

Chevron Process Safety Alert

Overpressure of an Explosion-Proof Enclosure

issued: June 2017

distribution:

- Local site: .
- SBUs: .
- Industry

incident location: Outside the USA

hazards:

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Gravity | <input type="checkbox"/> Temperature |
| <input type="checkbox"/> Motion | <input type="checkbox"/> Chemical |
| <input type="checkbox"/> Mechanical | <input type="checkbox"/> Biological |
| <input type="checkbox"/> Electrical | <input type="checkbox"/> Radiation |
| <input checked="" type="checkbox"/> Pressure | <input type="checkbox"/> Sound |



date of event: 5/15/2017

contact details: Val Vialpando; (228) 934-7281

incident description:

An analyzer engineer was fatality injured when the engineer removed the cover on an explosion-proof enclosure as part of a routine task. The threaded cover weighing ~12 lbs. and measuring 14 inches in diameter was forcefully propelled from the enclosure as the engineer unscrewed it inflicting a fatal head injury. The force was caused by pressure inside the enclosure from leaking sample gas or instrument air components. The enclosure was not equipped with an external indicator to determine the pressure inside the enclosure and had no means to relieve internal pressure.

key communication points:

- Recognize the potential hazard of trapped pressure in explosion-proof electrical enclosures from all sources of energy entering the enclosure
- Identify explosion proof enclosures which are susceptible to trapped pressure scenarios and do not have pressure indication or pressure relief protection
- Work with equipment manufacturers to develop a mitigation plan that addresses the trapped pressure situation while still maintaining the electrical certification of the identified enclosures

images:

Figure 1: Reenactment of Cover Removal



Figure 2: Example of Explosion-Proof Enclosure

