# Roth: Deaths in the oil patch from exposure to fumes

By Jim Roth, Director and Chair of the Firm's Clean Energy Practice Group. This column was originally published in The Journal Record on April 11, 2016.

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When I first joined the Oklahoma Corporation Commission years ago, the agency's many talented Oil and Gas Division employees and inspectors taught me a lot about the issues in the field.

One new lesson that was a shock to learn was about the enormous dangers of deadly hydrogen sulfide in and around tank batteries, where oil and gas is collected from nearby wells. This killer gas is deadly in small amounts and it can stop a

person’s breathing in seconds, rendering them unconscious or dead without much warning. In fact, as the concentration increases it apparently deadens a person’s sense of smell, rendering them unable to even detect the danger.

Since 2010, at least nine workers have died from exposure to hazardous gas vapors on oil production and storage tanks. These workers were alone, usually in the middle of the night, and were later found dead near an opening on top of the tanks. There seemed to be a pattern going unnoticed, and Mike Soraghan, a reporter for *Energy Wire,* sought to reveal it.

Five of the deceased workers were collecting fluid samples, and the remaining four were manually measuring production levels. To perform both of these tasks, workers had to climb ladders to access so-called “thief hatches” on top of the tanks. Once the hatch is opened, gas vapors that have built up in the tank rush out of the hatch. These vapors greatly displace oxygen in the air surrounding the hatch that can asphyxiate a person in a matter of seconds.

What makes these deaths even more tragic is that they were completely avoidable. There are ways to perform these tasks automatically without exposing workers to these toxic vapors. Unfortunately, the cost of installing the necessary equipment has caused many operators to continue using these dangerous methods.

Another problem is that safer practices cannot be employed on federally owned land due to outdated government agency rules. On federal and tribal leases, strict federal regulations allow only two methods of measurement: Lease Automatic Custody Transfer or manual measurement. LACT is the only automated method of measurement currently allowed on federal land. Because this system is so expensive, the vast majority of storage tanks on federal land are still checked manually.

The Bureau of Land Management is finally revising its rule

regarding storage tank measurement, which has not been updated since 1989. However, the proposed new rule adds only one additional automatic measuring method. This additional method is also expensive, which will still prevent smaller operators who cannot afford the necessary equipment from upgrading their storage tanks.

Many of the incidents were reported as deaths from natural causes, such as cardiac arrest. Some were even attributed to the workers attempting to get high off of the fumes. Initially, the Occupational Safety and Health Administration did not find any safety violations where these nine workers died. But OSHA has now recognized the risks involved in manually measuring and sampling fluids in storage tanks. In February, it issued an alert warning operators and workers of these risks. Let's pray these warnings help save lives.

If interested, you can also find out more on National Public Radio's website at www.npr.org/sections/health-shots/2016/03/30/472341181/mysterious-death-uncovers-risk-in-federal-oil-field-rules and to learn ideas for avoiding the exposure risks, please check out Inside Energy at insideenergy.org/2016/03/03/what-workers-need-to-know-about-oilfield-gas-exposure.

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