



LIFEsavers

March 2018

Cargill LIFEsavers

At Cargill, we believe every job can be done safely and are committed to returning all employees home safely at the end of each day.

In support of this commitment, we have set a clear goal: ZERO work-related fatalities. We can achieve this goal by working together to build a culture of safety. One of the ways we are doing that is through our Focus on LIFE strategy.

The **Focus on LIFE** (Life-altering Injury and Fatality Elimination) strategy is designed to help Cargill achieve its zero-fatalities goal by identifying and eliminating lifethreatening dangers in our workplace procedures. It focuses on ensuring the integrity of our safety processes, identifying and eliminating risk factors leading to serious injuries and fatalities and, if incidents happen, learning from them to prevent them in the future.

In support of Focus on LIFE we introduced **LIFEsavers**, and have defined the necessary behaviors and requirements to prevent serious injuries or fatalities for 12 high risk activities.

Because these behaviors are so critical to our success, we have created this booklet with important information about each LIFEsaver to use as a reference to increase awareness and promote safe behavior.

With your support, **we can eliminate fatalities and serious injuries.**



LIFEsavers

1. Motor Vehicle – Traffic Safety
2. Working at height
3. Mobile Powered Equipment
4. Lockout Tagout – Energy Isolation
5. Electrical Work
6. Confined Space Entry
7. Bulk Material Handling and Storage
8. Railcar Safety
9. Excavation and Trench Work
10. Lifting and Rigging Protection
11. Hazardous Materials
12. Hot Work

LIFEsavers Q&A:

What are LIFEsavers?

LIFEsavers - a key component of Focus on LIFE campaign - identify the key hazards and safety requirements to ensure safety when performing 12 high-risk activities.

How were LIFEsavers developed?

The 12 LIFEsavers were selected and developed by Environment, Health and Safety (EHS) leaders around the world, representing most of Cargill's business units and process technologies.

This helped to ensure key hazards – and the minimum requirements needed to perform each task safely – were properly defined.

Do the LIFEsavers replace our site rules or local regulations?

No; LIFEsavers do not replace site safety rules or replace local regulations. LIFEsavers are a tool to increase awareness, identify key hazards and reinforce important requirements.

Local site policies and operating procedures provide detailed requirements on the most safe and efficient way to perform a task and specify the exact methods that must be followed at each site.

For example, a task may require a location-specific work permit with defined levels of permission before work can begin.

Which should I follow if there is a difference between LIFEsavers and our site's rules?

Always follow your local site safety rules. Differences if found should be shared with supervisors, however, so they can provide clarification and guidance. Because significant care has been taken to ensure LIFEsavers and recognized best practices are aligned and consistent, we do not anticipate conflicts.

What if I am unable to follow one of the LIFEsavers requirements?

If you find that you are unable to follow a LIFEsavers requirement, immediately stop the task and seek guidance from your supervisor. Remember our policy: "Cargill insists that all work, however urgent, be done safely."

What if I see somebody not following the LIFEsavers requirements?

Everyone should follow site safety rules and LIFEsavers requirements. If you notice someone not following the rules and requirements it is important that you take the following action to prevent potential injury:

- a. Immediately stop the work activity.
- b. Inform the worker about the non-conformity and ask the task not proceed until all requirements are followed.
- c. Review the non-conformity with your supervisor for further guidance and follow-up.

Remember, a strong safety culture requires us to actively watch out for the safety of others.



MOTOR VEHICLE – TRAFFIC SAFETY

Wear your seat belt, drive at appropriate speeds, avoid distraction and never drive impaired.



WORKING AT HEIGHT

Follow all safety precautions for activities with the risk of falling more than 1.2 m (4 ft).



MOBILE POWERED EQUIPMENT

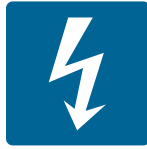
(Excluding Cranes and Trains)

Only operate mobile equipment when trained and authorized.



LOCKOUT TAGOUT – ENERGY ISOLATION

Secure ZERO energy state before starting work on equipment or processes.



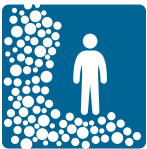
ELECTRICAL WORK

Assume equipment is live; never expose yourself unprotected to live electrical energy.



CONFINED SPACE ENTRY

Confined space entry always requires an approved permit.



BULK MATERIAL HANDLING AND STORAGE

Always be alert for engulfment hazards and follow safety and permit precautions.



RAILCAR SAFETY

Only move railcars when trained and authorized. Always be alert for moving railcars, maintain a safe distance.



EXCAVATION AND TRENCH WORK

Always obtain authorization before commencing excavation or entering a trench.



LIFTING AND RIGGING PROTECTION

Never climb on, walk or stand under suspended loads.



HAZARDOUS MATERIALS

Always understand the hazards of chemicals or materials you are handling and follow all safety precautions.



HOT WORK

Hot work, outside designated welding or hot work areas, may only take place with an approved permit.

Reminder: These LIFEsavers do not replace the location, BU or legal rules.



Wear your seat belt, drive at appropriate speeds, avoid distraction and never drive impaired.

Key Hazards:

- Reckless Driving
- Distracted or Impaired Driving
- Poor Road Conditions
- Poor Visibility
- Other Drivers
- Pedestrian and Animal Traffic
- Vehicle Stability and Reliability

Key Requirements:

FOR DRIVERS

- Have a valid driver's license for type of vehicle being driven.
- Always wear your seatbelt and ensure all passengers wear their seat belt.
- Always wear a helmet if on a motorcycle or all-terrain vehicle.
- Do not drive impaired by drugs or alcohol.
- Avoid distractions when driving.
- No use of mobile/cell phones, including hands-free, when driving.
- When fatigued stop driving. Park in a safe location and rest.
- Drive defensively by maintaining recommended speeds and following distances. Adjust for traffic congestion, road conditions and weather.
- Have a trip plan when driving in new areas or geographies.
- Inspect and maintain your vehicle.
- Do not overload your vehicle.
- Program GPS navigation device before starting your trip.

FOR PEDESTRIANS

- Always be alert for traffic.
- Use designated walkways.
- Keep your eyes on path. Avoid texting or reading e-mails while walking.



**WORKING
AT HEIGHT**

Follow all safety precautions for activities with the risk of falling more than 1.2 m (4 ft).

Key Hazards:

- Falling off roofs, roof-accesses, platforms, scaffolding, trucks, railcars, ladders, etc.
- Falling through floor openings, fragile roofs, skylights, etc.
- Falling out of mobile platforms, scissor-lifts, man-baskets, etc.

Key Requirements:

- Eliminate the need to work at height where feasible.
- Only qualified individuals may perform elevated work.
- Comply with elevated work permit/PJHA requirements for all elevated work with a fall potential 1.2 m (4ft) or greater. This includes floor and wall openings.
- Only use certified fall protection systems equipment and PPE.
- Use full-body harness with 100% anchorage to approved anchor points.
- Inspect personal fall protection before each use.
- Only access scaffolding that has been inspected and approved by qualified individual.
- Evaluate if ladders are an appropriate tool for the work activity.
- Set ladders on firm base, correctly angled and tied off. Avoid overhead power lines.
- When working at height secure tools and equipment to prevent them from falling.
- Cover or barricade floor and wall openings. Caution tape is not a substitute for barricades.
- Never step on building or tank roof without verifying its integrity first.
- Follow manufacturer's requirements when using mobile work platforms.
- Have a plan to quickly rescue fallen or suspended individuals.



Only operate mobile equipment when trained and authorized.

Key Hazards:

- Injury to others by being run over, hit by or pinched between moving mobile equipment
- Loss of stability and tumbling over
- Damage to structures and supports when hit by mobile equipment
- Loss of control and load while moving

Key Requirements:

FOR DRIVERS

- Only operate mobile powered equipment when trained and authorized.
- Mobile equipment is only used for its intended use.
- Ensure a pre-use inspection is completed on all mobile equipment.
- Never exceed safe operating speeds.
- Always look in the direction you drive.
- Stay on approved/indicated traffic paths (or driveways).
- Be alert for pedestrians in and outside designated walkways.
- Always use the seatbelt or similar protection.
- Keep all body parts inside the protection of the truck while operating.
- Only operate controls from the designated position.
- Keep all body parts inside the cabin and away from pinch points.
- Never stand or walk under a suspended load or bucket.
- Use wheel-chocks, dock locks or other tools to prevent equipment from moving when entering while being loaded or unloaded.
- Don't use mobile phone or other communication tools while driving.

FOR PEDESTRIANS

- Always wear high visibility-vest where required.
- Always use designated walkways and be alert for mobile truck traffic particularly around corridors and in warehouses.
- Give way to mobile powered vehicles.
- Never walk under a suspended load or bucket.



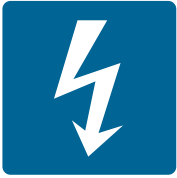
Secure ZERO energy state before starting work on equipment or processes.

Key Hazards:

- Caught-in or entangled in equipment or moving parts
- Unexpected equipment startup and/or release of stored energy
- Contact with hazardous materials

Key Requirements:

- Only qualified individuals may perform lockout.
- Review lockout procedures prior to performing lockout.
- Do not perform any work without verifying (attempt to start) that all energy sources are identified and secured and purged and vented to a zero energy state (e.g. electrical, mechanical, gravity, hydraulic, pneumatic, chemical, thermal, stored, radiation).
- Apply lockout-tagout devices to all energy sources.
- Each individual who performs work on equipment must apply their own unique lockout device to ensure Zero Energy during the work activity.
- Locks are always used with a tag to identify the owner.
- Group lockout procedures (e.g. lock box) can be utilized when several people are working on the same equipment or for isolating multiple energy sources.
- Lockout equipment must be robust, well maintained and appropriate for energy source being isolated.



Assume equipment is live, never expose yourself unprotected to live electrical energy.

Key Hazards:

- Electrical shock / Electrocutation
(By direct or indirect contact)
- Arc flash / Blast
(Severe burns and other
traumatic injuries caused from an
electrical arc flash and blast)

Key Requirements:

- Ensure individuals are qualified to perform the level of electrical work they will perform.
- Assume equipment is “live”. Always test before touching electrical components.
- Know the electrical hazards of the equipment you will be working on.
- Only install or repair equipment in accordance with local codes and legal requirements.
- Never modify approved or listed equipment.
- De-energize and lockout before starting electrical work whenever possible.
- Electrical safe work practices including electrical permit procedures, where applicable, must be followed for all diagnostic and repair work. Electrical energized repair work should be avoided.
- Wear appropriately rated arc flash and shock protection PPE that is selected based on work and activity being completed and arc or shock hazard.
- Restrict access to electrical rooms to keep out unqualified personnel.
- Use ground fault circuit interrupters (GFCI) or residuals current devices (RCD) outlets for portable tools and equipment.
- Inspect equipment, power cords and outlets for damage before each use.



**CONFINED SPACE
ENTRY**

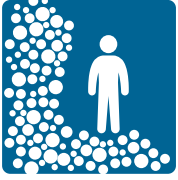
Confined space entry always requires an approved permit.

Key Hazards:

- Atmospheric condition (high/low O₂, toxic & explosives gases, radiation, temperature/pressure)
- Contact with hazardous chemicals, material engulfment, moving parts, electrocution, etc.
- Restricted mobility and rescue (entrapment, visibility, small space & access)
- Hazards created during the work (e.g. welding, cleaning, etc.)

Key Requirements:

- Eliminate the need to enter a confined space if feasible.
- Access to confined spaces **MUST** be authorized with a permit.
- Only authorized individuals are allowed to approve entry.
- Only qualified workers may participate in a confined space entry.
- A risk assessment is completed and hazard controls identified before entry.
- All hazard controls, including the isolation of motors, piping, conveyors, etc. are completed before entry.
- Atmospheric testing, using a calibrated meter, is conducted before entry is allowed and monitoring is conducted throughout the job duration.
- Proper ventilation is verified before entry and maintained during entry.
- A safety attendant is constantly present throughout entry duration, who maintains communication with entrants and can summon emergency rescue if needed.
- Emergency and rescue procedures must be planned and reviewed before entry to ensure timely rescue from the confined space.



Always be alert for engulfment hazards and follow safety and permit precautions.

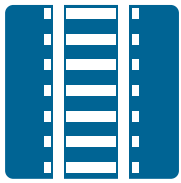
Key Hazards:

ENGULFMENT DUE TO:

- Collapsing product cliffs
- Fill and discharge equipment
- Walking on product during underground product discharge
- Flow of product at unloading points

Key Requirements:

- Access to bulk material areas is strictly controlled.
- Signs are used to identify all bulk material areas and hazards.
- Only qualified individuals are allowed entry into bulk material areas.
- All permit procedures for entry into all bulk material storage areas or bulk material confined spaces must be followed.
- Safe zones are defined for work that must be performed in bulk material warehouses.
- Never walk close to product piles with cliffing or unnatural angles of repose. Maintain a distance of 1.5 times, or greater, the height of the product pile.
- Vehicles and mobile equipment working in bulk material warehouse must be designed to protect operators from engulfment.
- While trucks are being loaded in bulk material warehouses drivers must stay in their vehicle cabin.
- Never “walk down” bulk material to get it to flow.
- Never stand on a bulk material that is flowing.
- All entries into ship or barge holds performed as defined by the site’s Vessel/ Barge hold procedures.
- Emergency rescue procedures related to bulk handling and storage activities must be included in the Emergency Action Plan (EAP).



Only move railcars when trained and authorized. Always be alert for moving railcars, maintain a safe distance.

Key Hazards:

- Direct contact with persons or vehicles when railcars are being moved within a facility
- Railcar collisions and derailments from improper switching or uncontrolled railcars movement

Key Requirements:

- Only move railcars when trained and authorized.
- Always follow railcar access and riding rules and procedures.
- Always maintain lead car visibility when moving railcars within the facility.
- If you are assigned as a spotter always position yourself in a safe area.
- Individuals involved in rail car movement must wear high-visibility clothing.
- Establish communication procedures with rail service providers to enable safe procedures when railcars are being moved into the facility.
- Tracks must be isolated from other railcar movement when railcars are being loaded, unloaded, cleaned or the track is under repair.
- Ensure a pre-use inspection is completed on all rail moving equipment.
- Verify proper track clearance of equipment, structures, and adjacent tracks.
- Report any concerns about tracks, switches or rail moving equipment to your supervisor.

FOR PEDESTRIANS:

- Always wear high visibility-vests where required.
- Always use designated walkways and be alert for railcar traffic or lights and alarms that indicate railcar movement.
- When crossing in front of standing railcars always maintain a safe distance.



Always obtain authorization before commencing excavation or entering a trench.

Key Hazards:

- Contact with electrical lines, chemical piping, etc. during excavation
- Engulfment – cave-in due to collapsing of the trench while working in it

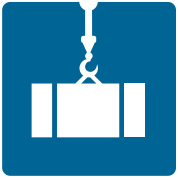
Key Requirements:

DURING EXCAVATION:

- Authorization is required before excavation begins (>50 cm/18" depth)
- Worksite survey is conducted to identify electrical cables, chemical and gas pipelines, sewer lines, communication wires, tanks, etc.
- Appropriate shoring, shielding or sloping requirements are defined and supervised by technically competent person.

DURING TRENCH WORK:

- Entry into trenches (>1.2m/ 4 ft. depth) is to be approved by authorized individual.
- Only qualified individuals are allowed near or to enter the trench.
- Use appropriate work permits (e.g. excavation, confined space) as defined by the business.
- Evaluate the risk for hazardous atmospheres (e.g. H₂S) and establish controls.
- The stability of the excavation and shoring are evaluated daily before entry is allowed. Special attention is required if there is changing weather conditions such as rain, frost, defrosting, etc.
- Safe access and egress into the excavation will be maintained.
- Use barriers or other means to control trench access.
- Machinery and excavated material will be maintained 1 m (>3 ft.) from the edge.
- Manage the traffic circulation around the trench, isolate the area of excavation (use physical barricades where possible).



Never climb on, walk or stand under suspended loads.

Key Hazards:

- Falling loads due to improper rigging or breaking chains, slings, lifting bolts, etc.
- Falling cranes due to wind, unstable ground, overload
- Swinging loads due to wind, uncontrolled movements, etc.

Key Requirements:

- Never walk under, stand under or be in the line of fire of a suspended load.
- Never climb on a suspended load.
- Lifting and areas where overhead-work is performed have been clearly marked and secured to prevent access.
- Crane operators, riggers and signaller must be qualified or licensed.
- Comply with all requirements for lifting operations, including designated permitted lifts.
- Ensure a risk assessment and rigging and lifting plan is developed for the operation by a technically competent person.
- Verify the weight of the load is known and the lift is clearly in the safe working range for the equipment used.
- All lifting equipment and safety devices, including slings and shackles are inspected and in good working condition before use.
- Never use homemade, uncertified or damaged lifting devices or equipment.
- Make sure adequate space, proper ground conditions, and proper outrigger deployment for crane location.
- Maintain required clearance when working near power lines.



**HAZARDOUS
MATERIALS**

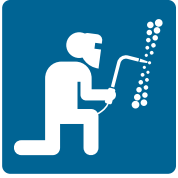
Always understand the hazards of chemicals or materials you are handling and follow all safety precautions.

Key Hazards:

- Exposure to hazardous materials during handling. These may include: Flammables, explosives, corrosives, pressure and temperature extremes, toxics, radioactive material, biological hazards, carcinogens etc.

Key Requirements:

- Only qualified individuals are allowed to work with hazardous materials.
- Understand the hazards of all chemicals and materials you work with.
- Always review safety data sheets (SDS), labels and other product safety information before performing any tasks.
- Follow all operating, material handling and job safety procedures.
- Wear appropriate PPE designated for the task performed and the hazardous material with which you are working.
- Follow all permit and isolation requirements when conducting line breaking, chemical off-loading or other safety critical operations.
- Always identify potential incompatibilities before mixing chemicals or storing them next to each other.
- Ensure all primary and secondary chemical containers and vessels are appropriately labeled.
- Handle chemicals only in designated areas with proper containment.
- Follow approved spill response procedures when needed.
- Report all spills or loss of containment events immediately to your supervisor.



HOT WORK

Hot work, outside designated welding or hot work areas, may only take place with an approved permit.

Key Hazards:

- Fire and explosion due to hot work
- Health hazards from fumes and other materials generated by hot work
- Eye injury due to ultraviolet radiation or particulates generated by hot work

Key Requirements:

- All hot work, (such as welding, cutting, grinding, drilling, etc.) which is not conducted in designated welding or hot work areas, **MUST** be authorized with a permit.
- Only authorized individuals are allowed to approve hot work.
- Welders must be qualified to understand the hazards of welding and the work environment.
- Ensure risk assessment is reviewed and all control measures are in place.
- Ensure area is free from combustible materials, any flammable liquids or gases.
- Ensure any immovable combustible material is fully covered by an appropriate non-combustible material.
- If automatic fire/smoke detection points must be isolated, this may be done only immediately before work commences and re-energized when the work is completed.
- Welding equipment must be suitable for the work environment, inspected before use and ensure welding gas cylinders are secured.
- Implement fire watch as per permit requirements.

AFTER HOT WORK IS COMPLETED:

- Continue fire watch, as per permit requirements, to ensure there are no smoldering heat sources.
- After completing Hot Work automatic fire/smoke detection points are immediately reinstated.
- Verify that any adjacent work areas that may have been affected by transferred or conducted heat are safe.

