

Fire & Explosions at Stromberger Pad in Windsor, Colorado on 12/22/17

by Duane Nichols on January 7, 2018

Fire & Explosions Rock Oil Well Pad in Windsor, Colorado

Windsor Explosion and Fire at Stromberger Oil Well Pad in Colorado

From a Commentary by Wendell Bradley, PhD Physicist, Windsor, Colorado

Regional air quality devices monitor ozone via probes on towers. They show that Windsor has been out of ozone compliance since 2008, thus has been under a long term health threat.

Windsor's over-the-limit amount of ozone derives from industrial oil development permitted within its residential neighborhoods.



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Windsor's offending ozone is a decay product of oil-derived Volatile Organic Compounds (VOCs) of which benzene is the most toxic. There is no safe level of benzene. It attacks every organ in one's body and causes cancer.

On December 22, 2017, a leaking valve at Windsor's Stromberger oil-well pad led to a fire and several explosions that threatened health and safety for the entire Town and its surrounding region.

The pad's escaping methane gas and benzene vapors explosively caught fire. This can happen for methane concentrations in air between 4 and 14 percent, less for benzene.

Leaking methane, during atmospheric inversions, can creep into municipal areas until it ignites and causes an explosion. A natural gas tanker-ship on Lake Erie leaked methane gas into Cleveland, Ohio where it collected, then exploded destroying approximately one square mile of that city.

Apparently, given the atmospheric inversion on the night of Windsor's pad explosion, Windsor was in danger of creep and devastating explosion, had the gas not burned on site.

Ordinarily fugitive natural gas (mostly methane), being lighter than air, rises whilst decaying into ozone, and finally dissipates without explosion. Methane is odorless, colorless, tasteless, and nontoxic.

The benzene component of a pad's gas leak, however, is heavier than air. As a consequence, benzene (highly toxic and also explosive) collects in lower lying areas where it may remain for days, undetected, finally decaying into ozone.

The main reason oil industry personnel wear hazmat suits with breathing devices upon arrival at uncontrolled gas leaks on well pads (as they did at Windsor's Ochsner blowout, 2013) is to avoid immediate benzene poisoning.

Windsor Severance Fire Rescue (WSFR) personnel should know the benzene levels at any oil pad's leak before entering the site unmasked. Benzene levels will not be measured by the pad's operator and likely will be extremely high.

Also, prohibitive benzene levels cannot be determined by the 'big picture' readings of a VOC meter.

The most efficient, economic way to test for a benzene determination of pad-entry safety is via deployment of dreagger tubes. Later measurement for benzene safety in the pad's surrounding areas will be tricky and difficult because of its creep and collected concentrations into low lying areas.

Due to the separation and creep of benzene from the larger methane volumes, VOC metering will not provide adequate public protections.

Since it has been amply demonstrated that adequate public health protections and safety cannot be provided in municipal areas for ubiquitous, ongoing well pad negligence leading to highly dangerous releases by any of the means under state regulation (COGCC, CDPHE), it is incumbent on municipal officials to take direct action.

One possibility would be for municipalities to impose a temporary moratorium on all further oil Exploration and Production (E&P) activity until health and safety issues can be assessed and resolved.

Local, temporary moratoria are not precluded by any current state rulings or powers. Indeed, the recent Appellant Court (Martinez) ruling virtually makes local, direct protective actions mandatory as environmental concerns must not get short shrift.

NOAA's regional ozone monitors detected such high levels of the decay products of Windsor's negligent, uncontrolled, highly toxic gas releases attending its Stromberger oil pad explosions on Dec 22, 2017 that residents within a 20 mile radius should have been warned, for days, not to go out of doors.

<http://www.frackcheckwv.net/2018/01/07/fire-explosions-at-stromberger-pad-in-windsor-colorado-on-122217/> 2/8

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No regional or municipal warnings were given by officials for the impacted areas. Local and Denver news media seemed unaware of any serious dangers. Their coverage seemed routine, assuming the incident was only another minor oil-related accident and fire.

The computer-generated NOAA ozone maps, representing the above monitoring, painted the large, impacted area in dark red. That map's legend indicates that as long as that coloring persists on the map area residents should, "Stay inside, behind closed doors".

Dangerous ozone spikes were detected all the way to Boulder.

Bloomberg News January 26, 2018 at 2:45 am

Landowners, Frackers in Tense Faceoff in Wake of Colorado Blast

Article by Meenal Vamburkar, Bloomberg News, January 26, 2018

The fracking frenzy in Colorado is spurring a tense faceoff between drillers and residents seeking a better handle on the dangers in their own backyards following a fatal pipeline explosion last year.

Gov. John Hickenlooper ordered a review of oil and natural gas operations after the April blast, which destroyed a home, killed two men and injured a woman just north of Denver. Now the industry is clashing

with state residents who are pushing for new rules that would mandate precise and comprehensive public mapping for underground lines.

With regulators extending the rule-making process into next month, residents say the additional disclosure would help guarantee lines are properly cared for and support quicker emergency response if an accident occurred. Industry says it's unneeded, and could open them up to terrorist strikes.

Colorado is seeing "an affluent population collide with energy development," which isn't necessarily the case in other parts of the country, according to Katie Bays, an analyst at Height Securities LLC in Washington. "There's very little that everyone in Colorado agrees on."

The dispute comes as explorers are increasingly returning to the oil-rich rock of Colorado as a way to expand beyond the shale plays of Texas and New Mexico. Drilling in the Denver-Julesburg Basin northeast of Denver has doubled since mid-2016 to 25 rigs, including the recent addition of equipment searching for natural gas for the first time in two years.

Last April's explosion in the community of Firestone was triggered by natural gas leaking from a gathering line nearby, which had been abandoned but not capped. The blast was linked to one of Anadarko Petroleum Corp.'s wells and prompted the driller to close more than 3,000 wells in Colorado as a precaution.

The Colorado Oil and Gas Conservation Commission last month released a draft of new rules it's proposing in response to the governor's call for a review. The results, outlined in a September report,



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found more than 120,000 flow-line segments running within 1,000 feet of buildings. At the same time, more than 400 of the lines failed to pass standard testing, according to the regulators.

The new regulations, if approved, would address management of abandoned flow lines and add new requirements for leak detection and pressure testing. It doesn't include mandated public mapping, spurring protests by local landowners.

"What I'm seeing is that residents and homeowners are concerned whether the largest investment they have is safe," said Sara Loffin, executive director of the League of Oil and Gas Impacted Coloradans, which seeks to promote oil and gas reform statewide.

A decision will come after the group revisits the issue in February, the commission said in its Jan. 9 meeting.

The fracking frenzy is crossing paths with Colorado's suburbs, as housing developments emerge in areas previously occupied by rigs and farmland. With a state law that allows entire neighborhoods to be forced into leasing the minerals beneath their properties as long as one person consents, homeowners are unable to stop development.

In contrast, many states require 51 percent of owners in a drilling area to consent. Against that backdrop, some residents and home builders are concerned about preventing another incident like the Firestone blast.

That sentiment extends to home builders, too. Pipeline location information is important in planning and development, the Colorado Association of Home Builders said this month. Disclosure would enable builders to include pipelines in their surveys and provide information to local governments and homeowners, the group said.

The industry sees it differently. At the January hearing, oil and natural gas companies, including representatives of Anadarko, argued that

public information about locations could invite terrorists to tamper with or damage lines. They have pointed to the 811 “call before you dig” hotline, which provides information on individual lines.

“We do not want to give roadmaps to those who wish to intentionally harm our energy infrastructure,” said Dan Haley, chief executive officer of the Colorado Oil & Gas Association, in an emailed statement. “That would only place a far greater number of people at risk.”

Anadarko didn’t immediately respond to request for additional comment.

Environmentalists and community representatives have said the 811 option falls short because it doesn’t ensure local governments can plan safely, and could slow response following an emergency event. “If you want to say you’re one of the safest industries, why are you fighting mapping?” Loflin asks.

Loflin says she doesn’t expect the industry to concede on mapping information, and believes a legislative solution — not just a regulatory ruling — will be needed to overcome the industry’s objections. Her group plans to work with state legislature, other resident groups and local governments to make that happen.

“At times, Colorado becomes a testing ground for what this could look like in other places,” Loflin said. Source: [https://www.bloomberg.com/news/articles/2018-01-26/landowners-frackers-in-tense-faceoff-in-](https://www.bloomberg.com/news/articles/2018-01-26/landowners-frackers-in-tense-faceoff-in-wake-of-colorado-blast)

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