

Tank and Petroleum Use Mishaps

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<http://groups.yahoo.com/group/DangerousGoods/>

USA, S.D, WATERTOWN

FEBRUARY 28 2013.

FARMERS CAUTIONED TO CLEAN ON-FARM FUEL STORAGE TANKS REGULARLY

Barry Amundson

When farmers at a Watertown (S.D.) Winter Farm Show program on diesel fuel earlier this month were asked whether they drained their bulk fuel tanks and farm equipment tanks regularly, several said they did.

"That's outstanding," said Doug Van Zee of Sioux Falls, a district manager of refined fuels for Cenex, who presented the program. "I often see very few people that do it."

He said it's recommended that aboveground or underground tanks be drained in the spring and fall.

"If you have water in your tank, the odds of you having issues with your equipment have accelerated greatly," he said. "You would be shocked how much water can accumulate in your tanks."

Along with the water comes dust, rust, dirt, bacteria and algae. With the bacteria problems comes the algae, he said, which live in water and feed on fuel. The dead algae will fall to the bottom of the tank. If algae is going into tanks, it can create a black, slimy film, he said. If a tank is regularly drained of condensation, algae formation can be prevented.

There are a few ways to tell whether you have water in your tanks. If there's a frost line on the outside of the tank, it means there's frost on the inside, and water, too, Van Zee said.

Bulk tank delivery truck drivers can help farmers and ranchers determine whether there's water in their tanks by using a stick with a white paste on the end of it. It will turn a bright pink if there's water in the tank.

Van Zee was asked about underground tanks and how to check and clean that type of bulk tank.

He said such tanks are the best to have on the farm as they keep fuel temperatures at the most constant, optimum temperature of about 60 degrees.

To clean underground tanks or large, upright aboveground tanks, an electric pump with a stiff PVC pipe can be used to suck the water out of the bottom. He said using a clear hose to see when the water is drained off is important. As soon as the water is drained out, shut the pump off. That type of system is used by Cenex to remove water from its underground tanks.

"Although it can be a challenge on larger tanks, it's time well spent," Van Zee said.

There are companies that will clean tanks, such as CamVacUSA, using a vacuum system. Van Zee showed a video taken by a fuel-safe camera from CamVac of what was found in a bulk tank in southern Minnesota. It was not a pretty sight with all of the contaminants.

CamVac, which serves the Upper Midwest with headquarters in Burnsville, Minn., said that cleaning tanks now is even more important than before because new farm equipment is much more sensitive to contaminants such as water, dirt, rust and microorganisms. Stricter emission standards cause the equipment to be more sensitive and make it critical to keep tanks and fuel clean, according to the company.

If contaminants make it through the filter and into equipment, it can lead to filter plugging, injector failure or fuel pump failure.

"Many winter fuel problems are related to water and contaminants in tanks," the company said on the video.

Van Zee agreed that it's important to have tanks cleaned and to install filters on bulk storage tanks. Several of the farmers at the meeting said they had filters on their bulk tanks.

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He said warmer days can cause problems, too. During hot summertime weather when a farmer is pulling fuel off the tank, it's "staggering" how much dust and dirt can be sucked in by vents and how much water and moisture can end up in the fuel tanks, he said.

Van Zee also talked with the farmers about various aspects of diesel engines and how premium diesel additive packages can help equipment run better and improve mileage.

Challenges have been created, he said, by the Environmental Protection Agency requiring cleaner tailpipe burns and better fuel economy. That's the reason that, since 2000, the common rail engine has been used to help with those issues. But it also causes the typical No. 2 diesel fuel to cook in the engines and causes filter-plugging issues if a fuel stabilizer is not used to stop the heating up of the fuel.

He said where the fuel used to be about 175 degrees going through the parts of the engine, it's now at 500 degrees and is breaking down and causing fuel injector problems and fuel filter troubles. All engine manufacturers have reported similar problems with the higher-temperature fuel leaving varnish on injectors and causing mileage losses.

Where there used to be about 30,000 miles between filter changes, if a stabilizer is not used, it can mean changing the filter at about 12,000 miles.

Van Zee said farmers who buy a premium diesel fuel should know what the additive package contains.

Standard No. 2 diesel fuel contains no additives to reduce water, extend storage life or reduce the formation of gum, varnish and corrosion.

He described the various parts of a Cenex premium diesel product, what it contains and how it can help with equipment performance.

The various additives include:

- Demulsifiers: Help in keeping water out of the fuel.
- Storage stabilizers: Help extend the shelf life or storage life of diesel an additional three months and allow diesel to be stored for as much as nine months without breakdown. Generally, fuel should not be stored for more than six months.
- Corrosion inhibitors: Help keep engines from corroding and keep fuel lines from breaking or cracking.
- Lubricity improvers: In the Cenex premium, one-tenth of 1 percent of soy is added, and he said it's a great lubricity product. In Minnesota, 5 percent biodiesel is mandated in diesel fuel. Lubricity provides friction reduction, which extends the life of the fuel pump and reduces down time.
- Detergents: Help keep fuel injectors clean. It can keep spray patterns clean and provide better fuel economy.
- Cetane improvers: Reduce smoke when starting an engine and provide a quicker startup. During startup, Van Zee said, is when engine damage most often occurs.
- Injector stabilizers: Help keep fuel from cooking in the common rail engine.
- Tracers: If there are questions about fuel's content, tracers can be used in a lab to make sure the product isn't diluted and is mixed properly.

Farmers asked whether there was a guarantee that a good base stock is being used at terminals. Van Zee said there are specifications measured there, too, to check the product.

Van Zee also noted that Cenex mixes its premium fuel at the terminal to make sure it's properly mixed and at the right temperature. He said the company prevents its marketers from splash-blending a product into fuel.

http://www.tristateneighbor.com/news/regional/article_f7b87490-7d02-11e2-8d8d-0019bb2963f4.html

USA, TX, TYLER

MARCH 8 2013.

MAN FALLS FROM TYLER GROUND STORAGE TANK; LUCKY TO BE ALIVE, POLICE SAY

Faith Harper

A 25-year-old Tyler man remained in the hospital this afternoon after falling from a ground storage tank early this morning. The man and two of his friends climbed to the top of a ground storage tank on the 2900 block of Rockbridge Road in Tyler for the view, said Don Martin, spokesman for the Tyler Police Department. Around 3:45 a.m., as the trio was admiring the view, one man got too close to the edge of the still under-construction ground storage tank and fell about 50 feet, Martin said. Alcohol was involved, he said. The man had a bloody nose but was conscious. He was taken to East Texas Medical Center, where he is listed in good condition. "He was very lucky," Martin said.

<http://www.tylerpaper.com/article/20130307/NEWS08/130309837>

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USA, FLA, ST AUGUSTINE

MARCH 15 2013.

STATE TO REFILE CHARGE AGAINST DRIVER IN BP EXPLOSION

DAVID HUNT COWLES, 61, FACING ONE COUNT OF CULPABLE NEGLIGENCE

Stuart Korfhage

Criminal charges against the truck driver in the BP gas station explosion in 2011 have been dropped, but the state is expected to refile them.

David Hunt Cowles, 61, of Palatka, was facing a second-degree misdemeanor charge of culpable negligence resulting in exposure to injury in the Aug. 19, 2011 explosion. His attorney, Mycki Ratzan, of South Florida, filed a motion to dismiss the charge as legally insufficient. The motion was granted without prejudice by Judge Charles Tinlin on Tuesday.

At the time of the explosion, Cowles lived in Fort McCoy. He has since moved to Palatka.

Because the dismissal is without prejudice, Tinlin gave the state 20 days to complete amended charging information.

There is another pretrial hearing scheduled for May 30. At that time, Cowles will be arraigned on amended information, or the charge could be dismissed again.

In her motion to the court, Ratzan describes the state's case against Cowles as "so vague and indistinct to render it fundamentally defective."

Tinlin agreed and asked the state to file more specific information.

Cowles was driving the fuel truck that delivered about 8,800 gallons of gasoline to the gas station owned by Coomes Oil. There was a leak during the transfer of fuel from Cowles' truck to Coomes Oil's tanks, and there was an explosion. Cowles was the only one seriously injured in the incident, suffering third-degree burns.

There was extensive property damage in the fire, which took hours to extinguish.

Both Cowles and Coomes Oil have filed lawsuits against each other.

The civil cases are at a standstill while the criminal side of things is worked out.

Clearly, Ratzan is seeking to end the criminal case before it reaches the trial stage.

"There is no allegation that Mr. Cowles violated a known legal duty or that his violation of that duty caused anything," Ratzan's motion says.

The state's charging information was filed on July 17.

The allegation made by the state is that Cowles did "expose various individuals in and around Coomes Oil and Supply Inc. to personal injury by removing himself from the pump and fuel tanker."

The defense — and the judge, for now — find the charge to be too vague.

"What that means, why that is reckless indifference or gross disregard for the safety of others and how that exposed various individuals to personal injury is left to speculation and conjecture," the defense motion says.

In the civil suit, filed by Stuart Ratzan, Coomes Oil is blamed for the explosion because it did not have proper gauges and other equipment in place to prevent an overflow. The complaint filed by Ratzan says Cowles attempted to access the tanker's shutoff valves once he realized there was an overflow.

However, the fumes from the spilled fuel ignited before he could stop the pumping.

<http://staugustine.com/news/local-news/2013-03-13/charge-against-truck-driver-bp-explosion-dismissed-state-refile#.UUOP3hzDCM4>

SOUTH KOREA, GUMI

MARCH 15 2013.

OIL TANK EXPLODES IN CITY GRAPPLING WITH GAS LEAK

A tank at an oil refinery in the southeastern city of Gumi exploded Thursday, with no injuries reported, police and fire officials said.

The 200,000-liter tank containing 4,000 liters of bunker C fuel oil at the Kyung Buk Kwang Yu Co. refinery located in Gumi, some 200 kilometers southeast of Seoul, exploded around 8:21 a.m., they said.

A small stream runs nearby the refinery, but no oil has been found to have leaked, they added.

Over 190 firefighters with the use of 20 fire engines were able to extinguish the blaze in about 30 minutes, they said.

The explosion comes just two days after a chlorine gas leak at another chemical factory in Gumi, causing nearly 200 people to receive medical attention.

<http://english.yonhapnews.co.kr/national/2013/03/07/25/030200000AEN20130307002551315F.HTML>

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USA, WYO, LARAMIE

MARCH 16 2013.

NEW EPA FARM FUEL-TANK REGULATIONS START MAY 10

Those who store fuel, oil, crop oil, hydraulic oil, surfactant, adjuvant and other materials on farms or ranches must comply with EPA-mandated Spill Prevention, Control and Countermeasure (SPCC) plans by May 10. The EPA's new SPCC rule includes requirements for oil spill prevention, preparedness and response to prevent oil discharges to navigable waters and adjoining shorelines.

http://www.thebusinessfarmer.com/v2_news_articles.php?heading=0&page=72&story_id=2311

USA, PENNSYLVANIA, WASHINGTON TWP

MARCH 16 2013.

WYOMING COUNTY WELL MALFUNCTION CAUSES SPILL, EVACUATION

Laura Legere

Three Wyoming County families near a malfunctioning natural gas well were evacuated Wednesday night and Thursday as thousands of gallons of fluid waste escaped from the well before crews could shut it down.

The Marcellus Shale well on Carrizo Oil and Gas' Yarasavage pad off Keiserville Road began malfunctioning during a fracking operation at around 6 p.m. Wednesday, Department of Environmental Protection spokeswoman Colleen Connolly said.

The problem worsened overnight when natural gas was detected leaking from the well and the salty, chemically treated wastewater flowed out at a rate that peaked at around 800 gallons per minute before subsiding, according to the company and regulators.

Gas company and specialty well control crews regained control of the well by early Thursday and had it capped by the afternoon.

About 5,400 barrels, or 227,000 gallons, of the fluid was captured in tanks and trucked off site, Ms. Connolly said. Some of the fluid ran off the pad but crews built a temporary catch basin across the road to contain it, she said.

Four families within 1,500 feet of the well site were asked to evacuate on Wednesday night because officials were concerned that as the fluid in the well was released to the surface, gas would blow out behind it.

"Fortunately, we had the outcome we were looking for," Ms. Connolly said. "There was no major gas buildup, no explosion, no large flare off. Now we need to find out why this happened and what can be done to prevent it from happening again."

No one was injured in the incident. The three families that evacuated to hotels were invited to return by Thursday afternoon. A fourth landowner did not evacuate. Carrizo is offering bottled water to families within 1,500 feet of the well and will return to the homes today to test their drinking water supplies, although there is no specific indication of contamination, Ms. Connolly said.

"The safety of our employees, community residents and stakeholders is our first priority," Carrizo said in a statement. "This is an unfortunate incident and we will apply the experience gained to the continuous improvement of our future operations."

The problem started while crews were in the 23rd stage of fracking, or hydraulically fracturing, the Yarasavage 1H well, a process of injecting chemically treated water and sand underground at high pressure to crack the gas-bearing shale. The malfunction might have been caused by a flange at the wellhead but the exact cause is unclear.

Officials with the county and state emergency management agencies responded to the incident along with Carrizo, its contractors, first responders and environmental regulators.

Keiserville Road was closed at both ends to most traffic on Thursday and dozens of trucks traveled to and from the site. Shortly before noon, a brief burst of vapor shot high into the air from the hillside well and stopped.

County EMA director Eugene Dziak said the public was not in any danger.

"We've been monitoring the air all night long," he said. "There has been no release of gas to the atmosphere."

DEP crews found no detections of volatile chemicals or methane in the air during a sweep of a mile-and-a-half-wide circle around the well. Officials also detected no or very low levels of radiation in the fluid that flowed out of the well, Ms. Connolly said.

Carrizo notified emergency officials of the problem in a timely way, as required, which aided the response, she said.

"There have to be systems in place to collect the flow back water at a certain pace," she said. "Since this started to flow back so fast, they couldn't get control of it until this morning."

The department will continue to investigate the cause of the incident and any soil or water impacts, and

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eventually determine whether to fine the company, she said.

Houston-based Carrizo has drilled 85 shale gas wells in Pennsylvania, according to DEP records. Thirty of them are in Wyoming County.

<http://thetimes-tribune.com/news/wyoming-county-well-malfunction-causes-spill-evacuation-1.1458575>

AUSTRALIA, QUEENSLAND, BRISBANE

MARCH 12 2013.

TESTING TO REVEAL HOW WATER GOT IN TO THE FUEL AT STAFFORD CALTEX SERVICE STATION

Caltex has undertaken a series of tests to find out how water got in to the fuel at a Stafford fuel station, where several motorists were affected after filling up.

A Caltex spokesman said tests confirmed fuel in the Vortex 95 tank at the Stafford Rd station meets "stringent quality standards" and the issue had instead been isolated to fuel pipes that connect the tank to the bowsers.

Four of the eight Vortex 95 bowsers which are supplied with fuel via a different pipe network have since reopened after they were closed on February 26, following complaints from customers.

The remaining four bowsers will stay offline until repairs and further tests confirm the fuel is fit for use.

Keperra resident Trudy Guy was one of the affected motorists. Her car broke down within 3km of the Stafford Rd station after filling up.

She said the damage bill was \$3500, which was covered by her insurance, aside from a \$500 excess.

But she's now awaiting confirmation Caltex will accept liability and provide compensation.

The spokesman said it would "investigate any customer claims and fully compensate any motorist if it is identified that Caltex's fuel has caused a problem with their vehicle".

He said it was common for a small volume of water to sit at the bottom of tanks at some service stations, without issue because oil and water do not mix.

"Volumes in the tank are managed so that there is a buffer zone between the water and the fuel extraction point."

The spokesman said in high rainfall events there could be "isolated circumstances in which water can impact our fuel systems" when levels changed quickly.

Phone Caltex customer feedback line on 1800240398.

<http://www.couriermail.com.au/questnews/north/testing-to-reveal-how-water-got-in-to-the-fuel-at-stafford-caltex-service-station/story-fn8m0r14-1226594981353>

USA, OH, WAYNE CO, CHIPPEWA TOWNSHIP

MARCH 16 2013.

FIREFIGHTERS EXTINGUISH BLAZE AT FUEL PRODUCTION WELL

Homes were evacuated after an oil tank in Chippewa Township exploded and caught fire Friday evening, the fire chief said.

Ron Browning told NewsChannel5 they received a phone call of the explosion at around 4:30 p.m. near Taylor and Serfass roads in Wayne County.

Officials say welding on the oil holding tank's battery caused sparks, which lead to the explosion. Oil inside the mostly empty tank continued to burn and sent large amounts of dark smoke into the sky, the fire chief said.

Spokesman for Dominion East Ohio Neil Durbin said the official cause is still under investigation and environmental contractors will be at the scene draining the leftover chemicals. Crews will be back on Monday to replace the equipment.

Due to the explosion, the lid to one of the tanks flew off, landing some 200 ft. away. Chief Browning said the lid could weigh up to 300 lbs. and could have caused serious damage if it hit a home or vehicle.

Just as close in another direction lives Craig Goliath, who thought bricks on his home had come off from the explosion.

"If felt like the whole house shook, I looked out the window and seen, it looked like a green lid rolling on the ground like 100 ft. away," said Goliath.

He told us he was not evacuated but a few homes across the street were. Officials said that was because the thick black smoke was headed in their direction.

Officials were concerned the fire, in close proximity to a second tank, would cause a second explosion. The lid of that second "bubbled-up" when it was supposed to be flat across.

"The biggest danger that we had was that the fire impinging on the second tank and that had not vented yet

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... that was our biggest concern and that's why we kept everybody back," said Chief Browning.

Durbin of Dominion East Ohio said the fire department extinguished the fire around 7 p.m.

No injuries were reported, residents were allowed back into their homes and the road was reopened Friday.

http://www.newsnet5.com/dpp/news/local_news/oh_wayne/oil-holding-tank-in-chippewa-township-in-wayne-county-catches-fire-causes-explosion#ixzz2PEN5jm3M

TURKEY, ANKARA

MARCH 17 2013.

1 KILLED, 5 INJURED IN FUEL TANK BLAST IN SE TURKEY

One person was killed and five others injured on Saturday evening when a fuel tank exploded in south-eastern Turkey, private Dogan news agency reported. The explosion took place in the electrical section of the fuel tank in a garden in Sanliurfa, leaving one person killed and five others injured, including two children, according to the report. Reasons behind the blast remained unknown. The wounded were taken to a private hospital for medical treatment, said the report, adding that an investigation into this incident was underway.

<http://www.nzweek.com/world/1-killed-5-injured-in-fuel-tank-blast-in-se-turkey-54756/>

USA, OH, MINERVA

MARCH 18 2013.

OIL WELL EXPLOSION NEAR MINERVA

An oil well exploded at 8704 Knox-School Road in Columbiana County, six miles east of Minerva on Sunday evening, according to Fire Chief Aaron Stoller of the Sandy Creek Joint Fire District, who serves Minerva and the surrounding area. Stoller said the call came into the fire department at 8:29 p.m. Sunday.

"It blew the lid (off the tank) about 400-500 feet into the yard of a nearby residence," Stoller said, adding there was no damage to the residence and no injuries reported.

Stoller said all of the crude oil remained inside of the tank and a resulting fire was extinguished using a Class B foam.

The Columbiana County Emergency Management Agency (EMA); Stark County HAZMAT; Atlas Gas, who owns the tank; and the Environmental Protection Agency (EPA) were contacted.

Stoller said Atlas Gas, Columbiana County EMA and the EPA will be on-site Monday for clean-up and investigation into the cause of the explosion.

The North Georgetown and Homeworth Fire Departments were called to assist Sandy Creek FD at the scene.

<http://www.cantonrep.com/news/x898150452/Breaking-Oil-well-explosion-in-Minerva>

USA, OH, MINERVA

MARCH 19 2013.

STATIC ELECTRICITY BELIEVED CAUSE OF OIL WELL EXPLOSION

Darrick Boord

An oil well explosion on Knox School Road in West Township was heard - and felt - for miles, but caused no injuries and only damaged the well itself, despite sitting less than 300 feet from two residences and the West Township garage.

The explosion blew the lid off the tank, landing about 400-500 feet away in the yard of an adjacent residence. Sandy Creek Fire District Chief Aaron Stoller said officials from the Ohio Environmental Protection Agency, Columbiana County Emergency Management Agency and Atlas Gas - which owns the well - were on scene Monday. Stoller said the officials are blaming static electricity to be the preliminary cause of the explosion.

He was unsure how officials came to that conclusion.

Stoller said the total call took about two hours, but, "It probably only took 10-15 minutes to set up and extinguish the fire." He said the department, which received mutual aid from Homeworth and North Georgetown, also was conferring with hazmat officials while on the scene.

"In talking with folks with Atlas Energy, containment was inside tank," Stoller said. "There is no outside hazard, nothing into the creeks or streams or anything.

"To my knowledge, EPA and EMA and Atlas reps were out there (Monday), and I've received no phone calls back that any other action is needed."

Stoller said Atlas would be responsible for whatever cleanup is required by the EPA and EMA.

"They have to pump out the residue that's left in the tank and decide what they're going to do with that," he

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said. "My guess is that they would replace that (well), but I don't have an official response from them on that."

<http://www.morningjournalnews.com/page/content.detail/id/546750/Static-electricity-believed-cause-of-oil-well-explosion.html?nav=5006>

USA, IN, PAOLI

MARCH 19 2013.

WORKERS BURNED TRYING TO REPAIR FUEL TANK

Two workers are recovering after fire erupted inside an underground fuel tank they were repairing. It happened last week at Riley Oil Co. in Paoli, Ind. The state fire marshal's office said both men were working inside the tank when someone operating a tanker truck dumped fuel into a tank nearby. Authorities said a fire sparked, burning the two workers. They were both flown to University Hospital in Louisville. The owner of Riley Oil Co. said the men work for Fiberglass Tank Systems. He said one of the men has been released from the hospital.

<http://www.wlky.com/news/local-news/indiana-news/Workers-burned-trying-to-repair-fuel-tank/-/9718538/19371376/-/format/rss 2.0/-/jqce3mz/-/index.html>

USA, TX, HOUSTON

MARCH 20 2013.

SOME COMPANIES DON'T WAIT FOR LIGHTNING TO STRIKE

Jeannie Kever

Back in Ben Franklin's day, no one worried about lightning causing a chemical tank to explode or shutting down the electronic controls to a nuclear reactor.

Technology has raised the stakes since Franklin invented the lightning rod – lightning-sparked fires caused more than \$1 billion in insured homeowners' losses in 2010 alone, according to the Insurance Information Institute.

The costs can be even higher for the oil and gas industry; a 2006 study published in the Journal of Loss Prevention in the Process Industries found lightning strikes are the most common cause of accidents involving storage tanks at refineries and petrochemical plants.

"For the guys who've been around for 30 or 40 years, it's not if, it's when they're going to get hit," said Matt Jones, project manager for Ashley Automation & Technology, an industrial electrical firm that works mostly in the oil fields. And while lightning is hardly the only risk for oil and gas production and other facilities, it's a big one, said David Miller, director of standards for the American Petroleum Institute.

In the lower 48 states, the risk is highest in Florida and lowest along the West Coast. The Houston area receives more lightning strikes than anywhere else in Texas, according to Richard Orville, a Texas A&M professor who established the National Lightning Detection Network.

The lightning rod is still the most commonly used protection around the world, updated with modern materials but still based on Franklin's design from the 1700s. Jones said there is also growing interest in a decidedly more modern technology as companies try to protect themselves from the elements.

Roy Carpenter was an engineer for NASA contractor Rockwell International when he came up with a different way of guarding rockets against lightning.

Lightning rods work by drawing lightning and sending the charge through a conducting wire into the ground. Carpenter's system aims to prevent a strike altogether by disrupting the electrical charge, essentially making conditions less favorable for lightning to develop.

After leaving Rockwell, Carpenter started the company that is now Lightning Eliminators & Consultants.

Roy Carpenter died in 2007, but the company is still in business, based in Boulder, Colo. Carpenter's son, Peter Carpenter, is chairman of the board.

Skeptics of system

While the system has its skeptics, energy companies make up a growing share of its clientele.

"Twenty years ago, it wasn't as big a deal, but now oil and gas plants are so technical," company president and CEO Avram Saunders said. "Lightning rods attract lightning and send it into the ground. If you had a multimillion-dollar facility, would you want to attract that much energy?"

Saunders said several companies along the Houston Ship Channel use the system, including some units at Exxon Mobil Chemical's Baytown plant. The company did not respond to requests to discuss the system.

The Tennessee Valley Authority installed the system over a portion of its Browns Ferry nuclear power plant in Alabama in 1999 and will use it at another nuclear plant now under construction, said Rick Brehm, the authority's program manager for electromagnetic interference and instrumentation and control systems.

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Brehm said the authority chose to add the protection to a 600-foot-high stack, camera towers and guard towers at Browns Ferry, areas that previously had been protected by lightning rods but still had been damaged by lightning.

"When we lose security equipment, it's not just the dollars of the equipment, but having to staff security officers to cover the area, so we were paying personnel costs as well as equipment costs," Brehm said.

An internal study tallied lightning strikes within a 500-meter, three-mile, six-mile and 120-mile radius of the stack for the three years before and after the system was installed.

In the years after the installation, lightning strikes within 500 meters of the stack dropped by 80 percent, Brehm said, while they held steady in the wider area. He said there's no sign the stack has been struck by lightning since the system was installed.

But such studies have done little to sway some in the lightning protection mainstream, including Bud VanSickle, executive director of the Lightning Protection Institute.

His organization, which certifies companies to install lightning protection systems, supports lightning rod systems "because they work," VanSickle said.

Apollo program

Peter Carpenter has heard all the criticism.

He was a child when his father designed the charge transfer system as a Rockwell engineer on the Apollo program. The rockets launched from Florida, making lightning strikes a constant worry.

"It seemed odd to him that they were using technology that went back to Ben Franklin to protect men going to the moon," Peter Carpenter said.

Jones, the project manager for Ashley Automation & Technology, said his company began using Lighting Eliminators' system at customers' request but now recommends it.

Jones said much of the current oil field expansion is funded by private investors, who are more concerned about protecting gas processing units, oil drilling pads and other investments from lightning strikes than major oil companies may have been in the past.

"They don't want to lose their \$5 million to a lightning strike," he said. "They see it (lightning protection) as an insurance policy."

http://fuelfix.com/blog/2013/03/18/some-companies-dont-want-to-wait-for-lightning-to-strike/?utm_source=WhatCountsEmail&utm_medium=FuelFix&utm_campaign=FuelFixNewsLetter

USA, FLORIDA, PENSACOLA

MARCH 29, 2013

PENSACOLA CHEMICAL PLANT EXPLOSION UNDER INVESTIGATION

Now the latest on the investigation into an explosion and fire at a chemical plant in Pensacola.

Crews were called to the Reichhold Chemical Plant off Pace Boulevard at around 10:30 Thursday night. Bill Torrence of Reichold Chemicals says a tank caught fire in a closed off area called a "tank farm" that contains several other tanks. A viewer sent us photos showing a large plume of smoke over the plant Thursday night.

Torrence says the company is conducting its own investigation and that he can't say yet what was burning or if any chemicals were released. He says the fire was contained within a half-hour. Police and fire authorities say residents in the area did not need to evacuate. Firefighters were on the scene for about three hours.

People who live nearby say they heard loud blasts. Many of them are very alarmed by what happened. "The whole neighborhood could've been in trouble. And it was late at night. We got so many kids that it would've been a problem tryin' to get them out," said Willie Hayes, who lives near the plant. "All you seen was like polices and ambulances rushing. You seen the cloud of smoke. It was crazy," said A'Keem Mouton.

The company makes unsaturated polyester and vinyl resins for composites used in products ranging from bathtubs to turbine blades. It also makes coatings used in paints and varnishes. Many of the chemicals it uses are toxic.

The State Fire Marshal is investigating the cause of the fire which they say caused \$1 million in damage. No one was hurt.

<http://www.wear.tv.com/news/features/top-stories/stories/pensacola-chemical-plant-explosion-under-investigation-30450.shtml>