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Foundation	5
Purpose	5
Scope	5
Authorized Users	5
Legal Compliance.....	5
Life Saving Rules	6
LSR's.....	6
Requirements	6
Bypassing Safety Controls	6
Confined Space Entry	6
Driving	6
Energy Isolation	7
Hot Work.....	7
Line of Fire.....	7
Mechanical Lifting	7
Work Authorization.....	8
Working at Height	8
General Requirements	9
Short Service Employees (SSE)	9
Site Management	9
Good Housekeeping	9
Waste Management.....	10
Good Neighbor Practice.....	10
Incident Reporting	10
Reporting Requirements	11
Incident Investigation.....	11
S.T.O.P. Work Authority	11
Good Catch Program	11
Tools and Equipment.....	12

Hand Tools	12
Electrical Tools and Equipment	13
Heavy Equipment	13
Lifting and Rigging	14
Cranes.....	15
Critical Lifts with Cranes.....	15
Ladders	15
Vehicle Operations	16
Vehicle Safety	16
Parking vehicles	16
Reversing Truck and Trailer Combinations	16
Using a Spotter	16
ATV/UTV Operations	17
Powered Industrial Trucks (Forklifts)	17
Safety Requirements	18
Disaster Response	18
Emergency Action Plan	18
Emergency Action Plan – Unique Rescue	18
Emergency Response	19
Environmental / Atmospheric Release Plan.....	19
Environmental / Atmospheric Release Response	19
Environmental / Atmospheric Release Clean-Up.....	20
Site Safety	20
Job Safety Analysis	20
Pre-Job Safety Meetings	21
Site Inspection	21
Naturally Occurring Radioactive Material Contamination	22
Alcohol or Drugs	22
Weapons	23
Smoking.....	23
Storm Water	23
Personal Safety.....	24
Required PPE.....	24
Additional PPE.....	24
Fire Protection	24
Fall Protection.....	25
Heat and Cold Stress	25
Working During Lightning	25
Length of Workdays	25

Respiratory Safety	26
Areas Requiring Respiratory Protection	26
Respiratory Protection Equipment.....	26
Using Respiratory Equipment	26
Fixed Area Monitoring Devices.....	26
Personal Monitoring Devices	27
Energy Isolation	27
Lockout/Tagout	27
Operation Specific Requirements	28
Working near Hydrogen Sulfide (H ₂ S)	28
H ₂ S Monitoring	28
H ₂ S Alarm	28
H ₂ S Signage	29
H ₂ S Respiratory Protection	29
Working Near Overhead Power Lines	29
Overhead Power Lines	29
Barricades and Signage	30
Clearance Distance to Overhead Power Lines During Operation	30
Clearance Distance to Overhead Power Lines in Transit.....	31
Confined Space Entry.....	31
Confined Space Entry Requirements	31
Confined Space Entry Permit.....	31
Hot Work	32
Types of Hot Work.....	32
Hot Work Permits.....	32
Conducting Hot Work.....	32
Compressed Gas Cylinders	33
Handling Compressed Gas Cylinders.....	33
Using Compressed Gas Cylinders	33
Storing Compressed Gas Cylinders.....	33
Working with Flammable and Combustible Liquids.....	33
Work with Flammable and Combustible Liquids	33
Vehicle Transfer of Liquids.....	34
Storing Flammable or Combustible Liquids.....	34
Working with Chemicals.....	34
Working with Chemicals	34
SDS for Chemicals.....	35
Labelling Chemicals	35

Working with Electricity	35
Electrical Safety	35
Work with Electricity Over 50 Volts	35
Electrical Equipment	36
Non-qualified Electrical Workers	36
Static Electricity	36
Trenching and Excavation.....	37
Preparing to Trench and Excavate	37
Trenching and Excavation Deeper than 4 Feet	37
Conducting Trenching and Excavation.....	38
Ground Disturbance Notification Required.....	38
Ground Disturbance Notification Not Required.....	38
Document Control Table.....	39
Appendix – Field Safety Expectations	40

Foundation

Purpose

The purpose of this handbook is to describe Expand Energy's (EXE) minimum requirements for contractors, and subcontractors, who perform work at all EXE workplaces to ensure:

- A consistent approach to contractor operations.
- The safety of personnel and equipment during contractor operations.

Scope

The scope of this handbook is bound by the following limits:

In scope:	Out of scope:
All EXE Workplaces	<ul style="list-style-type: none"> • Non-operational control contractors • Vendors that provide goods only

Authorized Users

Authorized users of this handbook include personnel working in the following roles:

- Contractors
- Subcontractors
- EXE Representatives

Authorized contractors and subcontractors must complete the following training:

- SafeLand, SafeGulf or RigPass Orientation.
- Expand Contractor Orientation on an annual basis.



NOTE: Contractors are subject to inspections or audit of training records by HSE at any time.

Legal Compliance

Contractors are required to be compliant with all applicable legislation and standards, including:

- Federal, state, and local laws.
- Required environmental and/or safety permits.

Life Saving Rules

LSR's

Expand's nine Life Saving Rules (LSR's), and the actions individuals should take to protect themselves and others, are aimed at the activities that have historically posed the greatest risk of Serious Incidents and Fatalities in our industry.

Requirements

Before any LSR activity is conducted, a specific JSA must be performed to identify and mitigate applicable hazards.

Bypassing Safety Controls



Obtain authorization before overriding or disabling safety-controls.

- Understand and use safety-critical equipment and procedures which apply to the task at hand.
- Obtain authorization before:
 - disabling or overriding safety equipment
 - deviating from procedures
 - crossing a barrier

Confined Space Entry



Obtain authorization before entering a confined space.

- Confirm energy sources are isolated.
- Confirm the atmosphere has been tested and is monitored.
- Check and use breathing apparatus when required.
- Confirm there is an attendant standing by.
- Rescue plan in place for permit space.
- Obtain a permit to enter.

Driving



Follow safe driving rules.

- Always wear a seat belt.
- Do not exceed the speed limit and reduce speed for road conditions.
- Do not use phones unless hands free or operate devices while driving.
- Ensure the driver is fit, rested and fully alert.

Energy Isolation



Verify isolation and zero energy before work begins.

- Identify all energy sources.
- Confirm that hazard energy sources have been isolated, locked, and tagged.
- Check to see there is zero energy and test for stored energy.

Hot Work



Control flammables and ignition sources.

- Identify and control ignition sources.
- Before starting any hot work:
 - Confirm flammables have been removed or isolated
 - Obtain authorization
- Before starting hot work in a hazardous area, confirm:
 - A gas test has been completed
 - Gas will be monitored continuously

Line of Fire



Keep yourself and others out of the line of fire.

- Position yourself to avoid:
 - Moving objects
 - Vehicles
 - Pressure releases
 - Dropped objects
- Establish and obey barriers and exclusion zones.
- Take action to secure loose objects and report potential dropped objects.

Mechanical Lifting



Plan lifting operations and control the area.

- Confirm the equipment and load have been inspected and are fit for purpose.
- Only qualified persons shall operate equipment.
- Establish and obey barriers and exclusion zones.
- Never walk under a suspended load.

Work Authorization



Work with a valid permit when required

- Confirm if a permit is required.
- Ensure authorization to perform the work is in place.
- Understand the permit conditions.
- Confirm that hazards are controlled and it is safe to begin work.
- Stop and re-assess if conditions change.

Working at Height



Protect yourself against a fall when working at height.

- Inspect fall protection equipment before use.
- Secure tools and work materials to prevent dropped objects.
- Ensure 100% tie off to approved anchor points when outside a protected area.

General Requirements

Short Service Employees (SSE)

For short service employees (SSE), contractors are required to have:

- A process that distinguishes SSEs from experienced employees.
- A visual means to identify SSE workers (e.g., green hard hat, stickers).
- An appropriate ratio of SSEs to experienced workers for the task.

For SSEs, contractors must:

- Assign a mentor.
 - Verify job skill competencies before the SSE status is removed.
-

Site Management

Good Housekeeping

Unclean work surfaces or unsecured tools and equipment can cause personal injury. Good housekeeping is required to keep the following clean and orderly:

- Floors.
- Stairways.
- Work surfaces.
- Egress routes.

Tools and equipment are required to be:

- Secured, stacked or chocked.
 - Stored so it can be easily accessible.
-

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Waste Management

Contractors are required to manage waste generated from operations as follows:

- Remove waste from the workplace upon completion of work.
- Place solid waste in appropriate containers.
- Separate oil contaminated waste from general waste.
- Dispose of oil contaminated waste according to regulations.
- Dispose of hazardous waste in approved third-party containers.
- Use NORM qualified service companies to decontaminate or dispose of NORM contaminated materials.
- Do not bury or burn waste.

NOTE: Hazardous waste includes:



- Aerosol cans.
- Light bulbs.
- Batteries.
- Paints.
- Other chemicals.

Good Neighbor Practice

Contractors shall be a Good Neighbor:

- Minimize Ground disturbances.
- Utilize reasonable measures to protect the environment.
- Utilize applicable remediation and restoration practices.
- Drive responsibly on public and private roads.

Incident Reporting

Contractors are required to report the following types of incidents immediately to an EXE Representative:

- Injury.
- Illness.
- Environmental or Air release.
- Spill of product from primary containment.
- Property damage.
- Near miss.
- Permit violation.

Reporting Requirements

Incident Investigation

Contractors are required to investigate all reported incidents:

- Incidents must be investigated to determine the cause(s).
- Corrective actions must be implemented to prevent recurrence.
- Final investigation report(s) and corrective actions must be supplied to EXE within 30 days post-incident.
- * Exposure Categories for Significant Incidents or Fatalities (SIF) are noted on page 42.



NOTE: If external tests or validation are required then the incident report can be submitted after 30 days, with EXE approval.

S.T.O.P. Work Authority

Contractors are required to incorporate S.T.O.P. Work Authority into their work at EXE workplaces.

S – See unsafe or noncompliant behavior or process.

T – Tell someone immediately.

O – Order any unsafe behavior to cease.

P – Postpone operations until the behavior or process is compliant and safe to proceed.



NOTE: Stop Work Authority can be exercised by anyone at any time at any location.

Good Catch Program



Contractors are encouraged to participate in the Good Catch Program to identify hazardous situations that pose a risk to any of:

- Physical wellbeing.
- Property.
- Environment.



NOTE: Information about how to submit a Good Catch can be obtained from the EXE Representative.

Contractors are expected to report unethical, illegal or inappropriate behavior to the Ethics & Integrity Helpline. Reports can be made:

- In English or Spanish.
- 24 hours per day, 7 days per week.
- 365 days a year.



NOTE: To report anonymously, the Helpline can be reached at:

Phone: 1-866-291-3401

Secure Website: www.expandethics.com

Tools and Equipment

Hand Tools

Contractors are required to use hand tools as follows:

- As designed by the manufacturer.
- Maintain tools in good condition.
- Regularly inspect tools.
- Do not remove or modify guards on power tools.
- Only use intrinsically safe tools in areas that may contain flammable gases/vapors unless a hot work permit is completed.

Damaged tools must be:

- Repaired or replaced.
- Unplugged prior to maintenance.



NOTE: Mechanical damage can include:

- Exposed wiring.
- Frayed or deteriorated cord insulation.
- Bent or broken plug prong.

Electrical Tools and Equipment

Contractors must meet the following requirements when using electrical tools and equipment:

- Electrical cords and plugs with mechanical damage must be immediately tagged as defective and replaced.
- Portable electric equipment must be grounded or double insulated and equipped with GFCI.
- Only intrinsically safe tools **shall** be used inside a hazardous location.



NOTE: For further information on hazardous locations refer to:

- NFPA 70E Article 500.
- OSHA 1910.307.

Heavy Equipment

Contractors must meet the following requirements when operating heavy equipment:

- Equipment must be inspected prior to use.
- Seatbelts or other operator restraint systems must be used.
- Proof of operator certification must be made available upon request.
- Equipment must be equipped with a functional backup alarm or have a spotter.
- Spotters must be used when maneuvering heavy equipment.



NOTE: Heavy equipment includes:

- Cranes.
- Forklifts.
- Manlifts.
- Powered industrial trucks.

Lifting and Rigging

Contractors are required to use lifting and rigging equipment as follows:

- Equipment must be inspected prior to use.
- Equipment must be used in accordance with applicable regulatory and manufacturer's guidance.
- Equipment must be marked with the manufacturer's rated load capacity.
- Lifting devices that are not commercially manufactured must be certified by an engineer.
- Defective or damaged equipment must be immediately removed from service.

Lifting equipment must be attached to the load as follows:

- Use a secure attachment point to avoid the lifting equipment sliding off the tines (forks).
- Do not use free rigging to directly attach rigging equipment onto the tines of a powered industrial truck.

NOTE: Lifting and rigging equipment includes:



- Cables.
- Chains.
- Slings.
- Hooks.
- Lift beams.
- Spreader bars.

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Cranes

Prior to operating a crane, contractors are required to:

- Ensure that crane operators are properly trained, certified and licensed in that state. (when applicable)
- Conduct a planning meeting with the crane operator and the other workers involved in the lift.
- Review the job to be performed.
- Utilize outriggers to level crane.
- Set up barricades to prevent unauthorized personnel from entering hazardous areas.
- Set up matting boards, regardless of ground conditions.

When a crane is operating, contractors are required to:

- Operate within the load limits specified by the load chart.
- Maintain a minimum clearance distance of 10 feet from overhead power lines up to 50kV. (*See pp. 31-32 for additional clearance info.)

Cranes must be inspected at the following intervals:

- Every shift.
- Monthly.
- Annually
- Post assembly.

Critical Lifts with Cranes

Contract crane operator/lead riggers must meet the following requirements when conducting critical lifts:

- A critical lift plan must be submitted to EXE personnel prior to the lift.
- A pre-lift meeting must be conducted.

A critical lift plan is required when any one of the following situations apply:

- The load exceeds 75% of the crane's capacity.
- Two cranes are used simultaneously to lift the same object.
- When a load is being lifted over pressurized or live equipment.

Ladders

When ladders are required for use, they must be:

- Appropriate for the job.
- Used in accordance with manufacturer's recommendations and OSHA requirements.



NOTE: For OSHA requirements refer to:

- 29 CFR 1910.25-1910.27
- 29 CFR 1926.1053

Vehicle Operations

Vehicle Safety

When operating a vehicle on an EXE workplace, contractors must observe the following safety requirements:

- Always use seatbelts.
- Follow the 10-mph speed limit unless otherwise posted.
- Avoid driving in reverse if possible.
- Never use a cell phone while in motion.

Parking vehicles

When parking vehicles, contractors are required to do the following:

- Find a pull-through parking area when possible.
- Park in a way that ensures the vehicle will drive forward when leaving the parking spot.

Reversing Truck and Trailer Combinations

When reversing truck and trailer combinations, contractors are required to:

- Use a spotter.
- Immediately stop vehicle if visual contact with a spotter is lost.

If a spotter is not available, the driver must:

- Ensure the path of travel is free of obstructions.
- Walk the full length of the path of travel prior to reversing the vehicle.
- If vision is obstructed, stop the vehicle every 3 to 5 feet and walk around the vehicle to check the route.

Using a Spotter

While reversing or maneuvering equipment, spotters are required to:

- Monitor vehicle proximity to equipment or personnel.
- Be aware of the hazards associated with the task.
- Never get between the equipment they are spotting and any other structure.

Equipment operators are required to:

- Establish clear communication with the spotter before moving equipment.
- Communicate their intended path to the spotter before moving equipment.
- Maintain visual contact with the spotter.
- Stop movement immediately if they lose sight of the spotter.
- Complete equipment inspection prior to operating.

ATV/UTV Operations

Contractors are required to do the following when operating all-terrain vehicles (ATVs) or utility-terrain vehicles (UTVs):

- Review and follow all operating instructions.
- Conduct a visual inspection of equipment prior to use.
- Verify workers are trained according to the manufacturer's recommendations.
- Ensure that the operator and all passengers use the safety belts.
- Follow the manufacturer's maintenance and PPE recommendations.
- Do not modify vehicles in any way that affects their recommended mode of operation, speed, or safety.

Certain operations may require a risk assessment.

Powered Industrial Trucks (Forklifts)

Contractors operating powered industrial trucks are required to:

- Be certified in the operation and maintenance of the specific truck model.
- Operate and maintain trucks in accordance with regulatory requirements and manufacturer's recommendations.
- Verify the manufacturer has approved attachments used on a truck.
- Verify trucks have a label or other indicator of manufacturer's load ratings.

Powered industrial trucks must be inspected by the operator as follows:

- Prior to use.
- At the beginning of each shift, if trucks are used around-the-clock.

The following safety devices are required on all powered industrial trucks brought onto EXE workplaces:

- Operator controlled horn, whistle or other sound-producing device.
- Overhead guard for protection against falling objects.
- Seat belts or other restraint devices.

Backup alarm or signal person.

Safety Requirements

Disaster Response

Emergency Action Plan

Contractors are required to have an Emergency Action Plan (EAP), including:

- Site-specific evacuation information and alarms.
- Evacuation routes.
- Primary and alternate muster points.
- A method to maintain head counts of all personnel present.
- Plan to transport injured or ill persons to a hospital or evacuation site.
- Response to environmental emergencies.
- Plan to conduct evacuation drills as deemed necessary.

Contact information for the following must be included in the EAP:

- Emergency services.
- Hospitals.
- Jurisdictional authorities (e.g., lands and forests, environment).
- Contractor's designated contact (including after-hours information).
- Expand's designated contact (including after-hours information).

Emergency Action Plan – Unique Rescue

The EAP is required to include plans for unique rescue situations that apply to the scope of work, such as but not limited to:

- Suspended worker.
- Working on elevated platforms.
- Confined space.
- Water rescue.

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Emergency Response

If an emergency occurs, the following response is required:



1. All work is stopped.
2. Workers are evacuated to a muster point if required.
3. The situation is assessed for hazards and risks.
4. The area is secure.
5. 911 is called, if required.
6. First aid is provided.
7. Actions are taken to mitigate the hazard.
8. The local field office EXE Representative is notified



NOTE: The Expand Operations Center 24-hour emergency number is **1-405-935-7500**.

Environmental / Atmospheric Release Plan

Contractors are required to have a written environmental or atmospheric release plan, including training for:

- Spill response.
- Mitigation.

Environmental / Atmospheric Release Response

If an environmental or atmospheric release occurs, the following response is required:

1. The source of the release is stopped, if possible.
2. Workers are not exposed to hazardous situations.
3. The environmental impact is minimized.
4. The environmental impact is assessed.
5. Public access to the area is blocked, if necessary.
6. The local field office EXE Representative is notified.
7. The EXE Representative is notified about the location and size of the release immediately.



CAUTION: If spilled or released material leaves EXE property, it can enter a waterway or impact other sensitive receptors.

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Environmental / Atmospheric Release Clean-Up

Clean-up of any environmental or atmospheric release is required as follows:

- Contaminated and uncontaminated materials must not be mixed.
- Proper PPE must be worn.
- An EXE Representative must approve any temporary openings in a berm or dike.
- A berm, dike or drain gate must not be left open without authorization from EXE.

Site Safety

Job Safety Analysis

Contractors must conduct a Job Safety Analysis (JSA) as follows:

- At the beginning of the job as part of the pre-job safety meeting.
- Attended by all affected workers, including any simultaneous operations.
- For any tasks completed in addition to routine operations. (Updating JSA to reflect exposures to non-routine tasks.)

The purpose of a JSA is to identify and communicate:

- Job safety hazards, including environmental hazards.
- Tasks: step-by-step list of primary activities of the work.
- Methods to eliminate or mitigate identified hazard. (Controlling measures).
- Required PPE.

JSAs must be communicated as follows:

- To all affected personnel at the workplace.
- To affected personnel who arrive after the safety meeting.
- In a manner understandable by all personnel.
- Using an interpreter to address any language barrier, if needed.

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Pre-Job Safety Meetings

Contractors must conduct pre-job safety meetings:

- Daily for the duration of the job.
- Before returning to work after a safety or environmental incident.
- Before starting any work not covered in a previous pre-job safety meeting.
- Including Job Safety Analysis.
- With attendance documented.

The purpose of pre-job safety meetings is to inform workers of:

- Job scope.
- Safety and/or environmental aspects of the job.
- Their roles in performing the work.
- Identified hazards.
- Methods to eliminate or mitigate identified hazards.
- Prior lessons learned.

Contractors who arrive after the initial meeting must:

- Report to the Person in Charge (PIC).
- Be briefed on the current job status.

Site Inspection

Contractors must conduct and document periodic site inspections to:

- Protect workers from hazards that could affect health and safety.
- Eliminate conditions that create environmental risks.
- Identify and report unsafe or unacceptable environmental conditions.
- Provide copies of report(s) to the EXE Representative when requested.

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**Naturally Occurring
 Radioactive Material
 Contamination**

When Naturally Occurring Radioactive Material (NORM) contamination occurs, contractors are required to:

- Notify the EXE Representative immediately.
- Follow contractor internal NORM safety policies.
- Verify posted signs identify contaminated equipment or material.

NORM levels of equipment or material are considered to be contaminated when either of the following occurs:

- Radiation levels equal or exceed 50 µR/hr when screened with a properly functioning and calibrated radiation detection instrument.
- Radiation levels meet a lower applicable standard of the State or other regulatory agency.

Alcohol or Drugs

The following actions involving alcohol or drugs are prohibited on EXE property:

- Possession.
- Use.
- Being under the influence.
- Distribution.
- Manufacture.
- Sale.
- Transportation.

Examples of prohibited substances include:

- Alcohol.
- Illegal drugs.
- Designer drugs.
- Synthetic drugs.
- Prescription drugs, without a valid prescription.

Enforcement:

EXE may conduct random on-site drug and alcohol testing.



CAUTION: Possession or use of alcohol or drugs will result in removal from EXE property.

Weapons

The following actions involving firearms or other weapons are prohibited on EXE property, subject to local and state regulations:

- Possession.
- Use.
- Sale.

Enforcement:

EXE may conduct unannounced *searches* of persons, vehicles or devices.



CAUTION: Possession of firearms will result in removal from EXE property.

Smoking

Smoking the following is only permitted in designated smoking areas:

- Cigarettes.
- Cigars.
- e-cigarettes.
- Vapes.

Storm Water

Contractors are required to be aware of the following regarding storm water:

- Materials and chemicals left outside must be closed, covered or in secondary containment.
- Erosion and/or sediment discharge must be prevented.



CAUTION: If rainwater or other form of precipitation mix with materials or chemicals, this can cause contaminated runoff if the water gets outside of containment. Chemical contact with precipitation should be avoided.

Personal Safety

Required PPE

Contractors must perform a hazard assessment of the workplace to ensure workers have the proper PPE for the hazards present. Contractors must provide the following minimum PPE:

Equipment	Specification Requirement
Eye protection and side shields	OSHA 1910.133 and ANSI Z87.1-1989
Head protection – helmets and hard hats	OSHA 1910.135 and ANSI Z89.1-1997 Type I Class G for working at a field location. Type I Class E for electrical work.
Safety-toe footwear Rubber/neoprene boots Waterproof boots	Occupational Safety and Health Administration (OSHA) Standard 1910.136 and ASTM F 2412 / 2413 • Class 75 toe protection rating
FRC	NFPA 2112 or NFPA 70e



NOTE: Refer to OSHA 1910.132 for OSHA requirements.

Additional PPE

Additional PPE to meet specific site requirements may include but is not limited to:

- Chemical aprons.
- Face shields.
- Impact resistant or cut-resistant gloves.
- Appropriate welding filter lens shade number.
- Electrical/insulating gloves.
- Hearing Protection

Fire Protection

Contractors must supply fire protection equipment as follows:

- Portable fire extinguishers of adequate size for the hazards.
- The adequate number of extinguishers for the scope of work.



NOTE: Refer to NFPA 10 for sizing and placement of portable fire extinguishers.

Fall Protection

Contractors are required to provide fall protection when working at heights 4 feet or greater. The fall protection must comply with:

- 29 CFR 1910 Subpart D.
- 29 CFR 1926.500.
- ANSI Z359.

Heat and Cold Stress

Contractors are required to identify and implement controls to protect the health and safety of workers from heat and cold stress, including:

- Engineering controls.
- Appropriate number of workers to support scheduled breaks.
- Necessary PPE.
- Recognize signs and symptoms of heat or cold related illnesses.
- Consideration of weather and ambient temperatures.

When severe weather conditions create unacceptable risk to people or equipment:

- Work must stop immediately.
- Work must not re-start until a risk assessment is conducted.

Working During Lightning

Contractors must use a weather application to track lightning near an EXE workplace:

If	Then
Lightning strikes within 10 miles of the workplace	Suspend work for a minimum of 30 minutes.
Lightning strikes within 10 miles of the workplace while work is suspended	Suspend work for an additional 30 minutes.

Length of Workdays

The length of a contractor's workday is limited as follows:

- Work a maximum of 16 consecutive hours in a 24-hour period.
- Can be extended by 2 hours with approval from supervisor.
- Must not work at any EXE location for a minimum of 8 hours following an extension.

Respiratory Safety

Areas Requiring Respiratory Protection

Respiratory protection must be used in the following areas:

- Where atmospheric concentrations of H₂S meet or exceed 10 ppm.
- Confined space entry activities.
- Emergency responses to hydrocarbon release.
- Chemical exposures greater than an applicable standard (e.g., benzene, silica, H₂S, CO, etc.
- Tank sandblasting, painting, cleaning.

Respiratory Protection Equipment

Contractors shall meet the following requirements for respiratory protection equipment:

- Identify exposure to respiratory hazards.
- Supply workers with appropriate respiratory protection equipment.
- Train workers to use equipment.
- Maintain the equipment.
- Develop a Respiratory Protection Program compliant with OSHA regulation.



NOTE: Refer to 29 CFR 1910.132 for OSHA requirements.

Using Respiratory Equipment

Before using respiratory equipment, contractors are required to:

- Obtain medical approval.
- Be fit-tested.
- Be trained in the use of respiratory protection devices.
- Be clean-shaven in areas where they are required to wear respirators.

Fixed Area Monitoring Devices

Fixed area monitoring can be used:

- In place of personal monitoring devices for work activities directly over the wellbore. (e.g., drilling, completions, and workover operations)
- A formal risk assessment must be completed.

Personal Monitoring Devices

4- gas personal monitoring devices shall be worn at all EXE workplaces with flammable hydrocarbons present or the potential to be present:

- Within the breathing zone.
- On the outer most layer of clothing.

Alarm set points must be as follows:

	High Alarm	Low Alarm
LEL (% LEL)	20	10
O ₂ (%)	23.5	19.5
CO (ppm)	200	50
H ₂ S (ppm)	20	10

Energy Isolation

Lockout/Tagout

Contractors must meet the following Energy Isolation requirements for lockout/tagout:

- Supply lockout/tagout devices.
- Coordinate all lockout/tagout activities with the EXE Representative.
- Notify affected personnel before removing any equipment from service.
- Examine the equipment to be isolated
- Agree on all isolation points with EXE Representative.
- Communicate the lockout/tagout plan to all affected personnel prior to starting lockout/tagout.
- All individuals involved in the energy isolation process must be authorized and equipped with their own personal Lockout/Tagout (LOTO) device securely attached.



NOTE: Refer to 29 CFR 1910.147 for OSHA requirements.

Operation Specific Requirements

Working near Hydrogen Sulfide (H₂S)

H₂S Monitoring

Contractors working on EXE sites with a known presence of H₂S must meet the following requirements:

- Complete H₂S awareness training prior to starting work.
- Provide and use H₂S monitoring equipment for all workers.
- Wear personal monitors outside clothing, within the breathing zone.
- Follow manufacturer's recommendations for the use and maintenance of H₂S monitoring equipment.
- Comply with posted signs for presence of H₂S.
- Note wind direction prior to entering workplaces.
- If possible, remain upwind of the source of H₂S while working.
- When you have a rescue there shall be a standby person trained onsite.

Where hydrocarbons and H₂S are present, monitoring is required for:

- H₂S concentration.
- Vapor flammability limits (LEL).



WARNING: H₂S is commonly encountered in combination with hydrocarbon materials.

H₂S Alarm

If an H₂S alarm is triggered, the following response is required:

1.	The area is immediately evacuated.
2.	Workers are evacuated to a muster point.
3.	The EXE Representative is notified
4.	The area is cleared by the EXE Representative or 3 rd party provider before workers return.

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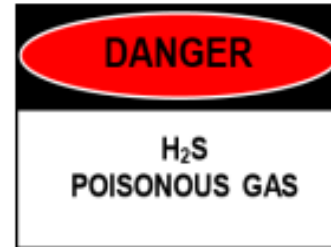
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H₂S Signage

Signs displayed at H₂S locations are dependent upon the concentration of H₂S in the site's production gas stream:



"H₂S concentrations exceeds 10ppm"



"H₂S concentrations exceed 100ppm."

H₂S Respiratory Protection

Contractors are required to wear respiratory protection as follows:

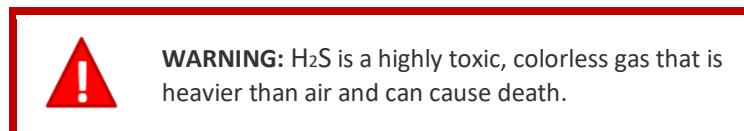
- When atmospheric concentrations of H₂S are determined to exceed 10 ppm.
- Where exposure may exceed 10ppm averaged over an 8-hour period.

Only the following approved National Institute for Occupational Safety and Health (NIOSH) respiratory equipment must be used:

- Positive pressure self-contained breathing apparatus (SCBA).
- Positive pressure supplied air respirator (SAR) units with an emergency escape bottle.

Stand-by personnel are required anytime persons are working in atmospheric concentrations of H₂S at or above the Immediately Dangerous to Life and Health (IDLH) exposure limit of 100 ppm.

- Standby personnel must remain outside the 100 ppm area.
- Standby personnel shall be equipped with positive pressure SCBA.



Working Near Overhead Power Lines

Overhead Power Lines

Contractors are required to be aware of the following when working near overhead power lines:

- Overhead power lines must be identified on the JSA.
- Hazard controls must be identified by the JSA.

Barricades and Signage

Barricades and signage must be used for the following situations involving elevating mobile equipment:

- Barricades must be used to prevent equipment from impeding clearance distances.
- Barricades must be used to limit crossings under power lines to designate areas.
- Signs must be used with barricades or temporary fencing.
- Temporary overhead signage is recommended for short-term operations.



NOTE: Elevating mobile equipment is mobile equipment that is able to reach an overhead power line, for example:

- Manlifts.
- Track conveyors.
- Dump trucks.
- Rigs.

Clearance Distance to Overhead Power Lines During Operation

The minimum clearance distances to electrical lines or electrical cables for elevating mobile equipment during operation is:

Voltage (kV ac)	Minimum Clearance Distance(feet) during operation
Up to 50	10 (controls required <20ft)
Over 50 to 200	15 (controls required <20ft)
200 to 350	20
Over 350 to 1000	45
Over 1000	Check with operator/engineer

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Clearance Distance to Overhead Power Lines in Transit

The minimum clearance distances to overhead power lines for elevating mobile equipment while in transit is:

Voltage (kV ac)	Minimum Clearance Distance (feet) in transit
Up to 0.75	4
Over 0.75 to 50	6
Over 50 to 345	10
Over 345 to 750	16
Over 750 to 1000	20

Confined Space Entry

Confined Space Entry Requirements

Contractors who perform confined space entry work are required to:

- Have a Confined Space Entry Program that complies with OSHA requirements.
- Train workers to use the process.



NOTE: Refer to 29 CFR 1910.146 for OSHA requirements.

Confined Space Entry Permit

The requirements for confined space permit are as follows:

- The permit or written certification must remain at the job site for the duration of the work.
- A copy of the applicable permit or Reclassification Checklist/Certification must be submitted to the EXE Representative upon completion of the job.

Hot Work

Contractors are required to obtain a Hot Work Permit for the following types of hot work:

Types of Hot Work

- Open Flame hot work within 75 feet of above ground hydrocarbon-containing or flammable-containing equipment, or within 35 feet of combustible materials, or within 35 feet of vehicles transporting hydrocarbons or produced water.
- Non-Open Flame hot work within 10 feet of above ground hydrocarbon-containing or flammable-containing equipment.

Open flame hot work tasks that require a hot work permit includes:

- Welding and brazing.
- Torch Cutting.
- Grinding.
- Sandblasting.
- Chipping.
- Using spark producing power tools or other equipment.



NOTE: Refer to 29 CFR 1910.252 for OSHA requirements.

Contractors must meet the following requirements for Hot Work permits:

Hot Work Permits

- Ensure permit remains at the job site for the duration of the work.
- Submit a copy of the permit to the EXE Representative upon completion of the job.

Contractors must ensure the following requirements are met when conducting hot work:

Conducting Hot Work

- Qualified workers conduct the hot work.
- Initial air monitoring is conducted.
- Periodic or continuous air monitoring is conducted.
- Internal combustion engines are continuously monitored when operating within 35 feet of a flammable or combustible source.
- A designated Fire Watch is available.
- The Fire Watch remains at the job site for at least 30 minutes after the hot work is completed to extinguish possible smoldering fires.

Compressed Gas Cylinders

Handling Compressed Gas Cylinders

Contractors who work with compressed gas cylinders shall:

- Keep protective caps on cylinders when not in use or when moving.
- Properly secure cylinders at all times.
- Cylinder contents must be properly labeled. Reject cylinders and return to vendor if not properly labeled.
- Close all valves when not in use. Cylinder valves must have a handle or other shutoff mechanism in place while in use.
- Regulators are to be removed from cylinders when not in use unless the regulator is designed to be capped or the cylinders are in an approved welding cart.
- Use proper lifting methods/devices (i.e., cradles) for cylinders. Do not lift by the valve or protective cap. Ropes and slings are not to be used for lifting cylinders.

Using Compressed Gas Cylinders

- Never use a cylinder of compressed gas without a pressure-reducing regulator connected to the cylinder valve.
- Always close the cylinder valve before attempting to stop leaks.
- Do not use oil or grease as a lubricant on valves or attachments to oxygen cylinders.
- Threads on fittings must correspond to cylinder valve outlets.
- Check valves/flame arrestors are to be utilized on fuel gas/oxygen systems.

Storing Compressed Gas Cylinders

- Always store cylinders in an upright position.
- Secure cylinders with chain.
- Do not store oxygen cylinders within 20-ft. (6 m) of combustible materials or fuel gases unless divided by a 5-ft. (1.75 m) fire-resistant wall rated for one half hour.
- Store empty and full cylinders separately.

Working with Flammable and Combustible Liquids

Work with Flammable and Combustible Liquids

Contractors who work with flammable or combustible liquids are required to:

- Be compliant with 29 CFR 1910.106.
- Comply with area-specific practices.
- Secure all cam lock fittings in flammable/combustible service.

Vehicle Transfer of Liquids

Vehicles used to transfer flammable or combustible liquids must meet the following requirements:

- Fuel trucks must be properly bonded and grounded during fuel transfer operation.
- Bulk transporters or tank trucks must use bonding and grounding equipment.
- Fuel nozzles capable of locking the handle open during fluid transfers are prohibited.
- During fueling operations, the shut-off must be continuously monitored/manned.
- Fuel hoses must not be routed under equipment.



WARNING: If vehicles are not bonded and grounded then static electrical discharge may cause flammable vapors to ignite.

Storing Flammable or Combustible Liquids

Portable tanks and drums used for storing flammable or combustible liquids must be:

- Type 1 or Type 2 approved metal or high-density polyethylene safety cans.
- Constructed of metal unless the liquid is corrosive to metal.
- Adequately vented with flame arresting capability whenever possible.
- Equipped with self-closing spouts and secondary containment to prevent spills to the environment.
- Located at least 35 feet from electrical and mechanical equipment, or other ignition sources.

Working with Chemicals

Working with Chemicals

Contractors who work with chemicals are required to:

- Know the hazards of each chemical.
- Know the necessary precautions.
- Have the required PPE as outlined in SDS.
- Have an approved written Hazard Communication Program.



NOTE: Refer to 29 CFR 1910.1200 for OSHA requirements.

SDS for Chemicals

Contractors must meet the following requirements for Safety Data Sheets (SDS) for chemicals:

- Provide an SDS for chemicals they bring to the workplace prior to, or at time of delivery.
- Be aware of SDS locations and availability.
- Refer to the SDS any time a job task involves contact with a known or suspected hazardous material.



NOTE: SDS for Expand supplied chemicals are available at the local office or by asking the Expand Representative.

Labelling Chemicals

Contractors must meet the following requirements for labelling chemicals:

- Label all original chemical containers with the original manufacturer's label or an approved warning label.
- Label all portable tanks with the original manufacturer's label or an approved warning label.
- Ensure labels are legible.

Working with Electricity

Electrical Safety

To ensure worker safety when working with electrical, contractors are required to:

- Provide all required training to work on electrical installations.
- Consider Industry-recommended best practices.
- Comply with applicable local codes and regulations for the project.
- Identify all work on energized circuits through hazard assessment.
- Where practical, follow lockout/tagout procedure to place circuits in energy isolation before performing electrical work.

Work with Electricity Over 50 Volts

Contractors are required to know the following to perform service and maintenance activities on electrical systems over 50 volts:

- How to distinguish between exposed energized parts of electrical equipment and non-energized parts.
- Lockout and tagout procedures.
- How to determine the nominal voltage of exposed energized parts.
- The safe approach distance and corresponding voltage when working near exposed energized parts.
- Proper use of PPE at its corresponding voltage and kilovolt-ampere (kVa) level.

Electrical Equipment

Contractors are required to properly use and maintain the following electrical equipment:

- Insulating and shielding materials.
- Insulated tools.
- Grounding devices.
- Test instruments and their rating limits.
- Specialized electrical equipment.

Signs, tags and barricades to warn of electrical hazards.

Non-qualified Electrical Workers

When non-qualified workers are assigned to work with qualified electrical workers they must be instructed in:

- Safety precautions.
- Work procedures.
- Electrical hazards.

The Contractor is required to verify that:

- Required equipment is supplied and inspected prior to use.
- Required equipment is properly used and maintained.
- The safe limit of approach distances for workers and equipment is always maintained.



NOTE: Refer to NFPA 70E, Standard for Electrical Safety in the Workplace, for additional details.

Static Electricity

Contractors are required to do the following to prevent static electricity buildup:

- Attach a bonding cable between the containers before transferring liquid between containers or to/from a truck transport.
- Use NFPA metal containers when transferring flammable liquids.
- Ensure all conductive couplings and components are bonded and grounded when a nonconductive hose is used to transfer fluid.
- Ensure metal storage tanks are grounded to an earthen ground.
- Verify metal gauge line is touching the thief hatch before lowering the line into the tank while gauging.
- Bond tank trucks to storage tank before the transfer line is connected.
- Disconnect the transfer line before disconnecting the bond.



WARNING: Static electricity can be generated any time liquid (oil, water, or chemicals) or solid substances are flowed, splashed, sprayed or agitated.

Trenching and Excavation

Preparing to Trench and Excavate

Before conducting trenching and excavation activities contractors are required to do the following:

- Provide a Competent Person who must remain on-site for all excavations.
- Inspect the job site for evidence of unmarked or mis-marked utilities prior to starting work.
- Conduct a job safety assessment with affected personnel.
- Verify that there is an active One-Call ticket for the proposed excavation.
- Conduct atmospheric testing where there is potential for hazardous atmosphere.
- Provide adequate drainage or dikes to prevent surface water from entering.
- Remove any accumulated water.
- Brace the sides of the trench as necessary if heavy objects are operated or placed above or near to it.



NOTE: Refer to 29 CFR 1926.650 – 652 for OSHA requirements.

Trenching and Excavation Deeper than 4 Feet

Before conducting any trenching and excavation activities deeper than 4 feet, contractors must meet the following requirements:

- Evaluate the trench or excavation to determine if a permit is required.
- Provide a means of egress spaced no more than 25 feet apart, measured laterally.



NOTE: Refer to 29 CFR 1910.146(c)(7) for OSHA requirements.

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**Conducting
Trenching and
Excavation**

When conducting trenching and excavation activities, contractors are required to:

- Use manual methods when excavating within the tolerance zone.
- Do not use mechanical excavation methods within the tolerance zone.
- Do not conduct any ground disturbance outside the designated area.
- Immediately report any near miss or line strike involving a utility to a Expand Representative.



NOTE: The “tolerance zone” is the area within 24 inches of the outermost part of a utility, measured in all directions.

**Ground Disturbance
Notification
Required**

Contractors are required to follow State and local One-Call notification requirements for any ground disturbance activity that results in either:

- Ground penetration deeper than 6 inches by mechanical means.
- Ground penetration deeper than 18 inches by manual means.

A One-Call notification is required for the following activities when ground penetration is deeper than 6 inches:

- Driving T-posts or ground rods.
- Using a pickaxe.
- Using a post-hole digger.

**Ground Disturbance
Notification Not
Required**

Notification requirements for ground disturbance are not required for the following activities, unless required by the state:

- Using fill dirt in low spots or areas where erosion occurred.
- Using stockpiled material for spill response.
- Back dragging.
- Grading an existing road.
- Filling ruts and snow removal.

Cleaning out a cattle guard without any new ground disturbance.

Document Control Table

Title: Contractor Handbook			Document Number: HSER-SAF-EXE-HBK-001	
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Appendix – Field Safety Expectations

Remember, our work is **NEVER** so urgent or important that we cannot take the time to do it safely!

1. Contractors performing work on Expand locations must have SafeLand, RigPass, or equivalent industry orientation and the Expand orientation prior to starting work.
2. STOP all unsafe tasks immediately and report the stop to the Expand Person-In-Charge (PIC).
3. Report to the Expand PIC when arriving on location and prior to starting any tasks. Sign in/out, if available. When a PIC is not onsite, check in with other leads to coordinate work and review JSA information.
4. Immediately report all events (near miss, injury, spill, fire, vehicle, property damage, etc.) to the Expand PIC.
5. Conduct and/or participate in a pre-job safety meeting with all involved parties prior to beginning work. If the work task changes scope, direction, shifts, additional job tasks are added, or extended breaks occur, review the JSA information.
 - Identify and communicate the exposures and precautionary measures used to protect the workers with everyone on location.
 - Communicate the site emergency action plans and ensure you know your role in the event of an emergency. No one shall respond to an emergency that endangers their safety.
 - All work group pre-job safety meetings, or equivalent, should be documented with a sign in sheet.
6. Minimum Personal Protective Equipment (PPE) requirements (PPE must be provided by workers' employer):
 - **Eye Protection** - Safety glasses w/side-shields or prescription eyewear must meet ANSI/ISEA Z87.1. The frames and lenses must be stamped in accordance with the standard. This includes Oakley and other popular brands of eyewear.
 - **Foot Protection** - Safety-toed footwear that meets ANSI Z41.1 or ASTM F2413-2005/ASTM F2412-2005.
 - **Head Protection** - Hardhats that meet ANSI/ISEA Z89.1. Hardhats will not be modified, such as engraving, painting, or reshaping.
 - **Hand Protection** - Appropriate for the exposure present will be worn.
 - **Hearing Protection** - Will be worn in all high-noise areas above 82 dB(A), identified by signage.
 - **Respiratory Protection** - If your job task requires you to wear a respirator, you must be clean shaven, have completed a medical evaluation, and fit test.
 - **Work Clothing** - All personnel will wear Flame Resistant Clothing (FRC) as the outermost layer on "active sites." PPE such as hardhat liners, raingear, and high visibility vests must be FR. Clothing worn under FRC should be 100% cotton, wool, or cotton/wool blend.
 - Do not wear clothing that may become entangled in machinery, including frayed or baggy clothing.
 - Keep sleeves rolled down and buttoned, shirt buttoned, and loose strings removed or tucked in.

Active sites: site where flammable or explosive materials are or may be present which includes, but is not limited to: drilling, completion, well or other production facility, compressor station, plant, and pipeline right-of-way sites.

 - **4-Gas Monitor** – Shall be worn at EXE worksites with flammable hydrocarbons present or having the potential to be present. Educational groups and tours should have at least one third of the group wearing monitors and stay within proximity of someone with a monitor. Nobody shall be allowed within 10 feet of any production equipment to include on top of tanks or catwalks without a personal monitor. **Exemption:** Work activities directly over the wellbore (e.g., drilling, completions, and workover operations) can utilize fixed area monitoring instead of personal monitors provided a formal risk assessment has been completed and signed off on by EXE Leadership.- 7. Contractors shall have and adhere to a Short Service Employee (SSE) program.
- 8. The use or possession of illegal drugs, drug paraphernalia, alcoholic beverages, firearms, or weapons of any type or pornography is prohibited. Workers under any prescribed medication that may impair their work performance must notify their supervisor. All persons and vehicles on company property are subject to search at any time. Location may be under video surveillance. Unauthorized personnel and animals are not allowed on Expand worksites (e.g., family members, friends, pets, etc.).
- 9. Fit for Duty: All personnel must be fit for duty prior to any work taking place. Personnel must be able to safely perform his or her job-related functions and not pose a direct threat to his or her own safety or the safety of others.
- 10. Hazardous chemicals brought on Expand property must be accompanied with a Safety Data Sheet (SDS). Provide a copy of the SDS to the Expand PIC. Expand Hazardous Materials Lists and SDS's are located online in the Expand 3E database. Chemicals must be properly labeled to communicate the product name, physical and health hazards, along with PPE requirements. Where and how chemicals are stored should be evaluated prior to arrival. Chemicals that may react with others such as oxidizers, should be stored separately. Hazards associated with chemicals stored in enclosed environments should be evaluated.
- 11. Fire Prevention – Smoking (including e-cigarettes) is only permitted in designated areas. Cigarette butts will be properly disposed in a designated receptacle. These areas must be 35' from a combustible material and at least 100' from any wellhead, process vessel, and pipeline or storage tank containing combustible or flammable liquids. Smoking materials and lighters are not allowed in the work area.
- 12. Wearing of jewelry that pose potential for entanglement should not be worn in field work areas.
- 13. Good housekeeping is essential to maximizing safety, so always keep your work area orderly and clean. Minimize and manage all waste. Contractors will remove all drums, containers, trash, etc., they brought onto the worksite and will dispose of properly. Appropriate measures will be used to prevent spills and leaks (e.g., drip pans, splash guards, containment rings, caps, etc.).
- 14. Respect all signs, warnings, barriers, and barricades on Expand locations.
- 15. Maintain three-points of contact while ascending or descending ladders and stairs.
- 16. "Homemade" lifting devices and homemade tools are prohibited on Expand locations.
- 17. Some facilities may contain Naturally Occurring Radioactive Material (NORM). Do not enter or clean equipment, cut, grind, or disturb piping, and do not remove/transfer equipment without a NORM survey.
- 18. Some facilities may contain Benzene. Wear proper PPE when handling oil and natural gas products. Contact the Expand PIC if you have any concerns.
- 19. All spills shall be reported to the Expand PIC. The Expand PIC will determine proper clean up and agency notifications. Spill response will only be performed by trained personnel.
- 20. Properly store, manage, transport, and dispose of any waste generated by activities and operations on Expand locations, including field office locations, in compliance with applicable laws and regulations.

SIF Potential Indicator: Exposure Categories



A Serious Incident and Fatality (SIF) is an event that results in a fatal, life-altering, or life-threatening injury or illness.

- Life-altering injuries or illnesses result in the loss of a body part, organ function or otherwise permanently disables that person's normal life activity
- Life-threatening injuries or illnesses that require the immediate intervention to provide life-sustaining support

Based on industry data of SIF Events, there are 14 exposure categories having SIF potential that require recognition and controls.

1. Caught Between / By or In:

Any situation where a body part could be amputated, crushed, lacerated or pinched due to being caught in mechanical equipment or between objects.

(Note: If the person was caught between as a result of a motor vehicle we recommend classifying it as Struck by motor vehicle.)

- Was there force significant enough to cause amputation of a digit or limb?
- Was there force significant enough to crush the body or body part?
- Did the person reach into or get a body part caught in an operating piece of equipment?

2. Missteps and Falls:

Any situation where a person could fall or where a person is working at height where their feet are >4 feet above the surface. The fall could be the result of slipping, stumbling, tripping, stepping on an object or losing their balance.

(Note: Use this category if the injury or potential injury is related to hitting an object while falling or hitting the ground.)

- Did the person fall or could they have fallen a distance of 4 feet?
- Did the person fall backward?
- Did the person fall on a frictionless surface such as ice or small plastic pellets?
- Did the person fall in an area that had SIF hazards in the immediate fall zone?

3. Motorized Equipment / Vehicle Operation:

Any situation where a person is operating or controlling motorized equipment (ATV, boat, car, forklift, truck, etc.) or is a passenger, where the operator or passenger are at risk of injury.

(Note: SIF potential is being evaluated for the driver and passenger of the MVL)

- Was there a reasonable chance of rollover?
- Was a critical control system (steering, brakes) lost or compromised?
- Was the equipment being used beyond the manufacturer-rated capacity?
- Was the equipment being operated in an unintended or unauthorized manner?
- Did the airbags deploy?
- Was there a crash where the speed of the operated equipment or vehicle striking exceeded 15 mph?
- Was there a crash in an intersection?
- Was there a crash where the striking equipment exceeded twice the weight of the struck vehicle?
- Was the motor vehicle involved in a pull-away incident?
- Did the operator fall asleep or was the operator operating the motor vehicle while impaired?

4. Struck By – Falling, Rolling, Flailing, Flying Object or Load Moving:

Any situation where a person could be at risk of being struck by a falling, rolling, flailing object, a flying projectile or a horizontally moving load.

(Note: If gravity provides the energy this category would apply.)

- Was the shape of the falling object likely to cause a life-threatening injury?
- Was the object or projectile of a size or shape and velocity likely to cause serious bodily harm?

5. Struck by / Contact with – Release of Stored Energy:

Any situation with a sudden, uncontrolled release of energy from an electrical source, liquid or gas under pressure, mechanical tension or other stored energy.

- Was the release unexpected and with a force that it could cause serious bodily harm?
- Did the incident involve electrical shock or arc flash?

6. Extreme Atmospheric Temperature:

Any situation where a person is working in extremely cold or hot temperatures.

- Was the person exposed to frostbite temperatures without adequate protection?
- Was heat and humidity sufficient to cause heat stroke?
- Given the heat and humidity, were there inadequate breaks, hydration or shaded areas?

You will achieve the level of safety that you demonstrate you want to achieve.



01-2024

SIF Potential Indicator: Exposure Categories Continued



7. Animal or Plant Contact:

Any situation where a person could be attacked, bitten or stung by animals or insects or exposed to a toxic plant.

- Was the person susceptible to anaphylactic shock?
- Was the animal of a size and ferocity to cause life-threatening injuries?
- Was the person bitten by a venomous animal?

8. Asphyxiation / Entrapment / Engulfment / Drowning:

Any situation that involves working in a confined space or an environment where there can be a wall or ceiling collapse or where material can flow over and engulf a person working in or near water.

- Was there an unauthorized entry into a confined space?
- Was there a breakdown in the confined space procedure while people were inside?
- Did the person fall into water with a swift or rip current?
- Was there an interruption in breathing air supply?

9. Fire or Explosion:

Any situation involving an uncontrolled fire or explosion.

- Was the fire unable to be controlled by a handheld fire extinguisher?
- Was there significant fire load in the immediate area of the fire?
- Was the explosion unexpected and uncontrolled?
- Was explosive material found in an unprotected state?
- Was flammable liquid or gas leaking uncontrollably?

10. Hazardous Substance Contact:

Any situation where a biological, chemical or radiological hazard could be inhaled, ingested or in contact with skin; or any situation where an extremely hot or cold material could contact the person.

- Was the substance corrosive, toxic or a health hazard and was the exposure amount enough to cause a life-threatening injury?
- Did the radiation exposure exceed or could it have exceeded the Personal Exposure Limit?
- Was the biological agent life-threatening and uncontrolled?
- Was the material hot enough to cause second- and third-degree burns or cold enough to cause frostbite or freezing of the skin?

11. Personal Assault:

Any situation where a person is involved in a verbal or physical altercation or where the person was attacked by someone with a club, knife, gun or other life-threatening devices.

- Was the person physically assaulted?
- Was the person threatened with a gun, knife or other life-threatening device?

12. (Pedestrian) Struck by – Motorized Equipment or Vehicle:

Any situation where a person outside a motor vehicle could be contacted or struck by motorized equipment or motor vehicle.

- Did the motorized equipment / vehicle make contact, strike or nearly make contact with a person?

13. Struck Against / Struck By / Personal Contact:

Any situation where a person moves their body or body part and strikes another object or when an object (non-powered) in their control or someone else controls strikes their body or body part.

- Did the object struck against or struck by have SIF potential?

14. Struck by / Contact with Power Equipment or Tool:

Any situation where a person contacts the operating part of power equipment or tool in their control or in the control of others.

- Could the contact have resulted in a serious laceration, amputation or other bodily injury capable of being life-threatening or altering?

USE YOUR STOP WORK AUTHORITY



01-2024