

Are We Reliving Past Incidents?

The short answer to this questions is YES. In 1993, Trevor Kletz, who passed away on Oct. 31, 2013, at the age of 91, wrote a book titled *Lessons from Disaster: How Organizations Have No Memory and Accidents Recur*. Twenty years later, we still fail to learn from accidents, and we repeat them.

A gasoline processing plant in Norway recently experienced an incident in which a carbon adsorber used for emission control ignited a flammable atmosphere in the attached tank. Sadly, a very similar incident occurred at a bulk chemical storage terminal in Savannah, GA, in 1995. A thorough literature search would undoubtedly find more similar incidents.

What happened? In both incidents, a carbon adsorber was used to reduce emissions of pollutants from a storage tank. Both facilities failed to recognize that adsorbing hydrocarbon vapors generates heat in a carbon bed. In both cases, this heat provided the ignition source for the flammable vapor in the tank vapor space.

Why did this occur? Two design problems were present in both systems, even though they happened 12 years apart and in different parts of the world. The systems did not account for the heat generation from adsorption and did not provide a flame arrester between the tank and carbon adsorber.

What Can You Do?

- Be aware that equipment installed to protect the environment can create new hazards that must be evaluated by process hazard analysis and management of change.
- Keep the stories of past incidents in your plant alive by discussing them at safety meetings.
- When incidents occur outside your area or company, review them and ask "Could something like this happen here?" Don't discount incident reports because you don't handle that specific material or because the incident happened in a different technology.
- Younger and less experienced employees should ask about past incidents to understand them. If it has happened before, it could happen again!
- Share incidents from your plant with others so they do not have to relive them.
- For more technical information on the incidents mentioned above see:
 - ♦ U.S. EPA Report on 1995 incident: www.epa.gov/osweroe1/docs/chem/pdtirept.pdf
 - ♦ Article on 2007 incident: Skjold, T., and K. van Wingerden, *Process Safety Progress*, 32 (3), pp. 268–276 (Sept. 2013).



Tank Farm After Fire



Carbon Bed Adsorber After Fire

2007 – Sløvåg, Norway



Tank Farm Fire



Tank Farm After Fire

1995 – Georgia, USA

**"Those who don't know history are destined to repeat it."
 Edmund Burke, Irish Statesman (1729-1797)**

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