

## Are we reliving past incidents?

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The short answer to this questions is YES!! In 1993, Dr. Trevor Kletz, who passed away on October 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, this still happens.

A recent article described an incident at a gasoline processing plant in Norway. 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, Georgia, USA in 1995. A thorough literature search would undoubtedly find more similar incidents.

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

Why did it 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.

### 2007 - Sløvåg, Norway



**Tank farm after fire**



**Carbon bed adsorber after fire**

## 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:

- US EPA Report on 1995 incident: [www.epa.gov/oem/docs/chem/pdtirept.pdf](http://www.epa.gov/oem/docs/chem/pdtirept.pdf)
- Article on 2007 incident: T. Skjold and K. van Wingerden, *Process Safety Progress* 32 (3), pp. 268-276, September 2013.

### 1995 – Georgia, USA



**Tank farm fire**



**Tank farm after fire**

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

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