee. The first four classes provide 100% fall protection, and will be implemented by Southern Fluid Solutions, LLC in descending order with Class 1 as the primary protection. The fifth addresses situations where it has proven to be infeasible to provide a system to prevent or arrest falls.

The classes, in order of priority for implementation:

Class 1—Hazard Elimination (engineering controls)

Class 2—Fall Protection System

Class 3—Fall Restraint System

Class 4—Personal Fall Arrest Systems

Class 5—Fall Protection Plan (work procedures)

***Hazard Elimination***

[In this form of fall protection, a process or work activity is redesigned or engineered to eliminate employee exposure to a fall hazard. This is often not recognized as fall protection because the solution leaves no visible hazard or need for a system to protect the employee. The *best* means of providing fall protection is always to eliminate the hazard. Work processes can be redesigned, special tools and equipment employed, or the work can be moved to a safer place. A good example of elimination of a hazard is building an exterior wall and roof trusses on the ground and then using a crane to lift them into the higher position, rather than having the employee do this work at elevation.]

Southern Fluid Solutions, LLC will eliminate employee exposure to fall hazards wherever feasible through the redesign of the worksite or other engineering controls.

**Engineering Controls**

Southern Fluid Solutions, LLC will select appropriate engineering controls to prevent falls as the first option for fall protection. Engineering controls include:

* Relocate certain tasks to ground level
* Use a telescoping arm
* Use a qualified contractor in extremely hazardous areas

***Fall Protection System***

Fall protection systems passively barricade employees from reaching the hazard. No special training is required to know how to work safely around a fall hazard protected by a fall protection system.

**Guardrails**

Guardrail systems will be erected at unprotected edges, ramps, runways, or holes where it is determined by Site Management that erecting such systems will not cause an increased hazard to employees. Guardrails will be made from steel, wood, and wire rope for all worksites. When necessary and feasible based on job location or requirements, they will be placed:

* On all open sided floors
* Around all open excavations or pits
* On leading edges of roofs or mezzanines

When guardrail systems are used to protect workers from falls, the systems will be capable of withstanding a force of at least 200 pounds applied within 2 inches of the top edge in any outward or downward direction. When the 200 pounds test is applied in a downward direction, the top edge of the guardrail will not deflect to a height less than 39 inches above the walking/working level. Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members will be capable of withstanding a force of at least 150 pounds applied in any downward or outward direction at any point along the mid-rail or other member.

The top edge height of top-rails, or (equivalent) guardrails will be 42 inches plus or minus 3 inches, above the walking/working level. When workers are using stilts, the top edge height of the top rail will be increased an amount equal to the height of the stilts. If wire rope is used for top-rails, it will be flagged at not more 6 feet intervals with high-visibility material.

Screens, mid-rails, mesh, intermediate vertical members, or equivalent intermediate structural members will be installed between the top edge of the guardrail system and the walking/ working surface when there are no walls or parapet walls at least 21 inches high. When mid-rails are used, they will be installed at a height midway between the top edge of the guardrail system and the walking/working level. When screens and mesh are used, they will extend from the top rail to the walking/working level and along the entire opening between top rail supports. Intermediate members, such as balusters, when used between posts, will not be more than 19 inches apart.

Other structural members, such as additional mid-rails and architectural panels, will be installed so that there are no openings in the guardrail system more than 19 inches.

Guardrail systems will be surfaced to protect workers from punctures or lacerations and to prevent clothing from snagging. In order to prevent cuts and lacerations, top-rails and mid-rails of guardrail systems will be at least one-quarter inch nominal thickness or diameter. The ends of top rails and mid-rails will not overhang terminal posts, except where such an overhang does not constitute a projection hazard.

**Guardrail Inspections**

Temporary guardrail systems will be visually inspected daily by a competent person, and a complete structural inspection will be completed weekly by a competent person.

Permanent guardrail systems will be subject to a structural inspection annually by a competent person.

**Guarding Hoist Areas**

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

**Guarding Holes**

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

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

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

***Fall Restraint***

Fall restraint systems keep employees from reaching the fall hazard and require employees to be trained to recognize hazards and to know how to correctly establish and use the system. This is a type of work restraint for employees who may be working on the tops of round structures such as tanks, or, on roofs adjacent to unprotected edges or openings.

**Positioning Device System**

[Positioning device systems are intended primarily to protect construction workers doing formwork and reinforcing steel work. This type of system enables an employee to work with both hands free on a surface such as a wall or other vertical structure.]

Body harness systems are to be set up so that workers can free-fall no farther than 2 feet. They will be secured to an anchorage capable of supporting at least twice the potential impact load of an employee’s fall or 3,000 pounds, whichever is greater. Requirements for snap-hooks, D-rings, and other connectors used with positioning device systems will meet the same criteria as those for personal fall arrest systems.

***Personal Fall Arrest Systems (PFASs)***

Where acceptable fall protection or restraint systems are not feasible, employees will use a PFAS or other fall protection method with equivalent protection. All designated employees will be trained to use and maintain PFASs before entering a worksite.

A PFAS will consist of a full body harness, shock-absorbing lanyard with locking type snap- hook, and an anchor point capable of supporting 5000 pounds per worker. A PFAS will do all the following:

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

Employees must wear harnesses with the attachment point in the center of the back near shoulder level or above the wearer’s head.

All components of a PFAS will meet the specifications of the OSHA Fall Protection Standard and will be used in accordance with the manufacturer’s instructions.

**Body belts prohibited as fall protection.** The use of body belts in a fall protection system is prohibited, but body belts can be used in a positioning device system.

**Snap-hooks and D-Rings**

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

D-rings and locking snap-hooks will have a minimum tensile strength of 5000 pounds and be proof-tested to a minimum tensile load of 3600 pounds without cracking, breaking, or suffering permanent deformation.

**Lifelines, Ropes, and Straps**

Lifelines will be designed, installed, and used under the supervision of Site Management. They will protect users against cuts and abrasions and be equipped with horizontal lifeline connection devices capable of locking in both directions on the lifeline when used on suspended scaffolds or similar work platforms that have horizontal lifelines that may become vertical lifelines.

Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet or less will be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

Self-retracting lifelines and lanyards that do not limit free fall distance to 2 feet or less, rip-stitch lanyards, and tearing and deforming lanyards will be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses will be made of synthetic fibers. Lanyards and vertical lifelines will have a minimum breaking strength of 5,000 pounds.

**Horizontal Lifelines.** Horizontal lifelines will be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two. Horizontal lifelines may, depending on their geometry and angle of sag, be subjected to greater loads than the impact load imposed by an attached component. When the angle of horizontal lifeline sag is less than 30 degrees (from horizontal), the impact force imparted to the lifeline by an attached lanyard is greatly amplified. For example, with a sag angle of 15 degrees, the force amplification is about 2:1 and at 5 degrees sag, it is about 6:1. Depending on the angle of sag, and the line's elasticity, the strength of the horizontal lifeline and the anchorages to which it is attached should be increased a number of times over that of the lanyard. Extreme care should be taken in considering a horizontal lifeline for multiple tie-offs. The reason for this is that in multiple tie-offs to a horizontal lifeline, if one employee falls, the movement of the falling employee and the horizontal lifeline during arrest of the fall may cause other employees to fall also. Horizontal lifeline and anchorage strength should be increased for each additional employee to be tied off. For these and other reasons, the design of systems using horizontal lifelines will only be done by qualified persons. Testing of installed lifelines and anchors prior to use is recommended.

**Vertical lifelines.** When vertical lifelines are used, each employee will have a separate lifeline. The reason for this is that in multiple tie-offs to a single lifeline, if one employee falls, the movement of the lifeline during the arrest of the fall may pull other employees' lanyards, causing them to fall as well. Lanyards and vertical lifelines will have a minimum breaking strength of 5,000 pounds.

**Anchorages**

Anchorages will be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two, i.e., capable of supporting at least twice the weight expected to be imposed upon it. Anchorages used to attach personal fall arrest systems will be independent of any anchorage being used to support or suspend platforms and will be capable of supporting at least 5,000 pounds per person attached.

One of the most important aspects of personal fall protection systems is fully planning for suitable anchorage points. Properly planned anchorages should be used if they are available. In some cases, anchorages will be installed immediately prior to use. Examples of what might be appropriate anchor points are steel members or I-beams if an acceptable strap is available for the connection (do not use a lanyard with a snap-hook clipped onto itself); large eye-bolts made of an appropriate grade steel; guardrails or railings if they have been designed for use as an anchor point; or masonry or wood members only if the attachment point is substantial and precautions have been taken to assure that bolts or other connectors will not pull through. A qualified person should be used to evaluate the suitability of these "makeshift" anchorages with a focus on proper strength. A variety of products specifically designed for use as fall protection anchorages (beam clamps, beam straps, roof anchors, etc.) are commercially available.
In instances where workers require greater vertical or horizontal mobility than can be achieved using fixed anchorages, properly designed and installed vertical or horizontal lifelines may be used.

**Holes and Covers**

Personal fall arrest systems, covers, or guardrail systems will be erected around holes (including skylights) that are more than 6 feet above lower levels. Covers will be able to support at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time. Covers located in roadways will be able to support twice the axle load of the largest vehicle that might cross them. To prevent accidental displacement resulting from wind, equipment, or workers’ activities, all covers will be secured. All covers will be color-coded or will bear the markings “HOLE” or “COVER.”

**PFAS Inspections**

PFASs will be inspected prior to each use for wear or damage, and other deterioration. Damaged or defective components will be removed from service. All components will be protected from cuts and abrasions while in use and during storage. PFASs and their components subject to impact loading will be immediately removed from service and not used again unless inspected and determined by a competent person to be suitable for reuse. PFASs will be used only for employee protection and not to hoist materials.

The following criteria will be utilized to maintain all equipment in good working condition:

**Full body harnesses**

* Inspect before each use.
* Annually, an inspection will be conducted and documented by a competent person.
* Store hanging in an enclosed cabinet to protect from damage.
* All harnesses involved in a fall will be destroyed.

**Lanyards/shock absorbing lanyards**

* Inspect before each use.
* Annually, an inspection will be conducted and documented by a competent person.
* Store hanging in an enclosed cabinet to protect from damage.
* All lanyards involved in a fall will be destroyed.

**Snap-hooks**

* Inspect before each use.
* Annually, an inspection will be conducted and documented by a competent person.

**Self-retracting lanyards/lifelines**

* Inspect before each use.
* Monthly, an inspection will be conducted and documented by a competent person.
* Service per manufacturer specifications. (1-2 years)
* Inspect for proper function after every fall.

**Tie-off adapters/anchorages**

* Inspect for integrity and attachment before each use.
* Annually, an inspection will be conducted and documented by a competent person.
* All tie-offs and anchorages will be destroyed after every fall

**Horizontal lifelines**

* Inspect before each use for structural integrity of line and anchors.
* Annually, an inspection will be completed by a competent person.

**Safety Net Systems**

Safety net systems will be installed no more than 30 feet below the walking/working surface with enough clearance to prevent contact with the surface below and will be installed with enough vertical and horizontal distances as described in the OSHA Fall Protection Standard. (29 CFR 1926.502(c)).

All nets will be inspected by Site Management at least once a week for wear, damage, or deterioration. Defective nets will be removed from use and replaced with acceptable nets. All nets will follow mesh, mesh crossing, border rope, and connection specifications as described in the OSHA Fall Protection Standard (29 CFR 1926.502(c)).

When nets are used on bridges, the potential fall area from the walking/working surface will remain unobstructed.

Objects that have fallen into safety nets will be removed as soon as possible, at least before the next working shift.

**Storage and Maintenance of Personal Fall Protection Equipment**

Following are general requirements for the storage and maintenance of personal fall protection equipment:

* Hang equipment in a cool, dry location in a manner that holds the shape of the equipment.
* Follow manufacturer recommendations for inspections.
* Clean with a mild, non-abrasive soap and hang to dry. Don’t use strong detergents.
* Do not store equipment near excessive heat, chemicals, moisture, or direct sunlight.
* Do not use in areas with exposure to fumes or corrosive materials.
* Avoid dirt or other types of buildup on equipment.
* Do not use equipment for other than its intended purpose.
* Once exposed to a fall, immediately remove equipment from service.

***Excavations***

Fall protection will be provided to employees working at the edge of an excavation that is 6 feet or deeper. Employees in these areas are required to use the fall protection systems as designated in this program.

Excavations that are 6 feet or deeper will be protected by guardrail systems, fences, barricades, or covers. Walkways that allow employees to cross over such an excavation will be equipped with guardrails.

***Protection from Falling Objects***

When guardrail systems are used to prevent materials from falling from one level to another, openings will be small enough to prevent passage of potential falling objects.

**Stored materials.** No materials or equipment except masonry and mortar will be stored within 4 feet of working edges. Excess mortar, broken or scattered masonry units, and all other materials and debris will be kept clear of the working area by removal at regular intervals. During roofing work, materials and equipment will not be stored within 6 feet of a roof edge unless guardrails are erected at the edge, and materials piled, grouped, or stacked near a roof edge will be stable and self-supporting.

**Toe-boards.** When toe-boards are used as protection from falling objects, they will be erected along the edges of the overhead walking or working surface for a distance enough to protect persons working below. Toe-boards will be capable of withstanding a force of at least 50 pounds applied in any downward or outward direction at any point along the toe-board. Toe-boards will be a minimum of 3.5 inches tall from their top edge to the level of the walking/working surface, have no more than 0.25 inches clearance above the walking/working surface, and be solid or have openings no larger than 1 inch.

Where tools, equipment, or materials are piled higher than the top edge of a toe-board, paneling or screening will be erected from the walking/working surface or toe-board to the top of a guardrail system’s top rail or mid-rail, for a distance sufficient to protect employees below.

**Fall Protection Plan**

[Fall Protection Plans are used only when it is clearly infeasible to provide 100% fall protection using conventional fall protection systems. This product contains a sample Fall Protection Plan designed for precast/prestress concrete structures, and contains procedures for controlled access zones, safety monitoring systems, and warning line systems.

Other types of work procedures where these Plans are used are during leading edge construction work and roofing activities.]

When it is infeasible or creates a greater hazard to implement fall protection systems, fall restraint systems, or PFASs, Southern Fluid Solutions, LLC will implement a Fall Protection Plan prepared by a Competent Person (29 CFR 1926.502(k)).

Acceptable reasons for determining that the use of fall protection systems is infeasible can include the following:

* The duration of exposure to the hazard while installing a fall protection system exceeds the duration of the work.
* The fall protection system unacceptably (dangerously) impedes worker mobility.
* The movements of multiple workers would result in entanglement of employee connections to the system, avoidance of which would require inordinate (dangerous) diversion of employee attention.
* The employees may not be able to escape quickly from a dangerous zone in the event of a mishap.
* The anchorage points elevated above the working surface would interfere with the work.
* The anchorage points below or on the working surface would not provide the required level of protection.

*Unacceptable* reasons for determining that the use of a fall protection system is infeasible are:

* Cost
* Employee resistance to the use of fall protection systems
* Continued use of current practices which were acceptable in the past
* Determination that insufficient time exists to implement a fall protection system

**Accident Investigations**

All incidents that result in injury to workers, as well as near misses, regardless of their nature, will be reported and investigated. Investigations will be conducted by Site Management or other competent person as soon after an incident as possible to identify the cause and means of prevention to eliminate the risk of reoccurrence.

In the event of such an incident, the Fall Protection Program (and alternative Fall Protection Plans, if in place) will be reevaluated by Site Management to determine if additional practices, procedures, or training are necessary to prevent similar future incidents.

**Fall Rescue**

Southern Fluid Solutions, LLC will establish procedures to ensure that employees who do fall receive prompt emergency medical attention. A fall rescue system will provide for prompt (within 15 minutes) rescue; or will ensure the capability of an immediate self-rescue. A rescue plan is in place at each worksite. The procedures identify key rescue and medical personnel, equipment available for rescue, emergency communications procedures, retrieval methods, and primary first-aid requirements. The rescue plan will be prepared prior to initial startup operations at worksites.

Supervisors will ensure that each employee thoroughly understands the rescue plan and has immediate access to emergency phone numbers.

***Rescue Plan***

The following are general guidelines for emergency response procedures and fall rescue for each worksite:

* Before on-site work begins, inform emergency responders of any conditions at the site that may hinder a rescue effort.
* Document rescue procedures and post at the worksite/inform employees of locations.
* Post emergency responder phone numbers and addresses at the site.
* Mark the worksite with signs noting the easiest routes in and out of the site.
* Ensure that responders have quick access to rescue and retrieval equipment such as lifts and ladders.

***Rescue Procedures***

At the beginning of any work activity where fall protection is an issue, rescue plans must be identified and discussed with all employees in case of a fall. Site Management is responsible for developing the rescue plan(s).

Workers using fall protection equipment will have an assigned safety person (spotter) who will be within visual/verbal range to initiate rescue of the fallen worker if required.

**If a person falls suspended from a fall arrest system:**

1. The first worker to notice that another worker has fallen will immediately ask if he or she has been injured and determine if the person is able to self-rescue.
2. If the fallen worker is injured or does not respond, call 911, summon emergency response personnel, or call other emergency personnel in the response plan.
3. Secure the scene from unauthorized personnel.
4. Make certain that only qualified personnel attempt a technical rescue.
5. Assign personnel to meet rescuers to direct them to the accident scene.
6. Provide comfort care and check vital signs if victim is accessible; if necessary, administer CPR and attempt to stop any bleeding per standard first-aid procedures.
7. All employees involved in a fall arrest or fall will be sent for a medical evaluation to determine extent of injuries, if any.

**Training**

Site Management will provide a training program that teaches employees who might be exposed to fall hazards how to recognize such hazards and how to minimize them. Employees will receive training as soon after employment as possible, and before they are required to work in areas where fall hazards exist. Employees will be trained in the following areas:

* Nature of fall hazards in the work area
* Requirements of the OSHA Fall Protection Standard, 29 CFR 1926, Subpart M
* Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems
* Use and operation of controlled access zones and guardrail, personal fall arrest, safety net, warning line, and safety monitoring systems
* Role of each employee in the safety monitoring system when the system is in use
* Limitations on the use of mechanical equipment during the performance of roofing work on low-slope roofs
* Correct procedures for equipment and materials handling and storage and the erection of overhead protection
* Southern Fluid Solutions, LLC requirements for reporting incidents that cause injury to an employee
* Employee’s role in fall protection plans

***Retraining***

Refresher training will be provided whenever:

* Changes in the workplace render previous training obsolete; *or*
* Changes in the types of fall protection systems or equipment to be used render previous training obsolete; *or*
* Inadequacies in an affected employee’s knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill

**Contractors**

All outside contractors working in or on the premises of Southern Fluid Solutions, LLC will be required to follow the guidelines set forth in this fall protection program. Contractors in the pre-job meeting will be informed of these requirements as well as the on-site construction rules that apply.

 **FIRE PREVENTION AND PROTECTION PLAN**

**PURPOSE**

This practice identifies the Southern Fluid Soultions, LLC requirements for fire prevention and protection.

**SCOPE**

This practice includes the following major sections :

* General Requirements
* Responsibilities
* Fire Extinguishers
* Fire Barriers
* Fire Protection Systems
* Temporary Enclosures
* Nonemergency Use of Fire Hydrants and Fire Protection Systems
* Evacuation
* Training

**APPLICATION**

This practice applies to work activities and employees under the control of Southern Fluid Soultions, LLC and its contractors.

**DEFINITIONS**

2A Extinguisher − Contains water, soda acid or foam, and is of the pump or pressure type with a discharge capacity of not less than 2.5 gallons (9.5 liters) per minute.

10B Extinguisher − Contains foam, CO2 or a dry chemical with a discharge capacity of not less than 17 gallons (64.4 liters) or 30 pounds (13.6 kilograms).

Fire Classifications − Fires are classified as Class A, B, C, D, or Special, depending upon the types of materials involved. These classifications are defined as follows:

* *Class A:* Fires in ordinary combustible materials such as wood, cloth, paper, trash, rubber, and plastic.
* *Class B:* Fires in flammable liquid, oil, grease, tar, oil-base paint, lacquer, and flammable gas.
* *Class C:* Fires involving energized electrical equipment or systems, resulting in the extinguishing media conducting electricity. (When electrical equipment or systems are deenergized, extinguishers for Class A or B fires can be used safely.)
* *Class D:* Fires in combustible metals such as magnesium, titanium, zirconium, sodium, lithium, and potassium.
* *Special:* Fires in certain reactive chemicals that fall outside the other 4 classifications and that, in some cases, require special extinguishing agents or techniques.
1. **GENERAL REQUIREMENTS**

The purpose of a fire prevention and protection program is to ensure that a fire does not occur, cause an unacceptable onsite or offsite release of hazardous material, or threaten employee health or safety, public health or safety, or the environment. General requirements toward this end include the following :

* Document site requirements regarding storage and use of flammable/combustible liquids and gases.
* Define requirements for welding, cutting, and heating permits.
* Maintain at least 18 inches (45.7 centimeters) vertical clearance between the top of storage and sprinkler head deflectors. (This requirement does not apply to storage shelves and cabinets located against the wall.)
* Limit accumulation of combustible materials to the quantity required for current needs.
* Separate combustibles from ignition sources.
* Use noncombustible or fire-retardant materials whenever possible
* Dispose of empty crates and containers as soon as possible.
* Keep inside stockpiles of combustible construction materials to a minimum.
* Provide only approved containers for flammable or combustible liquids and for cloths, rags, and waste soaked with flammable or combustible materials.
* Empty trash and rag containers daily.
* Do not block fire lanes.
* Provide engineering or administrative controls in work areas where the potential exists for accumulation of flammable vapors to make certain that the concentration of such vapors does not exceed 10 percent of the lower explosive limit.
* Electrical wiring and equipment will be installed in accordance with applicable standards.
* Smoking will be prohibited in areas where fire hazards may exist, and **No Smoking** signs must be posted.
* Welding, cutting, burning, and other heat-producing activities will be carried out in accordance with Practice 000.653.3101, Hot Work.
* Client emergency plans will be studied to ensure that the plans adequately protect employees in case of a fire. If they do not offer adequate protection, the client and will mutually agree upon protection measures.
1. **RESPONSIBILITIES**

Project/Site Management is responsible for the following:

* Implement the fire protection program for the project.
* Investigate and take corrective actions to prevent the recurrence of fires.
* Report fire and property loss.
* Designate and ensure training of employees for each building (as floor monitors) to be responsible for implementing necessary elements of this practice and to perform monthly fire protection checks.
* HSE Representative is responsible for the following:
* Coordinate the fire prevention and protection program and participate in fire investigations.
* Include fire-loss incidents on MIER/MSISR.
* Act as the technical fire protection contact.
* Retain a basic understanding of the fire protection systems, and provide fire prevention inspection briefings, as requested, to building managers or their designees.
* Employees are responsible for the following:
* Report potential fire hazards to their immediate supervisor or the building floor monitor.
* Immediately report fires by activating a fire alarm pull box and calling the fire department.

***ALL*** *fires must be reported to the onsite or client fire department if one exists.*

Notify their immediate supervisor of any fires and use of a fire extinguisher.

1. **FIRE EXTINGUISHERS**

**3.1 General**

* + Fire extinguishers are considered first response devices designed for use on small fires. Employees assigned to fire prevention/protection will:
	+ Locate portable fire extinguishers throughout facilities in accordance with applicable codes and standards.
	+ Keep fire extinguishers unobstructed and clearly in view.
	+ Always maintain clear access to a fire extinguisher and conspicuously mark and identify fire extinguisher locations.
	+ Obtain assistance from the HSE Representative before relocating fire extinguishers.
	+ Inspect fire extinguishers in accordance with applicable codes and standards (refer to Section 3.2).
	+ Document the results of the inspection.
	+ Maintain extinguishers fully charged and operable.
	+ Take immediate corrective action for any portable fire extinguishers having a deficiency (such as being empty, missing, not mounted, or a broken seal).
	+ Portable fire extinguishers for welding and cutting operations do not have to be secured at temporary locations.
	+ A fire extinguisher rated not less than 4A must be provided for each 3,000 square feet (270 square meters) of protected building area and in each yard storage area. Travel distance to any fire extinguisher must not exceed 75 feet (22.9 meters) from any protected area inside or outside a building.
	+ One or more extinguishers rated not less than 4A must be located on each floor of a multi-storied building. At least 1 4A-rated extinguisher will be located adjacent to a stairway in a multi-storied building. Extinguishers rated not less than 10B must be provided within 50 feet (15.2 meters) of any area in which more than 5 gallons (19 liters) of flammable or combustible liquids or 5 pounds (2.3 kilograms) of flammable gas are being used.
	+ *This does not apply to fuel tanks of motor vehicles.*
	+ *Carbon tetrachloride extinguishers are prohibited.*
	+ In areas where 2A extinguishers are required, the following may be substituted for each extinguisher:
	+ One 55 gallon (209 liter) drum of water with 3 pails
	+ One water hose of not less than 1/2 inch (1.3 centimeters) in diameter, of not more than 100 feet (30.5 meters) in length, and with a discharge capacity of 5 gallons (19 liters) per minute
	+ One fire hose of not less than 1-1/2 inch (3.8 centimeters) in diameter, of not more than 100 feet (30.5 meters) in length, and with a discharge capacity of 25 gallons (94.6 liters) per minute
		- *The hoses referred to above must be of sufficient length and have a stream range so as to reach all points in the protected area. These substitutions will not apply where the possibility of freezing exists.*
	+ Extinguishers must be conspicuously located and marked, readily accessible, and immediately available in case of fire. Extinguishers will be installed on hangers or in the brackets provided, and at the appropriate height according to codes and standards.
	+ Fire extinguishers required during work or scaffolds must be readily available (within reach) to the employees.
	+ A written plan should be established for the prompt recharging and testing of fire extinguishers in accordance with applicable codes and standards.

**3.2 Inspections**

* + Managers/supervisors will ensure that fire inspections are conducted and the following tasks are done:
		- Using an inspection form, conduct or assist floor monitors in conducting monthly fire-prevention inspections (refer to Attachment 01).
		- With support from the HSE Representative, develop specific fire protection checklists that incorporate applicable systems.
		- Take the necessary corrective actions.
		- Extinguishers must be inspected monthly, or more often when circumstances warrant, to ensure that they have not been actuated or tampered with and to detect any damage. Inspection tags must be placed on the extinguishers, and the date of any inspection will be indicated. Records should be maintained for 1 year.
		- Stored pressure fire extinguishers that require 12-year hydrostatic testing will be emptied every 6 years and subjected to applicable maintenance procedures.
		- Hydrostatic testing or weighing must be done in accordance with applicable codes and standards.

|  |  |
| --- | --- |
| **Type** | **Frequency** |
| Water Pump | No test required |
| Cartridge \* | 5 years |
| Soda Acid | 5 years |
| Pressure | 5 years |
| Foam | 5 Years |
| CO2 | 5 Years |
| Dry Chemical | 12 Years |

* + - Used for expellant on wheeled or carbon dioxide extinguisher.
		- Each extinguisher must have a durable tag securely attached to show the maintenance test and recharge date and the initials or signature of the person who performed the services. A discharged fire extinguisher must be removed from service immediately and replaced. Each project/site will maintain a well-documented inspection report.
1. **Fire Barriers**

General requirements for fire barriers include the following :

* Do not disable fire barriers.
* Hold fire doors open only with approved operating devices.
* Do not chock or block fire doors open. Fire doors that are normally in the closed position may be held open if continuously attended by a fire watch.
* Take immediate action to resolve any fire barrier deficiencies or impairments.
* Make certain that the HSE Representative reviews and approves modifications or additions that affect new or existing fire barriers.
* Control changes or modifications to installed fire barriers with administrative procedures.
1. **FIRE PROTECTION SYSTEMS**

General requirements for fire protection systems include the following :

* Inform the building manager/client in advance of planned tests, inspections, and modifications or maintenance activities that could result in impairment of fire protection systems.
* Immediately report unplanned or emergency fire protection system or equipment impairments to the building manager/client.
1. **Temporary Enclosures**

General requirements for temporary enclosures include the following :

* Review proposed enclosures with the client, supervisors, and HSE Representative before fabrication. construction engineers will typically provide review for contractors.
* Keep flammable and combustible liquids to a minimum and store or dispense from approved safety containers.
* Prohibit smoking in a temporary enclosure or within a 25‑foot (7.6‑meter) area of storage areas. Post “No Smoking” signs at 25‑foot (7.6‑meter) limit.
* Do not store combustible materials within 10 feet (3.1 meters) of temporary enclosures.
* Do not use fire protection systems for structural support of temporary enclosures.
* Construct indoor supporting structures of noncombustible or fire-retardant materials with a flame-spread rating of greater than 25.
* Enclose supporting structures with noncombustible or fire-retardant materials. Make coverings for enclosure walls, ceilings, and floors of noncombustible or fire‑retardant materials. Plastic must be self-extinguishing and fire retardant.
* Place combustible trash in metal containers equipped with metal covers, or remove such trash immediately after use.
* Make certain that furniture in clean areas in noncombustible.
1. **NON-EMERGENCY USE OF FIRE HYDRANTS AND FIRE PROTECTION SYSTEMS**

Non-emergency tie-ins to fire hydrants and other fire protection systems are prohibited, except as permit-approved by the client or responsible fire department with jurisdiction in the area.

1. **EVACUATION**

ASSEMBLY AREAS FOR THE PROJECT MUST BE DESIGNATED AND SIGNS POSTED.

See site Emergency Response Program for emergency preparedness (Medical, Fire, Chemical, Weather).

In the event that there is a need to evacuate, an alarm will sound such as:

* + **ALERT ALARM** − Designated fire personnel to respond, all other personnel to stand by for instructions from Wardens.
	+ **EVACUATION ALARM** − All employees to assemble on direction of designated fire person and go to the nominated assembly areas.
	+ If necessary, instructions to gather at the assembly area will be given by the Site/Project Manager (or delegate).
	+ Each individual is responsible for removing themselves from perceived danger and for gathering at a specified assembly area. Each individual must remain in the assembly area until they have been accounted for and given further instructions.
1. **Training**

**9.1 Basic Fire Extinguishers**

Where the employer has provided portable fire extinguishers for employee use in the workplace, the employer must also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with first-stage fire fighting. Formal, documented training must be conducted for all fire watches.

Annual fire extinguisher training includes the following:

* Types of fire hazards
* Correct type of fire extinguisher to use
* Proper use of fire extinguishers
* The location of fire extinguishing equipment
* Good housekeeping practices
* Proper response/notification in the event of a fire
* Recognition of potential fire hazards

**9.2 Fire Watch**

Employees performing fire watch duties (such as in welding, cutting, burning activities) will receive annual hands-on fire prevention/fire extinguisher training in addition to general employee fire protection training (initial and refresher every 3 years).

**9.3 Building Emergency Exits**

As part of a fire prevention / protection program, the following is required:

* Keep building exits and paths to exits clear and unobstructed. Do not lock exits so that anyone is prevented from using the exit to leave the building.
* Keep exterior building stairs clean and unobstructed.
* Make certain that exit doors do not require more than one action to open.
* Report any observed deficiencies in exit signs and exit direction signs.
* Do not use materials of unusual fire characteristics (such as urethane foams – which produce large quantities of smoke) for interior finishes.
* Do not store combustible materials in stairwells or corridors.
* If facilities are used by people with impaired mobility, ensure that they have accessible exits designed to accommodate them in an emergency, or that other equally safe methods are implemented for them to exit the facility safely.

**9.4 Building Emergency Lights**

* + - Have emergency lights operationally tested month for a minimum of 30 seconds as part of the monthly fire prevention inspections. During this test, make certain the lights are inspected to verify the following:
			* Lamps are not cracked or damaged.
			* Units are securely mounted.
			* Lamps are positioned to illuminate the required areas.
			* Lamps illuminate within 10 seconds of switch to backup power supply.
		- Have emergency lights operationally tested annually for a minimum of 1‑1/2 hours and document the test results.
		- Repair deficient emergency lights within 24 hours, or provide portable emergency lights until the permanent lights are restored to service.
		- When generators are used to satisfy emergency lighting requirements, test the generators and systems in accordance with applicable codes and standards.

**Hazard Communication Plan**

**Regulation:** 29 CFR 1910.1200 Hazard Communication Standard

**Policy Statement**

It is the policy of Southern Fluid Solutions, LLC to reduce employee exposure to hazardous chemicals and the overall incidence of chemical-related injuries and illnesses. All employees who are potentially exposed to hazardous chemicals in their assigned jobs will be fully informed of the hazards of the chemicals and protective measures to minimize exposure to these chemicals. This type of information will be made available to employees by means of labels on chemical containers, safety data sheets (SDSs), and training. Employees will be informed of any known hazards associated with chemicals to which they may be exposed before their initial assignment, whenever the hazards change, or when new hazardous chemicals are introduced into their respective work areas.

**Plan Administration**

The program administrator is responsible for the implementation of the Plan, including reviewing and updating it as necessary. The administrator or designee(s) is responsible for:

 Properly labeling all containers of hazardous chemicals and for maintaining and updating the labels,

 Maintaining up to date SDSs and ensuring that they are readily accessible in all work areas,

 Informing and training employees concerning hazardous chemicals in their work areas.

***Plan Review and Update***

This Plan will be periodically reviewed and updatedwhenever new hazards are introduced into the workplace.

***Plan Availability***

Copies of the Plan, including the written training program, are available upon request to employees, their designated representatives, or to a safety and health regulatory agency.

Copies of the Plan are available at the local office or Southern Fluid Solutions, LLC office at 4 Waterway Square Place, Suite 900 The Woodlands, Texas 77380.

**Definitions**

*Chemical*--any substance, or mixture of substances.

*Hazardous chemical*--any chemical that is classified as a physical hazard or a health hazard, a simple asphyxiant (i.e., displaces oxygen in the ambient atmosphere), combustible dust, pyrophoric gas (i.e., gas that will ignite spontaneously in air at 130 degrees Fahrenheit or below), or hazard not otherwise classified.

*Chemical label*--an appropriate group of written, printed, or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical or to the outside packaging, with the specified pictogram, hazard statement, signal word, and precautionary statement for each hazard class and category.

*Safety data sheet (SDS)*--a written description of a hazardous chemical or chemical product in a 16-section format that contains comprehensive technical information about a substance and explains the risks, precautions, and remedies to exposure related to the chemical.

**Labeling of Containers**

All containers with hazardous chemicals will be labeled. Each container will include either:

 The label shipped with the chemical container; *or*

 A label, tag, or marking with product identifier and combination of words, pictures, or symbols that provide general information regarding the hazards of the chemicals and information about the physical and health hazards of the chemical.

**Secondary Container**

The administrator or designee will ensure that all secondary containers in which a chemical has been transferred from the original manufacturer’s container are labeled, tagged, or marked with either an extra copy of the original manufacturer’s label or with alternative labels that contain the same information required on the manufacturer’s label.

**In-House Container Label System**

Where in-house labels on containers replace the original labels provided by the chemical supplier, they will include the following label elements where applicable:

 Pictogram that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical,

 Hazard statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard,

 Signal word (i.e., “Warning” or “Danger”) to indicate the relative level of severity of hazard,

 Precautionary statement for each hazard class and category that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

The in-house labeling system is designed to Indicate the System Used, such as NFPA, HMIS, or In-House System if the In-House System Complies with the GHS Provisions of the Hazard Communication Standard system.

The administrator will review the organization’s labeling procedures periodically and will update labels as required.

**Portable Containers**

Labels are not required on portable containers into which hazardous chemicals are transferred from labeled containers and that are intended only for the immediate use of the employee who performs the transfer.

**SAFETY DATA SHEET (SDS)**

Procedures will be developed at each construction site to ensure that employees obtain the necessary SDSs and that any new information is communicated to affected employees.

**SDS Access**

SDSs will be readily available to all employees during each work shift. The primary method for accessing SDSs in work areas is Printed Copies, other systems may be available at client locations such as Computer Systems, Fax-Back Service Name, and Phone Number.

***SDS Access System***

Following are the steps that employees will follow to access an SDS: employees will be trained on the location of SDS books on each location. The employee will always have access to those locations where the SDS books are located.

***SDS Not Available***

If an SDS is not available, or an employee has a problem accessing an SDS, the employee will contact the plan administrator or a supervisor. The missing SDS will be provided to the employee requesting it by the employee’s next work shift at the latest, unless the SDS has not been received from the chemical supplier.

If an SDS is not received at the time of initial shipment, the administrator will contact the supplier, in writing, to request the SDS. If an SDS is not received from the supplier within 15 days after the written request is sent, the appropriate government agency will be contacted for assistance in obtaining the SDS.

**EMPLOYEE TRAINING AND INFORMATION**

**Employee Information**

Each employee will be informed about:

 The employer’s duty to provide information and training about chemical hazards, chemical labeling, SDSs, and protective measures

 The hazardous chemicals present in the employee’s work area

 The location and availability of the written hazard communication program, list of hazardous chemicals, and SDSs

**Initial Employee Training**

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. Before a new hazardous chemical is introduced into any work area, each employee in the affected work area will be given information and training about the new chemical hazard.

**Training Content and Format**

Each new employee will receive information and training that covers:

 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 taken to prevent exposure to hazardous chemicals

 Procedures to follow if employees are exposed to chemical hazards

 How to read and interpret chemical labels and SDSs

Training will be delivered through a combination of hands-on demonstration, audiovisuals, interactive electronic programs, and classroom instruction.

**Retraining**

Additional training will be conducted when new chemicals are introduced into the work area. Retraining is not required if the new chemical contains hazards like previously existing chemicals for which training has already been conducted.

**Training Records**

All employees attending hazard communication training sessions must sign a sheet at the end of the session or otherwise record their attendance.

**INFORMING OTHER EMPLOYERS OR CONTRACTORS AT MULTIPLE EMPLOYER WORKSITES**

When worksites or projects involve employees of other employers or contractors, the administrator or their designee will provide them with information about hazardous chemicals that their employees may be exposed to on a jobsite and precautionary protective measures for their employees. The administrator or their designee will obtain information about hazardous chemicals used by other employers or contractors to which employees of this organization may be exposed.

Other employers and contractors will be provided with SDSs for hazardous chemicals introduced into the work area.

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 organization.

Also, other employers will be informed about container labels used by the organization. Where labeling systems are used that are not the original container labels, the employees of other employers or contractors will be provided with information explaining the labels used for hazardous chemicals to which they may be exposed.

**ANTI-DISCRIMINATION POLICY**

Each employee must be informed that the organization is prohibited from discharging or discriminating against employees who exercise their rights to obtain information regarding hazardous chemicals used in the workplace.

**Hazardous Waste Operations (HazWoper)**

**Policy Statement**

This requirement covers emergency and post-emergency response operations standards, to include training for personnel responding to releases or substantial threats of releases of chemical or petroleum products without regard to the location of the hazard. Even though there is a specific section devoted to hazardous materials and emergency response (29 CFR 1910.120), this section does not encompass all work procedures around emergency response and 29 CFR 1910, and 29 CFR 1926 continue to apply in every respect during emergency response operations. If there is an apparent conflict or overlap, the provision that is more protective of employee health and safety shall apply. Emergency response efforts on land or water to releases of chemicals or petroleum products originating from Southern Fluid Solutions, LLC facilities or in the course of transportation will comply with the requirements of 29 CFR 1910.120(q). The primary concern in emergency response is the safety and security of responding personnel.

**Authority and Scope**

Authority: 29 CFR 1910.120

Scope: All employees to all employees and independent contractors employed by and/or contracted by Southern Fluid Solutions, LLC when responding to chemical releases.

**Definitions**

* Emergency response: A response effort by employees from outside the immediate release area or by other designated responders (e.g., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of crude oil or petroleum products.
* Post emergency response: That portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the site has begun.
* Health hazard: Chemicals which are carcinogens, toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. It also includes stress due to temperature extremes

**Requirements**

* Written Safety and Health Program and Emergency Response Plan
	+ Southern Fluid Solutions, LLC and any contractors or subcontractors shall develop and implement a written pre-incident safety and health program to handle anticipated emergencies prior to the commencement of emergency response operations for their employees who are expected to be involved in any product spill emergency and post emergency response operations. The program shall be designed to identify, evaluate and control safety and health hazards and to provide for safe response efforts to product spill emergency and post emergency response operations. These programs shall be described in controlled manuals identified as contingency plans or hazardous materials handling procedures.  The plan shall be in writing and available for inspection by employees, their representatives and OSHA representatives.
		- The following elements must be included in either a specific site safety plan or a combination of plans addressing the response activity:
			* Pre-emergency planning and coordination with outside parties
			* Personnel roles, lines of authority, training and communication
			* Emergency recognition and prevention
			* Safe distances and places of refuge
			* Site security and control
			* Evacuation routes and procedures
			* A decontamination procedure shall be developed by the Southern Fluid Solutions, LLC safety office, communicated to employees through training and implemented through drills before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.
			* Emergency alerting and response procedures
			* Critique method to evaluate the response and assure follow-up
			* Personal protective equipment and spill control, containment, and recovery equipment
			* Site and worker monitoring to ensure protective actions are commensurate with the conditions at the site.
		- Engineering controls, work practices and PPE shall be used to reduce and maintain exposure limits.  Feasible engineering controls include the use of pressurized cabs or control booths on equipment and/or the use of remotely operated material handling equipment.

**Procedure**

Use of the following safety and control procedures will be used by those in charge at the scene to ensure the safety and health of personnel at spill locations.

* + Person Discovering the Spill
		- Survey and Secure the Area.  Evaluate the seriousness of the situation regarding protecting personnel and the public. Do not approach the spill if you can smell hydrocarbons or potential chemical sources.
		- Notify your supervisor as soon as possible. Remember, any device you use to call in spill notice may not be intrinsically safe. Place your call from a safe distance.
		- If the situation requires, stay at the scene and control access at a safe distance from the spill until the initial response team arrives. The spill area will become subject to regulatory controls with restricted access
	+ **Initia**l **Spill Control Actions**
		- Initial spill control actions designed to halt the spread of a spill, direct its movements, or minimize the area affected by the spill shall not be initiated in the immediate spill area until all the following occur:
		- A complete site safety analysis
		- Air monitoring shall be used to identify and qualify airborne levels of hazardous substances. The monitoring will address initial entry, periodic monitoring, possible IDLH conditions and wherever exposure may be a possibility.
		- Gas detector readings are 10% or less of the lower explosive limit (LEL). If the readings are above 10% of the LEL, spill control actions shall be terminated in the immediate area and moved to an area where LEL conditions are less than 10%.
	+ **Initial Approach an**d **Gas Testing**
		- Gas testing personnel shall be trained to competently operate their equipment and other site-specific requirements.
		- Combustible gas detectors (LEL meters) must have current calibrations and be function tested prior to an approach to a spill site.
		- At a minimum, the oxygen, LEL and permissible exposure level (PEL) must be evaluated throughout the regulated area at as many points around the spill perimeter as possible. These levels shall be monitored periodically throughout the work shift to detect changes in airborne hazards that may result from work activities, changing weather conditions, etc.
		- Approach to the incident site.
			* Perform a function test and check the zero reading on the gas detector.
			* Don the respirator.
			* Observe the readings on the gas detectors as you approach the spill site.
			* Continue until one of the following conditions occurs.
				+ You can see all that you need to observe, or
				+ The gas detector reads 10% or more of the LEL, or
				+ Liquid oil or gas condensates are encountered.
				+ CAUTION Care must be taken to keep the gas detectors warm and prevent rough handling.
				+ NOTE If any of these conditions are exceeded, do not proceed any closer to the spill perimeter.
				+ NOTE Decontamination units, first aid kits, and eye flushing supplies shall be functional and on-site prior to attempting contact with liquid oil or gas condensates.
		- After the initial observations are performed, the site conditions shall be reported to the Incident Commander.
		- Mark or flag an exclusion area (hot zone) around the spill site to further control access.
	+ **Safety Procedures for Exclusion Areas**
		- Personnel shall be given a safety briefing on the specific hazards and hazard control procedures prior to entering the spill site.
		- Decontamination units, first aid kits, and eye flushing supplies shall be functional and on-site prior to attempting contact with spill materials.
		- To minimize personnel exposure and reduce potential ignition sources, where possible, all initial approaches to the suspected spill site will be from the upwind direction.
		- Personnel shall not approach the site or attempt gas testing without wearing appropriate respiratory protection.
	+ **Personal Protective Equipment (PPE)** **and Chemical Protective Clothing**
		- *Respiratory Protection* - During spill response operations when gas detectors read 10% or more of the LEL, trained gas testing personnel shall measure PEL levels to determine appropriate respiratory protection levels.
		- *Skin Protection* - The following PPE is recommended to minimize dermal exposure to chemicals:
			* Hands: neoprene, nitrile or butyl rubber gloves
			* Feet: neoprene, nitrile or butyl rubber boots
			* *Body*: coated Tyvek or PVC rain suits (as necessary)
			* *Eye Protection* - At a minimum, safety glasses must be worn. If a splash hazard to the eyes is present, chemical goggles or a face shield with chemical goggles shall be used. Eye protection is not required if a full-face respirator is worn.
			* *NOTE*: Either one-piece or two-piece chemical (magnum 445) suits can be used. Gloves and boots can be taped to the arms and legs of the suits as needed. The flaps of a two-piece suit can be taped as well. Heavy duty duct tape is recommended
	+ **Other Considerations**
		- The purpose of personal protective clothing and equipment is to shield or isolate individuals from the chemical, physical, and biological hazards associated with handling crude oil. No single combination of protective equipment and clothing can protect against all hazards.
		- Consider the following:
			* The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress, and impaired vision, mobility, and communication.
			* Equipment and clothing that provide an adequate level of protection shall be used.
			* Overprotection, as well as under protection, should be avoided where possible.
	+ **Post-Emergency Response** **Cleanup or Decontamination Procedures**
	+ All employees leaving a contaminated area shall be appropriately decontaminated and all contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.  Engineering controls, work practices and PPE shall be used to reduce and maintain exposure limits.
	+ Southern Fluid Solutions, LLC does not provide removal of contaminated substances such as soil or other elements of the natural environment.
	+ Decontamination procedures shall be monitored by the Southern Fluid Solutions, LLC safety department to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies
	+ Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirements of 29 CFR 1910.141.  Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.  Take into consideration ground water, wind direction, construction material, barriers and fencing, signage and training.
	+ PPE and equipment shall be decontaminated, cleaned, laundered, maintained or replaced as needed to maintain their effectiveness.   Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove the clothing.
	+ Unauthorized employees shall not remove protective clothing or equipment from change rooms.
	+ General Safety/Physical Hazards
		- During training drills, spill responses, and remediation operations, the physical working environment of personnel shall be continually evaluated. Exposure to either hot or cold weather conditions along with long working hours, could adversely affect both the psychological and physiological condition of those involved. Continued exposure may result in physical discomfort, loss of efficiency, and a higher susceptibility to accidents and injuries.
		- Personnel must be constantly alert to signs of distress and eliminate or protect against accident causes. There is a need to constantly review methods and procedures for routine work and emergency response situations so that all personnel may function as safely and effectively as possible.
		- Supervision shall keep the following procedures and safety precautions in mind when working with petroleum and petroleum products and as decisions are made in how the work is to be conducted:
			* A job shall be planned, and all personnel briefed as to the procedures to be followed and the responsibilities of each person.
			* Supervision shall always remain on the job or designate a qualified person to take their place if called away.
			* When responding to hydrocarbon spills or gas leaks, the hazardous area shall be defined. No personnel or equipment shall be permitted in the area of a spill until the hazards associated with the contaminated area have been clearly defined by a qualified person.
			* Before moving to the job site, supervision should check tools and safety equipment (including personal protective equipment), to ensure everything is safe, usable, and all required tools and safety equipment are available
			* Vehicles, heavy equipment, hand tools, and power equipment shall not be moved into a spill area until adequate precautions have been taken. When power equipment is moved into a spill area to expedite repairs, it should be removed from the area as soon as work with it is completed. Personnel who are not required should be kept out of the work area.
			* Use of matches, lighters, and smoking materials shall be in a place designated as safe by supervision.
			* Upon completion of equipment repairs, necessary operating checks should be made before placing the unit in service.
			* The senior official at an emergency response site is the most senior official on the site who has the responsibility for controlling operations at the site.
			* Medical Surveillance – Any emergency response person who exhibits signs or symptoms which may have resulted from exposure to hazardous substances during an emergency shall be provided with medical consultation at no cost to them.  This shall include all employees who are or may be exposed to hazardous substances or health hazards at or above the established permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year.

**Training**

* + The Southern Fluid Solutions, LLC new hire orientation program trains all new Southern Fluid Solutions, LLC employees and independent contractors so they will know what to do in case they witness or discover a chemical release. They are instructed to leave the area and take no further action beyond notifying the Southern Fluid Solutions, LLC facility operations personnel of the release.
	+ Training for employees expected to participate in an emergency or post-emergency response shall be completed before they take part in response operations. Southern Fluid Solutions, LLC and contractor personnel shall receive initial and annual refresher training. The level of training received will be commensurate with their assigned duties and functions and take place in the area they are working in.
	+ Initial Emergency Response Training
		- ***Support Personnel:*** This designation applies to Southern Fluid Solutions, LLC or contractor personnel who are supporting in the operation of equipment or material (such as general laborers, equipment operators, mechanized earth moving operators or crane and hoisting equipment operators), and who are needed temporarily to perform immediate emergency support work that cannot reasonably be done in a timely manner by Southern Fluid Solutions, LLC employee responders. Support personnel who will be or may be exposed to the hazards at an emergency response scene shall be trained on the use of personal protective equipment and will cover work practices which minimize hazardous risks and safe use of engineering controls & equipment.
		- ***First Responder Awareness Level***: Southern Fluid Solutions, LLC personnel who are likely to witness or discover a hazardous substance release and have been trained to initiate an emergency response sequence by notifying Southern Fluid Solutions, LLC facility operations personnel of the release.  Personnel at this level must receive initial training or have had enough experience to objectively demonstrate competency. Annual refresher training or demonstration of competency is also required.  First Responder Awareness Level employees shall have enough training or experience to objectively demonstrate competency in the following areas:
			* An understanding of what hazardous substances are, and the risks associated with them in an incident.
			* An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
			* The ability to recognize the presence of hazardous substances in an emergency.
			* The ability to identify the hazardous substances if possible.
			* An understanding of the role of the first responder awareness individual in the client’s emergency response plan including site security and control and the U.S. Department of Transportation’s Emergency Response Guidebook.
			* The ability to realize the need for additional resources, and to make appropriate notifications.
		- ***First Responder Operations Level***: Southern Fluid Solutions, LLC personnel who are identified in contingency plans as responders to releases or potential releases of hazardous materials -- as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release -- shall be trained to this level. Their function is to contain the release from a safe distance and help it from spreading.  All personnel at this level must receive 8 hours of initial training or have had enough experience to objectively demonstrate competency. Annual refresher training or demonstration of competency is also required.  Certification is required.
		- ***Hazardous Materials Technicians***: Southern Fluid Solutions, LLC personnel, who are identified in contingency plans as responders to releases or potential releases of hazardous materials for the purpose of stopping the release, shall be trained to this level. Technicians have the knowledge of how to implement emergency response plans, know the classification, identification and verification of known or unknown substances, functions with an assigned role in the incident command system, how to select and use proper PPE, perform advanced containment and understands decontamination and toxicology. All personnel at this level must receive at least 24 hours of training equal to first responder operations level. Annual refresher training or demonstration of competency is required.  Certification is required.
		- ***Hazardous Materials Specialists***: All Southern Fluid Solutions, LLC and personnel working as field Safety Specialist shall be trained to this level. Material Specialists receive at least 24 hours of training the technical level and can develop a site and safety control plan.  Annual refresher training or demonstration of competency is also required.  Certification is required.
		- ***On-Scene Incident Commander***: The Incident Commander must have at least 24 hours of training equal to the first responder operations level and know how to implement the program and system, PPE requirements, hazard and risk assessment, state and federal regulations and all elements of decontamination.  Certification is required.
	+ Post-Emergency Response Training
		- For chemical spills, a minimum of four hours of training for post-emergency response workers who have job duties and responsibilities with a low magnitude of risk shall occur.
	+ Refresher Training
		- Employees trained for Initial Emergency Response Training must receive annual refresher training of enough content and duration to maintain their competencies or shall demonstrate competencies in those areas at least annually. Southern Fluid Solutions, LLC must keep records of all employee training or competency demonstrations.
		- Participation in drills, completion of approved response training modules, and on-the-job training based on the duties and functions each employee is expected to perform during an emergency response may be substituted for, or used in conjunction with, formal classroom training to demonstrate competency. If demonstrated competency is used in lieu of or in conjunction with classroom training then Southern Fluid Solutions, LLC must keep a record of the methodology used to demonstrate competency.
	+ Trainers and Training Material
		- The manager of site safety operations shall designate who has the responsibility to approve trainers and training materials used in Southern Fluid Solutions, LLC provided training for employees who are identified in contingency plans as responders to hazardous material spills, emergency and post-emergency response operations.  All instructors shall have the training and or academic credentials and instructional experience to demonstrate competency.

**Hearing Conservation Program**

**Regulation**

 29 CFR 1910.95 Occupational Noise Exposure

**Purpose**

The purpose of this program is to provide a process to minimize employee-hearing loss caused by excessive occupational exposure to noise.

**Scope**

This program is applicable to all employees who may be exposed to noise in excess of 85 decibels (decibels). This document covers Southern Fluid Solutions, LLC employees.

**Definitions**

* Audiometric testing - means detection by the person being tested of a series of pure tones. For each tone, the person indicates the lowest level of intensity that they can perceive.
* Decibels – means the sound energy measured by a sound level meter using the “A” scale. The “A” scale is electronically weighted to simulate the response of the human ear to high and low frequency noise.
* Slow Response – means the setting on the sound level meter that averages out impulses of brief duration that would cause wide fluctuation in the sound level meter reading.
* Standard Threshold Shift – means a change in hearing threshold relative to the baseline audiogram of an average of 10 dB (corrected for age) at 2000, 3000 and 4000 Hz in either ear.

**Key Responsibilities**

**Managers and Supervisors**

* Ensure requirements of this program are established and maintained.
* Ensure employees are trained and comply with the requirements of this program.

**Employees**

* Wear hearing protection when required and attend the required training.

**Procedure**

* + Occupational hearing loss is a cumulative result of repeated or continued absorption of sound energy by the ear; employee protection is based on reduction of the noise level at the ear or limiting the employee’s exposure time. Southern Fluid Solutions, LLC shall offer hearing protection to all employees exposed to potential high noise levels in working areas and to those employees requesting hearing protection.
	+ All employees, who work in areas where the exposure to noise levels are 85 decibels or greater for the 8 hour time-weighted average of 85 decibels, must wear hearing protection and Southern Fluid Solutions, LLC shall implement a monitoring program to identify employees to be included in the hearing conservation program. Employees will wear hearing protection in all areas with posted signage.
	+ **Surveys**
* Surveys will be conducted by a qualified employee or third party.
	+ - To evaluate noise exposure in terms of possible hearing damage, it is necessary to know the overall sound level (“A” scale measurement), the exposure time of the individual in hours per day and the length of time the individual has worked in the area being surveyed. This data shall be supplemented by the following:
			* Name of area and location
			* Date and time of survey
			* Name of person conducting survey
			* Description of instrument used, model and serial number
			* Environmental conditions
			* Description of people exposed
	+ Southern Fluid Solutions, LLC shall notify each employee of their monitoring results, or, if their job is exposed to noise 85 decibels or greater.
	+ The adequacy of hearing PPE shall be reevaluated whenever noise exposures increase to the point that the PPE provided may no longer provide adequate protection. Southern Fluid Solutions, LLC shall then provide more effective PPE where necessary.
	+ All sound measuring equipment must be calibrated before and after each survey.
	+ *Sound Level Surveys*
		- All owned facilities that are suspected of having noise levels exceeding 85 decibels must be screened.
	+ *Exposure Surveys:*
		- A representative sampling of employees shall be conducted to determine the exposure to noise over a period.
		- Noise dosimeters must be capable of integrating all continuous, intermittent and impulsive sound levels from 80 dB to 130 dB and must be calibrated so a dose of 50% corresponds to a time weighted average of 85 db.
	+ **Signage**
		- Clearly worded signs shall be posted at entrances to, or on the periphery of, areas where employees may be exposed to noise levels in excess of 85 decibels. These signs shall describe the hazards involved and the required protective actions.
	+ **Audiometric Testing**
		- Each employee who is exposed to noise 85 decibels (8 hr. TWA) or greater must take an audiogram annually.
			* An employee must receive a baseline audiogram within six months of their first exposure to 85 decibels or greater for an eight-hour period.
			* An employee shall receive an annual audiogram every year they work in a position that is exposed to noise 85 decibels or greater.
			* A qualified third party shall perform all audiometric testing, evaluation, reporting and retesting.
			* Audiometric testing shall be preceded by a period of at least 14 hours during which there is no exposure to workplace sound levels in excess of 80 decibels.
			* This requirement may be met using hearing protectors that reduce the employee noise exposure level below 80 decibels.
			* An otoscopic exam is required before an audiogram is initiated. A qualified person shall examine the ear canal for any ear infections or canal irregularities that might affect the audiogram or rule out the use of earplugs.
	+ Annual audiograms shall be evaluated as follows:
		- Each audiogram shall be compared to the employees’ baseline audiogram to ensure the test was valid and to determine if a standard threshold shift has occurred.
		- If a standard threshold shift is determined, the employee will be retested within 30 days.
		- The retest results will be considered as the annual audiogram.
		- Employees shall be informed of their audiometric test results in writing within 21 days of determination.
		- If the employee has sustained a standard threshold shift, after retesting, that employee shall be retrained and refitted for appropriate hearing protection.
		- The employee shall be referred for additional medical evaluation if indicated.
	+ Employee audiograms are considered medical/exposure records. These records must be kept for the length of employment plus 30 years.
	+ **Hearing Protection Devices**
		- Earmuffs and earplugs shall be made available to employees in sizes and configurations that will be comfortable to the employee. These hearing protection devices shall be made available to all employees exposed to an 8-hour time-weighted average of 85 db. or greater at no cost to employees. Hearing protectors shall be replaced as necessary. Employees shall be instructed how to obtain the proper fit. Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by Southern Fluid Solutions, LLC.

**TRAINING**

* + A training program shall be established to inform employees who are exposed to a noise action level or work in high noise levels, on an annual basis, of the effect of noise on hearing; the purpose of hearing protectors, including the advantages, disadvantages and alternatives of various types, including instructions on selection, fitting, use and care and the purpose of audiometric testing and an explanation of test procedures.
	+ Training shall be updated to be consistent with changes in the work process, PPE requirements and the proper techniques of wearing hearing protection.
	+ A copy of this program will be made available to all employees, their representatives and regulatory agencies upon request.
	+ The training must be documented.

**HYDROGEN SULFIDE (H2S) PROGRAM**

1. **Purpose**
	1. The purpose of this program is to establish minimum requirements for site specific H2S safety, which will enhance safety in the occupational setting where hydrogen sulfide is present or is recognized as being potentially present.
2. **Scope**
	1. This program sets forth accepted practices for Hydrogen Sulfide (H2S). This program applies to all employees of Southern Fluid Solutions, LLC, temporary employees, and any contractors working for Southern Fluid Solutions, LLC. When work is performed on a non-owned or operated site, the operator’s program shall take precedence, however, this document covers Southern Fluid Solutions, LLC employees and contractors and shall be used on owned premises, or when an operator’s program doesn’t exist or is less stringent.
3. **Definitions**
	1. *Contingency Plan* - a site-specific written document that provides an organized plan for alerting and protecting the public within an area of exposure following the accidental release of all potentially hazardous atmospheric concentrations of hydrogen sulfide.
	2. *Exposure Level* - permissible exposure level of hydrogen sulfide is 10 PPM for an 8-hour, time weighted average.
	3. *Gas Detector Instrument* - An instrument/detector to measure levels of H2S. Instruments may be electronically or manually operated.
	4. *Hydrogen Sulfide (H2S)* - is an extremely deadly, toxic gas that in its pure state is colorless and is heavier than air. Additionally:
		1. It is the second most toxic gas known to man, ranking behind hydrogen cyanide and ahead of carbon monoxide.
		2. It has the odor of rotten eggs at low concentrations.
		3. In higher concentrations the gas will rapidly paralyze the olfactory nerves (sense of smell).
		4. Is soluble in water and is flammable and poses a definite threat of explosion.
	5. *Parts Per Million (PPM)* - parts of vapor or gas per million parts of contaminated air by volume.
	6. *Personal H2S Monitor* - An electronic instrument worn on the person that is set to alarm at 10 PPM of H2S.
	7. *Possible Locations of H2S* – While clients are required to notify Southern Fluid Solutions, LLC of known H2S locations the majority of time H2S can be located in drilling operations, recycled drilling mud, water from sour crude wells, blowouts, tank gauging, during routine field maintenance involving hydrocarbons, tank batteries and wells.
	8. *Venting* - the process of discharging a material to the atmosphere through a series piping and/or venting devices, to facilitate the proper and safe dispersion of toxic materials and to minimize personnel exposure.
4. **Key Responsibilities**
	1. **Managers and Supervisors**
		1. Shall ensure all employees who are to be assigned to work at locations where hydrogen sulfide is known to be present, or suspected to be present in any concentration, have been trained in hydrogen sulfide safety.
		2. Top Line employees will not be involved in areas that will require a respirator.
		3. To ensure employees have been trained and familiar with personal H2S monitors and gas detection instruments.
		4. To have been provided with the client's safety procedures.
		5. To ensure the necessary respiratory equipment to perform the work safely is available.
		6. That each employee has been provided with a copy of this program.
	2. **Employees**
		1. Employees are responsible to comply with this program.
5. **Procedure**
	1. **Physical Effects of Hydrogen Sulfide**
		1. H2S paralyzes the sense of smell. Do Not Rely on Smell to Detect H2s – Rely Strictly on Instruments Designed to Measure Concentrations of H2s.
		2. Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air.
		3. It can accumulate in low places and in small concentrations. It has a strong, pungent, somewhat distasteful odor like rotten eggs. In higher concentrations, it can deaden the sense of smell.
		4. Exposure to certain concentrations of H2S can cause serious injury or death.
	2. **Toxic Effects of Hydrogen Sulfide**

|  |  |
| --- | --- |
| CONCENTRATION | PHYSICAL EFFECT |
| .01 PPM | Can smell odor.  |
| 10 PPM | Obvious and unpleasant odor. Beginning eye irritation. ANSI permissible exposure level for 8 hours (enforced by OSHA).  |
| 100 PPM | Immediately Dangerous to life or Health (IDLH). Kills smell in 3-15 minutes; may sting eyes and throat. May cause coughing and drowsiness. Possible delayed death within 48 hours.  |
| 200 PPM | Kills smell shortly, stings eyes and throat. Respiratory irritation. Death after 1-2 hours exposure.  |
| 500 PPM | Dizziness; breathing ceases in a few minutes. Need prompt rescue breathing (CPR). Self-rescue impossible because of loss of muscle control.  |
| 700 PPM | Unconscious quickly; death will result if not rescued promptly. 1000 PPM Unconscious at once, followed by death within minutes.  |

* 1. **General**
		1. Each person entering a H2S designated location, regardless of the concentration, shall wear a personal H2S monitor that is set to alarm at 10 PPM.
		2. Southern Fluid Solutions, LLC employees will not be involved when work requires opening any equipment on location that has the potential of releasing concentrations of H2S at 100 PPM or higher.
	2. **Safe Work Procedures**
		1. Maintain compliance with permit requirements of Southern Fluid Solutions, LLC and any requirements by the client.
		2. Verify that proper safety equipment is available, functioning properly and is utilized.
		3. Check and remain aware of wind conditions and direction.
		4. Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity.
		5. Check for other personnel and ignition sources.
		6. Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities.
		7. Keep all non-essential personnel away from work areas.
		8. Immediately vacate the area when any H2S monitor sounds.
	3. **Equipment**
		1. The following equipment shall be provided and used as required by this program:
			1. Personal H2S monitor set to alarm at permissible exposure limit of 10 PPM for OSHA 1926 requirements and 20 PPM for OSHA 1910 requirements. Fixed monitors may be present as well at the same alarm setting.
	4. **Medical**
		1. Southern Fluid Solutions, LLC employees will not be involved in work that would require a respirator, thus there will not be a need to obtain a medical respirator evaluation.
	5. **Training**
		1. Employees and other personnel visiting H2S locations who will not be involved in the work shall be briefed on the following prior to entering:
			1. Site-specific sources of H2S
			2. Health hazards of H2S
			3. Routes of egress
			4. Emergency assembly areas
			5. Applicable alarm signals and
			6. How to respond in the event of an emergency.
	6. **Rescue**
		1. Each employee, when working in a H2S designated area, shall plan and become familiar with self-escape procedures to include being aware of wind direction and obstacles to avoid when exiting the work area.
	7. **Monitors and Gas Detector Calibration**
		1. Each personal H2S monitor shall be calibrated at least monthly and the results recorded on the calibration log.

**Lockout/Tagout Plan**

**Authority and Scope**

**Regulation:** 29 CFR 1910.147

**Scope:** This Plan covers the control of hazardous energy (mechanical, hydraulic, pneumatic, chemical, thermal, or other energy) to prevent the unexpected or accidental starting or activating by employees of machinery or systems while they are being repaired, cleaned, and/or serviced, and to establish a safe and positive means of shutting down machinery, equipment, and systems.

**Policy Statement**

All employees will be protected from injuries caused by unexpected energizing or startup of machines or equipment, or release of stored energy during service, repair, maintenance, operation, and associated activities. This Plan establishes minimum performance requirements for the control of such potentially hazardous conditions. This will be accomplished by locking out and/or tagging out energy-isolating devices, and otherwise disabling machines or equipment to prevent unexpected energizing, start-up, or release of stored energy.

**Plan Administration**

**Southern Fluid Solutions, LLC Management.** Southern Fluid Solutions, LLC Management or their designee will ensure compliance with all hazardous energy-control procedures, provide the necessary information to lock out or tag out energy-isolating devices, and conduct periodic inspections to ensure that the hazardous energy-control procedures are being followed.

Southern Fluid Solutions, LLC Management or their designee will conduct training for authorized and affected employees, and provide retraining whenever there is a change in an employee’s job assignments; a change in machines, equipment, or processes that present a new hazard; a change in the lockout or tagout procedures; or whenever and employee demonstrates a lack of knowledge or skill in lockout or tagout procedures.

**Authorized employees.** Authorized employees will recognize and control hazardous energy sources and implement established lockout/tagout procedures.

**Affected employees**. Affected employees will be familiar with the purpose and use of lockout/tagout procedures and will be responsible for ensuring they do not attempt to restart or reenergize machines or equipment that are locked out or tagged out.

**Definitions**

*Affected employee*--an employee whose job requires him or her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him or her to work in an area in which such servicing or maintenance is being performed.

*Authorized employee*--a person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee’s duties include performing servicing or maintenance covered under this section.

*Energy-isolating device*--a mechanical device that physically prevents the transmission or release of energy, including, but not limited to, the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit-type devices are not energy-isolating devices.

*Energy source*--any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

*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.

*Lockout device*--a device that utilizes a positive means such as a lock, either key or combination type, to hold an energy-isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

*Other employee*--a person who works near machines or equipment during servicing or maintenance.

*Tagout*--the placement of a tagout device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

*Tagout device*--a prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy-isolating device in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the tagout device is removed.

**Tasks that Require Lockout and Tagout**

This Plan applies to the control of energy during servicing and/or maintenance of machines and equipment that could unexpectedly energize, start up, or release stored energy, and injure employees. It applies to normal production operations when an employee is required to remove or bypass a guard or other safety device, or places any part of his or her body into an area on a machine or piece of equipment where work is actually performed on the material being processed (point of operation), or where an associated danger zone exists during a machine operating cycle.

**Exceptions**

The following tasks do not require lockout or tagout procedures:

* Work on cord and plug-connected electric equipment for which exposure to the hazards of unexpected energization or start-up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
* Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water, or petroleum products when they are performed on pressurized pipelines, provided that the employer demonstrates that:
	+ Continuity of service is essential;
	+ Shutdown of the system is impractical; and
	+ Documented procedures are followed, and special equipment is used that will provide proven, effective protection for employees.

**Hazardous Energy Control Procedures**

***General Use of Hazardous Energy-Control Devices***

Lockout and tagout devices will be the only devices used for controlling hazardous energy and will not be used for any other purposes. Any devices used for lockout/tagout will be capable of withstanding the environment to which they are exposed for the maximum period they are expected to be exposed.

*Employee Compliance*

Lockout or tagout procedures may be performed by authorized employees only. All employees are required to comply with the restrictions and limitations imposed on them during the use of lockout. All affected employees, upon observing a machine or piece of equipment that is locked out to perform servicing or maintenance, will not attempt to start, energize, or use that machine or equipment.

*Lockout Devices*

Lockout is the primary and preferred method for controlling hazardous energy. During servicing or maintenance, a machine utilizing any mechanical power source such as electrical, pneumatic, steam, hydraulic, and/or air will be locked out when the unexpected energizing or start-up of the machine or equipment or release of stored energy could cause injury to employees. The lockout will render the machine inoperative and immovable. Lockout devices will be substantial enough to prevent removal without excessive force (i.e., use of bolt cutters or other metal-cutting tools). Lockout devices will indicate the identity of the employee who applied the device.

*Tagout Devices*

When the energy-isolating devices are not lockable, or they are capable of being locked out, but locks are not available, tagout will be used. Energy-isolating devices will be tagged out of service with a warning tag attached at the power source. In the case of a plug-in power source, the tag will be attached at the plug. Tagout devices will be substantial enough to prevent inadvertent or accidental removal. They will be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.

Tags will be designed to not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored. They will be non-reusable, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and have the same resilience of a one-piece, all-environment-tolerant nylon cable tie.

The tagout devices will indicate the identity of the employee applying the device(s).

Tagout devices will warn against hazardous conditions if the machine or equipment is energized and will include a legend such as the following: “Do Not Start,” “Do Not Open,” “Do Not Close,” “Do Not Energize,” or “Do Not Operate.”

The tagout program at this facility is equivalent to the level of safety obtained by using a lockout program.

***Preparation for Lockout or Tagout***

Following are the general procedures to lock out or tag out machinery or equipment:

1. Notify all affected employees that servicing, or maintenance is required on a machine or equipment and that the machine or equipment will be shut down and locked out to perform the servicing or maintenance.
2. The authorized employee will identify the type and magnitude of the energy that the machine or equipment utilizes, will understand the hazards of the energy, and will know the methods to control the energy.
3. If the machine or equipment is operating, it will be shut down by the normal stopping procedure (depress the stop button, open switch, close valve, or other means).
4. Energy-isolating device(s) will be deactivated so that the machine or equipment is isolated from the energy source(s).
5. Each energy-isolating device will be locked or tagged out with assigned individual lock(s) or tag(s).
6. Stored or residual energy (e.g., energy in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure) will be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, or other appropriate means.
7. Authorized employees will verify that the equipment is disconnected from the energy source(s) by (a) checking that no personnel are exposed, then (b) verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. Caution: Operating control(s) must be returned to neutral or the “off” position after verifying the isolation of the equipment.
8. The machine or equipment is now locked or tagged out.

***Restoration of Service***

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the authorized employee will take the following steps:

1. Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and that the machine or equipment components and guards are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed from the area.
3. Verify that the controls are in neutral.
4. Remove the lockout or tagout devices and reenergize the machine or equipment. Note: The removal of some forms of blocking may require the machine to be reenergized before safe removal.
5. Notify affected employees that the lockout or tagout devices have been removed and the machine or equipment is ready for use.

***Testing of Systems or Equipment***

Whenever lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the system, equipment or component thereof, the following sequence of actions will be followed:

1. Clear the machine or equipment of tools and materials.
2. Remove employees from the machine or equipment area.
3. Remove the lockout or tagout devices.
4. Energize and proceed with testing or positioning.
5. Deenergize all systems and reapply energy control measures to continue the servicing and/or maintenance.

***Group Lockout/Tagout***

*Responsible Authorized Employee*

When the servicing and/or maintenance of an energized system or equipment will be performed by more than one person, an authorized employee will be assigned the responsibility to coordinate lockout/tagout under the protection of a group lockout or master tagout device. A master tag is a personal tagout device if each employee personally signs on and signs off on it and if the tag clearly identifies each authorized employee who is being protected by it. The responsible authorized employee will monitor the status of individual group members concerning the lockout or tagout of the machine or equipment.

When more than one crew, craft, or department is involved, an authorized employee will be assigned the responsibility to coordinate all the affected workforces and ensure continuity of protection. In the case of multiple crews working on the same lockout/tagout, each crew must have at least one authorized employee locked or tagged out on the isolating device. Group lockouts will not be allowed for Electrical work. During electrical work, each employee must be required to provide their own locks and tags.

*Group Procedures*

1. Before any machine or equipment is shut down, each authorized employee involved during the servicing or maintenance operation will be made aware of the type, magnitude, and hazards related to the energy to be controlled and of the method or means to control the energy. If the machine or equipment is already shut down, the authorized employee will be made aware of these elements before beginning his or her work.
2. An orderly shutdown of the machine or equipment will be conducted according to the Preparation for Lockout or Tagout section of this Plan, which will not create hazards.
3. All energy-isolating devices needed to isolate the machine or equipment will be positioned and/or installed.
4. Each authorized employee will place his or her own lock or tag to the *device used for lockout or the lockout point* when he or she begins work and will remove those devices when he or she stops working on the machine or equipment being serviced or maintained at each energy-isolating source. No employee may affix a personal lockout/tagout device for another employee.
5. Following the application of locks or tags, all potentially hazardous stored energy or residual energy will be relieved, disconnected, restrained, and otherwise rendered safe.
6. Verification of energy isolation will be monitored as frequently as necessary if there is a possibility of re-accumulation of stored energy. Monitoring may be accomplished, for example, by observation or with the aid of a monitoring device that will sound an alarm if a hazardous energy level is being approached.
7. Authorized employees will verify that isolation and de-energization have been effectively accomplished before starting servicing/maintenance work. Verification is also necessary by each group of workers before starting work at shift changes.
8. When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, each authorized employee will follow the procedures listed in the Restoration of Service section of this Plan.

*Procedure for the Emergency Removal of an Energy Control Device*

Southern Fluid Solutions, LLC Management or their designee may authorize the removal of a lockout or tagout device in the absence of the authorized employee that applied the device. If a lockout or tagout device must be removed and the authorized employee that applied it is not in the facility, the following procedure will be followed:

1. Verify that the authorized employee who applied the device is not in the facility.
2. Make reasonable efforts to advise the authorized employee that the device has been removed.
3. Ensure that the authorized employee is informed of the removal of the device before the employee resumes work at the facility.

***Procedures for Shift or Personnel Changes***

The following steps will be followed to ensure continuity of employee protection during shift or personnel changes:

1. All authorized employees involved in the maintenance or servicing activity will be notified that a transfer of personal locks/tags is about to occur.
2. All personnel will move away from hazardous area(s) of equipment.
3. Under the supervision of the shift supervisor or group designee, the off-going employee will remove his or her lock and tag, and the on-going employee will immediately install his or her lock and tag.
4. If more than one employee will transfer work responsibility, locks/tags will be removed and replaced one at a time in order of installation. All authorized employees transferring work responsibility must be present during this exchange.
5. When the transfer of lockout/tagout devices is complete, the effectiveness of all energy-isolating devices will be verified to the satisfaction of all personnel involved.
6. Once the effectiveness of energy isolation protection is confirmed, the service or maintenance operation may continue.

***Procedures for Contractors***

All contractors, including temporary employees, will be advised that Southern Fluid Solutions, LLC has and enforces the use of lockout and tagout procedures. They will be informed of the use of locks and tags and notified about the prohibition relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out. Southern Fluid Solutions, LLC will obtain information from the contractor about the restrictions and prohibitions associated with the contractor’s energy-control procedures and advise affected employees of this information.

**Program Inspection**

An inspection of all energy-control procedures will be conducted periodically to ensure that the procedures and the requirements of this Plan are being followed. An authorized employee (inspector) other than the authorized employee(s) implementing the energy-control procedure(s) being inspected will conduct the inspection.

Southern Fluid Solutions, LLC Management or their designee will ensure that any deviations or inadequacies identified during the inspection are corrected.

The inspection will include a review, between the inspector and each authorized employee, of that employee’s responsibilities under the energy-control procedure being inspected, including the limitations of tags when tagout systems are used.

**Employee Training**

***Initial Training***

*Authorized Employee*

Each authorized employee will be trained in the recognition of applicable hazardous energy sources, the types and magnitude of energy sources available in the workplace, and the methods and means necessary for energy isolation and control.

*Affected Employee*

Each affected employee (all employees other than authorized employees utilizing the lockout/tagout procedure) will be instructed in the purpose and use of the lockout/tagout procedure and the prohibition relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out.

Employees who exclusively perform functions related to normal production operations, and who perform servicing and/or maintenance under the protection of normal machine safeguarding, need only be trained as affected employees even if tagout procedures are used.

*Other Employees*

Other employees whose work operations are or may be in an area where energy-control procedures may be utilized will be instructed about the procedure and about their responsibility not to restart or reenergize machines or equipment that are locked out.

*Tagout Limitations*

Employees will be trained in the following limitations of tags:

* Tags are essentially warning devices affixed to energy-isolating devices and do not provide the physical restraint on those devices that is provided by a lock.
* When a tag is attached to an energy-isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
* Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area in order to be effective.
* Tags and their means of attachment must be made of materials that will withstand the environmental conditions encountered in the workplace.
* Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy-control program.
* Tags must be securely attached to energy-isolating devices so that they cannot be inadvertently or accidentally detached during use.

***Refresher Training***

Retraining for all authorized and affected employees will be provided to ensure employee proficiency and introduce new or revised control methods and procedures whenever:

* There is a change in their job assignments.
* There is a change in machines, equipment or processes that present a new hazard.
* There is a change in the energy control procedures.
* There are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

***Training Certification and Recordkeeping***

Southern Fluid Solutions, LLC will maintain written certification that training for each employee has been completed. The certification will include each trainee’s name and date that training was completed.

**Personal Protection Equipment (PPE) Plan**

**Authority and Scope**

**Regulation:** 29 CFR 1910.132 and 29 CFR 1910.133 (Eye and Face Protection), 29 CFR 1910.134, 29 CFR 1910.135, 29 CFR 1910.136, 29 CFR 1910.137, 29 CFR 1910.138, 30 CFR 77.1710.

**Scope:** This plan addresses the personal protective equipment for all employees, visitors, contractors, and others passing through PPE hazard areas.

**Policy Statement**

Southern Fluid Solutions, LLC is dedicated to protecting the safety and health of its employees. The company requires PPE of all employees working in areas or performing tasks that present a potential for bodily injury. The protective devices will be used in conjunction with machine and equipment protective devices, engineering controls, compliance with equipment and tool manufacturer specifications, and safe work practices.

**Plan Administration**

**Plan Administrator.** The Plan Administrator or their designee(s) will:

* Evaluate operations and work areas to determine personal protective equipment (PPE) requirements.
* Recommend PPE that conforms to applicable standards (e.g., American National Standards Institute (ANSI), National Institute for Occupational Safety and Health (NIOSH)).
* Maintain records of hazard assessments performed to identify PPE requirements.
* Provide information and training on PPE, including requirements, use, limitations, proper care, maintenance, useful life, and disposal.

**Supervisor(s).** Supervisors will ensure that:

* Ensure PPE is readily available to employees working in areas or performing operations that require PPE for protection.
* Enforce the use of PPE when required to protect employee health and safety.
* Ensure PPE is properly stored and maintained.

**Employees.** Employees that wear PPE will use, maintain, and store it in accordance with the procedures and instructions provided by the supervisor, Administrator or the manufacturers recommendations and will not use damaged or defective PPE. Employees will report all problems associated with PPE (i.e., damage, worn, or inadequate) to their supervisor. It shall be used and stored in a sanitary condition.

**Plan Review and Update**

This Plan will be reviewed and updated whenever:

* New hazards are identified.
* Operations at the facility change that require a revision to this Plan.
* An accident investigation or safety audit warrants a Plan revision.

**Definitions**

*Eye protection equipment*—Devices that protect the user from injury to the eyes, including safety glasses, chemical splash goggles, face shields, welding goggles, and welding face shields.

*Safety goggles/glasses*—Prescription or nonprescription lenses in frames

*Eye hazard operations*—Tasks that present a potential eye injury hazard. Eye protection should be worn during eye hazard operations, such as pouring or transferring hazardous liquids, grinding, and when using impact or power tools.

*Eye/face hazard area*—Work areas identified in the Hazard Assessment as high risk for eye or face injuries.

*Foot protection* – footwear must comply with any of the following consensus standards: ASTM F-2412-2005, ANSI Z41-1991 or ANSI Z41-1999.

*Hand protection* – must be applicable to the task at hand whether it be leather, rubber or electrical gloves.

*Head protection* – must comply with any of the following consensus standards: Z89-1-1986, Z89-1 – 1997 or Z89-1 – 2003.

*Reflective Vests or Coveralls:* reflective/fluorescent vests or coveralls shall meet ANSI 107-2004 Class 2 standards.

**Hazard Assessment**

The plan administrator or their designee(s) will conduct a hazard assessment for each work task and operation at the facility. Following is the process for evaluating the operations and tasks that present a potential eye or face injury hazard:

1. Conduct a survey of each work area to assess if hazards are present, or are likely to be present, for which the use of PPE is needed. The Administrator will also provide worksite evaluations of any operation at the request of a supervisor or employee.
2. Review injury and illness records, the layout of the work areas, and the placement of workers in the work areas.
3. Collect and organize the data for each work area and estimate the potential for injuries according to the basic hazard categories and potential sources of injury and illness.
4. Determine the type, level of risk, and seriousness of potential injury from each of the hazards found in the work areas and evaluate the possibility of exposure to several hazards. During determination the employee shall be fitted for the correct PPE and size when applicable.
5. Categorize and record the hazards.
6. Determine what type of PPE will protect against the hazards that are found.
7. Incorporate the results of the assessment and recommendations for protection into the PPE plan. Ensure each assessment is in writing and signed by the supervisor.

**Reassessment of hazards.** The Administrator or their designee(s) will periodically reassess the workplace hazard situation by identifying and evaluating new equipment and processes, reviewing accident records, and reevaluating the suitability of previously selected PPE.

**Eye and Face Protection Procedures**

All persons who enter or work in eye and face hazard areas must wear protective eyewear or face protection. This includes employees, visitors, researchers, contractors, or others passing through an eye/face hazard area.

**PPE Supplies**

Supervisors of eye/face hazard areas will acquire and maintain an adequate supply of PPE for each eye/face hazard area that will provide the maximum amount of protection possible. If personnel in such areas wear personal glasses, they will be provided with a suitable eye protector to wear over them. Employee owned equipment shall be approved by management and shall be maintained in sanitary and usable conditions.

**Protective Eyewear and Face Shield Guidelines**

The following general eyewear guidelines will be followed by supervisors and employees in all eye/face hazard areas:

* Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment.
* Side protectors will be used on glasses or spectacles when there is a hazard from flying objects.
* Goggles and/or face shields will be used when there is a hazard from chemical splashes.
* Face shields will only be worn over primary eye protection (safety glasses or goggles).
* Eye protection must not interfere with the function of other required PPE.
* Eye protection must not restrict vision or movement.
* Eye protection will be cleaned and disinfected after each shift.
* Equipment fitted with appropriate filter lenses will be used to protect against light radiation. Tinted and shaded lenses are not considered filter lenses unless they are marked or identified as such.
* Eye and face PPE must be distinctly marked with the manufacturer’s identification.
* Tinted lenses will not be allowed when the area or time of day does not provide the appropriate light for safe work practices with tinted lenses in place.

**Prescription Safety Eyewear**

Any employee who wears prescription lenses while engaged in operations that involve eye hazards will wear eye protection that incorporates the prescription in its design, or will wear eye protection that can be worn over the prescription lenses (e.g., goggles or face shields) without disturbing the proper position of the prescription lenses or the protective lenses.

**Emergency Eyewash Facilities**

Emergency eyewash facilities meeting the requirements of ANSI Z358.1 will be provided in all

areas where the eyes of any employee may be exposed to corrosive materials. All such

emergency facilities will be located where they are easily accessible in an emergency. Field activities could replace eyewash facilities with the appropriate bottles of eyewash commensurate to the work activity.

**Protective Footwear**

Safety toed footwear shall always be worn while on client property. Footwear shall be properly maintained and shall have a distinctive 1/4" heal to meet ANSI and OSHA standards.

**Hand Protection**

Appropriate hand protection shall be used when employees’ hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

**Head Protection**

All employees are always required to wear a protective hard hat in any work area.

**Employee Training**

The Administrator or their designee(s) will provide training to each employee who is required to use PPE.

Each employee will be trained to know at least the following:

* When PPE is necessary
* What PPE is necessary
* How to properly put on, take off, adjust, and wear PPE
* The limitations of the PPE
* The proper care, maintenance, useful life, and disposal of PPE

When the Administrator has a reason to believe that any affected employee, who has already been trained, does not have the understanding and skills required to use the PPE, the Administrator will retrain such employee. Circumstances where retraining is required include:

* Changes in the workplace render the previous training obsolete; *or*
* Changes in the types of PPE to be used that render previous training obsolete; *or*
* Inadequacies in an affected employee’s knowledge or usage of the PPE.

Each affected employee will demonstrate an understanding of the training and the ability to use PPE properly before being allowed to perform work requiring the use of PPE. The Administrator or their designee(s) will verify that each affected employee has received and understood the required training through a written certification that contains:

* The name of each employee trained
* The date(s) of training
* The subject of the certification

 **Respiratory Protection Plan**

**POLICY STATEMENT**

It is the policy of Southern Fluid Solutions, LLC that all employees will be protected from exposure to airborne contamination by installing or implementing feasible engineering or administrative controls. If these controls do not prove feasible, or while they are being installed/instituted, appropriate respiratory protection will be provided.

**AUTHORITY AND SCOPE**

Regulation: 29 CFR 1910.134, 30 CFR 72.710

Scope: All employees with potential exposure to airborne contaminants that exceed or potentially exceed permissible exposure limits.

**Supervisors.** Supervisors are responsible for ensuring that the respiratory protection program is implemented in their areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Supervisors must:

* Ensure that employees under their supervision (including new hires) have received appropriate training, fit testing, and annual medical evaluation.
* 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 when necessary.
* Ensure that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
* Ensure that respirators fit well and do not cause discomfort.
* Continually monitor work areas and operations to identify respiratory hazards.
* Coordinate with Southern Fluid Solutions, LLC on how to address respiratory hazards or other concerns as they arise.

**Training coordinator.**  Southern Fluid Solutions, LLC Management will develop and update training programs and maintain a schedule of training for all employees who use respirators.

**Employees.** Each employee has the responsibility to wear his or her respirator when and where required and in the way the employee was trained. All employees who use respirators must:

* Care for and maintain their respirators as instructed and store them in a clean sanitary location.
* Inform the supervisor if a respirator no longer fits well and request a new one that fits properly.
* Inform the supervisor or Contractor of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns regarding the program.

**DEFINITIONS**

*Air-Purifying Respirator (APR)*--a respirator that filters and/or absorbs contaminants from the ambient air being inhaled by the wearer.

*Atmosphere-Supplying Respirator*--a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere and includes supplies air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

*Filtering facepiece (dust mask)* --a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

*Fit test*--the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

*Immediately dangerous to life or health (IDLH)*--an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

*Powered Air-Purifying Respirator (PAPR)*--an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

*Qualitative Fit Test (QLFT)*--a pass/fail test to assess the adequacy of respirator fit that relies on the individual’s response to the test agent.

*Quantitative Fit Test (QNFT)*--an assessment of the adequacy of respirator fit by numerically measuring the amount of the leakage into the respirator.

*Respirator*--a device provided to protect the wearer from inhalation of harmful or nuisance atmospheres and may function by air-purifying and/or air-supplying techniques.

*Supplied-air respirator (SAR) or airline respirator*--an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

**DETERMINATION OF NEED FOR RESPIRATORY PROTECTION**

Southern Fluid Solutions, LLC has determined that employees in the shop or field are exposed to respiratory hazards during routine operations. These hazards include Specific Chemical or Physical Hazard (e.g., Dust, Chemical Mists, Vapors, Biological Agents, or Immediately Dangerous to Life or Health Conditions)

Engineering controls, such as ventilation and substitution of less toxic materials, are the first line of defense at Southern Fluid Solutions, LLC. Engineering controls, however, are not always feasible for some of our operations, and have not always completely controlled the identified hazards. In these situations, respirators and other protective equipment are used. Respirators are also needed to protect employees’ health during emergencies. The work processes requiring respirator use are outlined in the *Program Scope and Application* section of this Plan.

**Voluntary respirator use.** Some employees have expressed a desire to wear respirators during certain operations that do not require respiratory protection. As a general policy Southern Fluid Solutions, LLC will review each of these requests on a case-by-case basis. If the use of respiratory protection in a specific case will not jeopardize the health or safety of the worker(s), Southern Fluid Solutions, LLC will provide respirators for voluntary use.

Any employee who voluntarily wears a respirator when a respirator is not required is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with information about respirator use and maintenance. Employees who usually voluntarily wear filtering facepieces (dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

Employees participating in the respiratory program do so at no cost to them. The expense associated with training, medical evaluations, and respiratory protection equipment will be borne by the company.

**PROGRAM ELEMENTS**

**Selection Procedures**

Southern Fluid Solutions, LLC will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with all OSHA standards.

***Hazard Evaluation***

Southern Fluid Solutions, LLC will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency. The hazard evaluation will include:

* Identification and development of a list of hazardous substances used in the workplace, by department, or work process.
* Review of work processes to determine where potential exposures to these hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing process records, and talking with employees and supervisors.
* Exposure monitoring to quantify potential hazardous exposures. Monitoring will be contracted out. Southern Fluid Solutions, LLC Management currently has a contract with Southern Fluid Solutions, LLC to provide monitoring when needed.

**Updating the hazard evaluation.** Southern Fluid Solutions, LLC must revise and update the hazard evaluation as needed (i.e., any time work process changes may potentially affect exposure). If an employee feels that respiratory protection is needed during an activity, the employee will contact a supervisor. Southern Fluid Solutions, LLC will evaluate the potential hazard, arranging for outside assistance as necessary. They will then communicate the results of that evaluation back to the employees. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks and this program will be updated accordingly.

***NIOSH Certification***

All respirators are certified by the National Institute for Occupational Safety and Health (NIOSH) and are used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters are labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while it is in use.

***Voluntary Respirator Use***

Employees choosing to wear a half-facepiece APR voluntarily must comply with the provisions of the Medical Evaluation, Respirator Use, and Cleaning, Maintenance, Change Schedules, and Storage sections of this Plan.

**Medical Evaluation**

Employees who are either required to wear respirators, or who choose to wear an APR voluntarily, must pass a medical exam before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use.

After an employee has received clearance and begun to wear the respirator, additional medical evaluations will be provided under the following circumstances:

* The employee reports signs and/or symptoms related to the ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
* A Physician or Medical Facility informs the employee that he or she needs to be re-evaluated.
* Information from this Plan, including observations made during fit testing and program evaluation, indicates a need for re-evaluation.
* A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

All examinations and questionnaires are to remain confidential between the employee and the physician.

**Fit Testing**

All employees who are required to wear respirators (except dust masks) must pass the fit test for the respirator that they will wear on the job. The attachment lists the respirator fit-testing requirements at the facility.

Employees who are required to wear tight-fitting respirators will be fit tested:

* Prior to being allowed to wear any respirator with a tight fitting facepiece
* Annually
* When there are changes in the employee’s physical condition that could affect the fit of a respirator (i.e., obvious change in body weight, or facial scarring)
* With the make, model, and size of respirator that they will wear.

Employees will be provided with several models and sizes of respirators so that they may find an optimal fit.

Employees that voluntarily wear tight-fitting respirators may also be fit tested upon request.

Fit tests will be conducted that follow the respirator fit test and user seal check protocols described in Attachment Number, *OSHA Fit Testing Procedures and User Seal Check Procedures*.

If an employee who has been fit-tested subsequently notifies a supervisor or medical surveillance coordinator that the fit of the respirator is unacceptable, the employee may select a different respirator facepiece and be retested.

**Respirator Use**

***General Use Procedures***

Employees will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of each model. In addition, the respirator will not be used in a manner for which it is not certified by NIOSH or by its manufacturer.

All employees will conduct user seal checks each time that they wear their respirator. Employees will use either positive or negative pressure check (depending on which test works best for them).

Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal. Employees are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

***Respirator Malfunction***

**Air Purifying Respirator malfunction.** For any malfunction of an APR (i.e., such as breakthrough, facepiece leakage, or improperly working valve), the respirator wearer will inform his or her supervisor that the respirator no longer functions as intended, and the wearer will go to the designated safe area to repair or replace the respirator. The supervisor must ensure that the employee receives the needed parts to repair the respirator or is provided with a new respirator.

**Atmosphere-supplying respirator malfunction.** All workers wearing atmosphere-supplying respirators will work with a buddy. Buddies will assist workers who experience an SAR malfunction as follows:

***Special Requirements for Confined Spaces—IDLH Procedures***

Certain work areas, including confined spaces, have the potential for IDLH conditions.

In IDLH areas, self-contained breathing apparatus (SCBA), airline respirators or hose masks with blowers will be used. For emergency rescue, a standby person with suitable SCBA will be at the nearest fresh air source. Communications (i.e., visual, voice, or signal line) will be maintained between all individuals present. Any employees using airline respirators and hose masks with blowers will be equipped with safety harnesses and safety lines for lifting or removing them from hazardous atmospheres, or other equivalent provisions for rescue from hazardous atmospheres will be used.

**Air Quality**

For supplied-air respirators, only Grade D breathing air is used in the cylinders. Southern Fluid Solutions, LLC will coordinate deliveries of compressed air and certify that the air in the cylinders meets the specifications of Grade D breathing air.

A minimum air supply of one fully charged replacement cylinder for each SAR unit will be maintained. In addition, cylinders may be recharged as necessary from any available breathing air cascade system located near the respirator storage area.

**Cleaning, Maintenance, Change Schedules, and Storage**

***Cleaning***

Respirators are to be regularly cleaned and disinfected at the designated respirator cleaning station.

Respirators issued for the exclusive use of an employee will be cleaned as often as necessary, but at least once a day.

Atmosphere-supplying and emergency use respirators are to be cleaned and disinfected after each use.

The following procedure will be used when cleaning and disinfecting respirators:

* Disassemble the respirator, removing any filters, canisters, or cartridges.
* Wash the facepiece and associated parts in a mild detergent with warm water. Do not use organic solvents.
* Rinse completely in clean warm water.
* Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs.
* Air-dry in a clean area.
* Replace any defective parts.
* Reassemble the respirator.
* Place in a clean, dry plastic bag or other airtight container.

Southern Fluid Solutions, LLC will ensure an adequate supply of appropriate cleaning and disinfection material at the cleaning station. If supplies are low, employees should contact their supervisor.

***Maintenance and Inspection***

Respirators are always to be properly maintained in order to ensure that they function properly and adequately protect the employee. Following are the general respirator maintenance procedures for all work areas:

* Maintenance involves a thorough visual inspection for cleanliness and defects.
* Worn or deteriorated parts will be replaced prior to use.
* No components will be replaced, or repairs made beyond those recommended by the manufacturer.
* Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.

***Storage***

Respirators must be stored in a clean, dry area, and in accordance with the manufacturer’s recommendations. Each employee will clean and inspect his/her own air-purifying respirator in accordance with this Plan and will store his/her respirator in a plastic bag in his/her own locker or storage location. Each bag will only be used to store that employee’s respirator.

Atmosphere-supplying respirators will be stored as designated by the Southern Fluid Solutions, LLC. Southern Fluid Solutions, LLC Management will ensure that the supply of respirators and respirator components are stored properly

***Defective Respirators***

Respirators that are defective or have defective parts will be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she is to bring the defect to the attention of his/her supervisor.

**TRAINING**

All respirator users and their supervisors will be informed of the contents of this Plan and their responsibilities under it, and on the applicable regulations. Respirator users will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to using a respirator in the workplace or prior to supervising employees who must wear respirators.

Employees will be retrained at least annually, or more often as needed.