Process safety management toolbox talk

29 CFR 1910.119

Date _____ Trainer _____ Location _____

Opening question

If a pressure or temperature on your unit moved outside its normal range right now, would you know the steps to bring it back?

Why it matters

Process safety is about preventing catastrophic releases of toxic, reactive, flammable or explosive chemicals, which can cause toxic exposures, fires or explosions. One release can hurt many people at once. It can start small: a skipped step, a change nobody reviewed or equipment nobody checked.

Key points

1 Follow the procedure and stay within limits

Each covered process must have written operating procedures with clear steps for every phase, from initial startup to emergency shutdown. They must spell out the operating limits, the consequences of deviation and the steps to correct or avoid it (29 CFR 1910.119(f)(1)(ii)), and be readily accessible to employees who work in or maintain the process (29 CFR 1910.119(f)(2)). If the procedure does not match the job, stop and ask.

29 CFR 1910.119(f)(1)

2 No change without management of change

A new chemical, a part that does not meet the design specification or a new way of doing a step can all be changes. Written procedures must manage changes to process chemicals, technology, equipment and procedures, and to facilities that affect a covered process, except replacements in kind. Operators, and maintenance and contract employees whose tasks will be affected, must be informed and trained before start-up (29 CFR 1910.119(l)(3)).

29 CFR 1910.119(l)(1)

3 Use the permits and safe work practices

The employer must have safe work practices for jobs like lockout/tagout, confined space entry, opening process equipment or piping, and controlling entry into the facility by maintenance, contractor, laboratory or other support personnel, and they apply to contractor employees too. Hot work on or near a covered process needs a hot work permit (29 CFR 1910.119(k)(1)). The permit documents that the welding standard's fire prevention and protection requirements are in place before the work begins (29 CFR 1910.119(k)(2)).

29 CFR 1910.119(f)(4)

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4 Keep equipment in good shape

Pressure vessels, storage tanks, piping, relief and vent systems, emergency shutdown systems, controls and pumps must be inspected and tested (29 CFR 1910.119(j)(1) and (j)(4)(i)). Deficiencies outside acceptable limits must be corrected before further use, or in a safe and timely manner when necessary means are taken to assure safe operation. If you see a leak, a stuck valve or an alarm that does not work, report it right away.

29 CFR 1910.119(j)(5)

5 Report close calls and know the emergency plan

The employer must investigate each incident that resulted in, or could reasonably have resulted in, a catastrophic release, starting as promptly as possible and no later than 48 hours after the incident (29 CFR 1910.119(m)(2)). Report close calls, too. The plant's emergency action plan must include procedures for handling small releases (29 CFR 1910.119(n)). Know your alarms, your shutdown duties, your escape route and your muster point.

29 CFR 1910.119(m)(1)

6 Speak up, because you know the unit

Employers must consult with employees and their representatives on process hazard analyses and other parts of PSM, and give them access to that information (29 CFR 1910.119(c)(3)). Each process hazard analysis team must include at least one employee with experience and knowledge specific to the process (29 CFR 1910.119(e)(4)). If you see a hazard nobody has talked about, speak up.

29 CFR 1910.119(c)(2)

Scenario

Picture this: on a night shift, a pump on a unit that handles a flammable liquid keeps tripping. A mechanic has a seal on hand that is close but not the same specification, and wants to put it in so the unit can run until morning. The procedure does not cover this. What should the crew do, and who needs to be involved first?

Crew discussion

1. Where are our unit's operating procedures, and when did you last read the part you use most?
2. What kinds of changes on our unit need management of change?
3. Which readings or alarms tell you the process is heading outside its limits?
4. How do we report a close call or equipment that is not working right?

Bottom line

Follow the procedure, stay within limits, never change anything without management of change, and report anything that could lead to a release.

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Sign-in sheet / Hoja de asistencia

Topic / Tema: Process safety management / Gestión de seguridad de procesos (PSM)

Date / Fecha: _____

Trainer / Instructor: _____

Location / Lugar: _____

Company / Empresa: _____

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