

Turnaround Safety

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Equipment collapse
Beware of your surroundings
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Traffic on the job
Proper storage
Slip and falls
House Keeping

Introduction

Turnaround Safety

Ensuring workplace safety for employees

Ensuring workplace safety for employees, contractors, and visitors is the leading priority for a shutdown or turnaround. These can present numerous challenges for safety and involve workers carrying out many tasks which are not routine and may be being performed for the first time. Additionally, a significant number of contractors may be working on site that have never visited before and have little knowledge of the layout of equipment and processes.



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Exposure

Especially in the case of chemical plant shutdowns and turnaround, exposure to toxic chemicals is a serious safety consideration. These chemicals can include acidic ones, flammable gases and liquids, toxic fumes, airborne fibers, and other contaminants. Plants that use or may have certified hazardous materials such as asbestos, PCBs, lead, mercury, and catalyst handling should have the corresponding teams on hand to see to them.



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Equipment collapse

Shutdowns often happen because a piece of equipment has shown to be defective. For example, a piece of equipment that has been leaking may have its structural integrity and can collapse in an attempt to move it.



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Beware of your surroundings

Your personal safety, including at work, is very important. If something serious were to happen to you, your family could be left without their loved one. With today's technologically complex equipment and numerous distractions, a number of things can pull your focus away from the tasks at hand. When this happens injuries such as slips and falls, being crushed by an object, or walking into stationary equipment can cause very serious accidents.



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Electrical Hazards

A piece of defective equipment may pose a risk if it is electrically malfunctioning, which is why electrical equipment should be inspected and disconnected from a power source before work is done on it. (LOTO)



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LOTO

The OSHA standard for The Control of Hazardous Energy (Lockout/Tagout) (29 CFR 1910.147) for general industry outlines measures for controlling different types of hazardous energy. The LOTO standard establishes the employer's responsibility to protect workers from hazardous energy.

Items Needed for LOTO

- Locks & Tags - identified to the worker
- Hasps - for placing locks & tags
- Breaker Clips - for electrical LOTO
- Blank Flanges (pancakes) - for fluid lines
- Valve Covers - for LOTO of Valves
- Plug Buckets - for electrical plugs



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Collisions

During shutdowns, heavy machinery may be brought into transport equipment. It is essential that this machinery be operated by qualified personnel and that they receive guidance from someone outside the vehicle when moving equipment that can obstruct their view.



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Traffic on the job

Lessons Learned

When operating vehicles when visibility is restricted or there is high congestion - use extra caution.

Be aware of creating traffic hazards such as blocking roadway.

Changes in normal operations (such as the congestion of vehicles and personnel during a Turn-Around) may require temporary changes in traffic patterns, speed limits, etc.

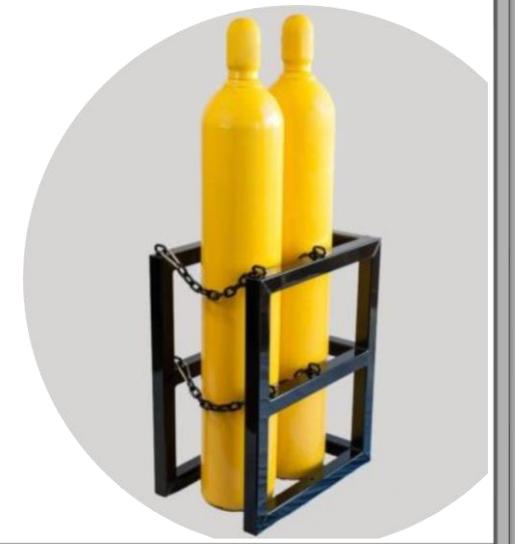
Safety devices such as flashing lights and special back-up mirrors can enhance the awareness of both pedestrians and drivers when the vehicle is backing up.



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Proper storage

During a plant shutdown, all hazardous and dangerous materials should be properly stored and kept out of the work area. Every air and gas cylinder should have its main valves closed when not being used. Cylinders should be securely stored with regulators removed and safety caps installed at the end of each shift.



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Slip and Falls

This is the accident most cited by OSHA in the workplace and is more likely to happen during a shutdown. Due to the haste and demanding schedule of the turnaround, workers are both more likely to spill slip hazards and be slower to identify or address them.



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House Keeping

Why should we pay attention to housekeeping at work?

Effective housekeeping can help control or eliminate workplace hazards. Poor housekeeping practices frequently contribute to incidents. If the sight of paper, debris, clutter and spills is accepted as normal, then other more serious hazards may be taken for granted.

Housekeeping is not just cleanliness. It includes keeping work areas neat and orderly, maintaining halls and floors free of slip and trip hazards, and removing of waste materials (e.g., paper, cardboard) and other fire hazards from work areas. It also requires paying attention to important details such as the layout of the whole workplace, aisle marking, the adequacy of storage facilities, and maintenance. Good housekeeping is also a basic part of incident and fire prevention.

Effective housekeeping is an ongoing operation: it is not a one-time or hit-and-miss cleanup done occasionally. Periodic "panic" cleanups are costly and ineffective in reducing incidents.



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**THINK
SAFETY
FIRST!**