Safety in Shutdowns & Turnarounds: High Risk Periods Need High Focus Stats and Facts



FACTS

- **Concentrated Hazard Window:** Shutdowns compress an unusually high volume of hazardous work into a short timeframe, often with unfamiliar contractors and time pressure that increases risk at every step.o Lockout/Tagout Failures Kill: Failing to isolate and de-energize equipment before maintenance begins is one of the most common causes of fatal injuries during shutdown periods. A machine that restarts unexpectedly during servicing leaves no margin for error.
- **Contractor Unfamiliarity:** Turnarounds often bring in large numbers of temporary workers who are unfamiliar with site-specific hazards, procedures, and emergency response plans — a direct risk factor from the first day on site.
- **Confined Space Entry:** Shutdown periods frequently require workers to enter vessels, tanks, and columns that are normally inaccessible and can contain residual toxic gases, oxygen-deficient atmospheres, or engulfment hazards that are invisible until it is too late.
- **Time Pressure Shortcuts:** Financial pressure to minimize downtime pushes workers to move faster. When speed overrides procedure, critical safety steps — permit verification, energy isolation, gas testing — get skipped or rushed.

STATS

- About 3 million U.S. workers regularly service or maintain equipment that exposes them to hazardous energy, making them the population most at risk during maintenance and shutdown activities, according to OSHA.
- The National Safety Council reported 48 deaths tied to hazardous energy control failures in 2023 alone.
- Being caught in running equipment during maintenance or cleaning led to 54 deaths in 2022 and nearly 18,000 DART cases in 2021–2022, according to National Safety Council data.
- OSHA estimates full compliance with the Lockout/Tagout standard could

prevent 120 fatalities and 50,000 injuries each year.

- Workers injured from hazardous energy exposure lose an average of 24 workdays for recuperation, according to OSHA.
- Control of Hazardous Energy (Lockout/Tagout) ranked among OSHA’s top five most cited standards in fiscal year 2024, with 2,443 total violations recorded.