

Tank and Petroleum Use Mishaps

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

USA, GA, MITCHELL CO

MARCH 28 2014.

MAN DIES AT ETHANOL PLANT

Devin Knight

An investigation is underway in Mitchell County, where officials say a Thomasville man was killed around 1 p.m. Thursday at the Southwest Georgia Ethanol Plant.

Mitchell County Sheriff's investigators say 31 year-old Joshua Fulghum returned to work as a "sweeper" from lunch in silo 1630, when he slipped and fell into an auger while sweeping seeds.

Deputies say two witnesses were in the silo with Fulghum and ran to turn the power off after he fell, but said it was too late when they did.

Officials removed the body from the silo around 4pm. Witness accounts and information collected from the scene were forwarded to the Georgia Bureau of Investigation medical examiner, who will conduct an autopsy Friday.

OSHA investigators will also probe the incident.

Investigators say no foul play is suspected, and say no other injuries were reported.

<http://www.walb.com/story/25092681/coroner-investigators-called-to-ethanol-plant>

USA, ILL, ST CLAIR CO

MARCH 28 2014.

FUEL TANK DRIVER FILES LAWSUIT AFTER BEING STRUCK ON HEAD BY PIPE

While working for a propane company, a man was struck on the head with a pipe, according to a recently filed lawsuit.

David R. and Wilma L. Candler filed a lawsuit March 13 in the St. Clair County Circuit Court against Illinois Oil Marketing Equipment.

In their complaint, the Candlers allege David Candler was working as a fuel tank driver on Aug. 28, 2012, when he attempted to use piping to load fuel into a delivery truck that had been inspected by Illinois Oil.

"The piping suddenly and without warning lowered swiftly and struck David on the head causing him to sustain serious and permanent injuries," the suit states.

Because of the incident, David R. Candler experienced physical pain, suffering and mental anguish and incurred medical costs, the complaint says. He also claims he lost his ability to work, lost wages and benefits and has been unable to perform his activities.

Wilma Candler, who was married to David R. Candler, claims she lost her husband's affections,

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society, companionship and consortium due to the incident.

The Candler's blame Illinois Oil for causing David Candler's injuries, saying it negligently failed to properly inspect the piping, failed to properly install the piping, failed to properly service the piping, failed to properly maintain the piping, failed to warn of the dangerous condition and failed to protect David Candler.

The Candler's are seeking a judgment of more than \$200,000, plus costs. They are being represented by Stephen C. Buser of the Law Office of Stephen C. Buser in Columbia.

St. Clair County Circuit Court case number 14-L-217.

<http://madisonrecord.com/issues/366-personal-injury/263625-fuel-tank-driver-files-lawsuit-after-being-struck-on-head-by-pipe>

USA, IN, INDIANAPOLIS

MARCH 29 2014.

NITRIC ACID EXPLOSION ROCKS INDIANAPOLIS ROLLS ROYCE PLANT

Jennifer Pfalz

An chemical spill and subsequent explosion on Friday afternoon at an Indianapolis Rolls Royce plant has injured eight workers. Another affected employee is being examined on site. The explosion happened at approximately 1:30 p.m. The incident occurred as nitric acid was being transferred out of a 250-gallon tank. The explosion created a chemical cloud, which has since dissipated. The plant was evacuated after the explosion.

Nitric acid is a very strong, odorless acid that can inflict serious burns to the skin, eyes, gastrointestinal tract, and respiratory tract. It is colorless, but can sometimes appear yellow. Nitric acid is a corrosive substance and it can explode when it contacts other materials. A person who inhales, swallows, or even comes in contact with the acid can suffer burns, injury, and possibly death.

The eight injured workers were transported to area hospitals to undergo treatment for exposure to acid. All eight are reported to be in stable condition.

Captain Mike Pruitt of the Wayne Township Fire Department stated that although they do know that an explosion occurred, it was too early to tell how large or small it was. They expect to gain more information from involved employees.

The explosion occurred at Plant 5 located on S. Tibbs Ave. The incident is under control according to emergency workers on the scene, but they have requested the Marion County Health Department to assist on site.

A nitric acid explosion at the University of Maryland in 2011 injured two students who were in the immediate vicinity of the blast. The two students were conducting an experiment using nitric and sulfuric acid. Normally, those two acids would not react violently, but in this case, the combination of the two was poured into an organic waste container and then exploded. It is believed that it was the addition of the materials that made up the container that caused the mixture of acids to explode violently. The injured students suffered from first- and second-degree burns and multiple cuts.

In January of this year, nitric acid exploded and seriously injured one student of a German university. The 24-year-old suffered cuts from flying glass and suffered a lung embolism due to the breathing in of the chemicals. Fifteen other students were also hurt in the incident. As in the UMD case in 2011, nitric and sulfuric acid had been combined. The mixture exploded when an organic chemical was introduced.

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When mixed with urea, nitric acid becomes a destructive explosion known as urea nitrate. Improvised explosive devices containing urea nitrate are used by terrorists all over the world. Perhaps the most well-known explosion caused by urea nitrate was the 1993 World Trade Center bombings. The most common source of urea for bomb-making has historically been from fertilizer, which contains urea due to the nitrogen it contains. Although the 1993 World Trade Center bombing failed to attain its goal of destroying both towers and killing tens of thousands of people, it did kill six people and caused injuries to more than one thousand.

<http://guardianlv.com/2014/03/nitric-acid-explosion-rocks-indianapolis-rolls-royce-plant/>

USA, ORE, COQUILLE

APRIL 1 2014.

RON'S OIL IN COQUILLE GETS FINED BY DEQ

A fuel company in Coquille was fined by the Department of Environmental Quality, after they say it used the wrong type of leak detector in an underground tank.

The DEQ said Ron's Oil Company used a gauge on an underground fuel tank that wasn't approved for fuel mixtures.

The tanks were located at 580 N. Central Blvd. in Coquille.

Ron's Oil Company was fined \$1,900.

The DEQ says the violation has been corrected.

Read the full release from DEQ here:

A Coquille business received a reminder from DEQ to pay careful attention to Oregon's underground storage tank leak detection requirements.

DEQ issued Ron's Oil Company a \$1,900 penalty for using the wrong type of leak detection method to monitor for leaks in one of four underground storage tanks the company owns and operates at 580 N. Central Blvd. in Coquille, Ore. The tank contained a mixture of gasoline and diesel.

The gauge Ron's Oil used was not approved for fuel mixtures.

Five months after learning of the violation the company corrected the violation. DEQ took this action into consideration when setting the penalty amount.

Proper testing and leak detection equipment is essential for discovering and responding to leaks to underground storage tanks quickly, before contamination can spread. Leaking tanks can contaminate groundwater and place human health and the environment at risk.

DEQ enforces Oregon environmental laws to protect people's health and to keep our region's air, land, and water clean and healthy. These compliance and enforcement efforts also help level the playing field by deterring violators who might otherwise have an unfair business advantage over their environmentally compliant competitors.

<http://www.kcby.com/news/business/Rons-Oil-in-Coquille-gets-fined-by-DEQ-253275641.html>

USA, WA, PLYMOUTH

APRIL 2 2014.

BLAST ROCKS WASHINGTON GAS PLANT; 5 WORKERS HURT

Jeff Barnard

Blast at the Williams Northwest Pipeline facility sparked fire, punctured a storage tank.

A large explosion rocked a natural gas processing plant on the Washington-Oregon border Monday, injuring five workers, causing about 400 people to evacuate from nearby farms and homes, and emitting a mushroom cloud of black smoke that was visible for more than a mile.

The 8:20 a.m. blast at the Williams Northwest Pipeline facility near the Washington town of Plymouth, along the Columbia River, sparked a fire and punctured one of the facility's two giant storage tanks for liquefied natural gas.

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Benton County Sheriff Steven Keane said a relatively small amount of gas leaked from the tank to the ground in a moat-like containment area. But it then evaporated, blowing away to the northeast, he said.

"I think if one of those huge tanks had exploded, it might have been a different story," Keane said.

The fire at the facility about 4 miles west of Plymouth was extinguished within a couple of hours.

One of the injured workers was transported to a Portland, Ore., hospital specializing in burns, he said.

Benton Fire District 1 Capt. Jeff Ripley said another four people were taken to local medical facilities. None of the injuries was believed to be life-threatening.

More than a mile away across the Columbia River, the explosion shook Cindi Stefani's home.

"It was just a very loud boom," she said. "I looked across the river and saw a giant mushroom cloud and flames at least a couple hundred feet high."

Animals on neighboring farms were running around, she added.

"At that point we were pretty scared. I was thinking, 'We need to get out of here.'"

Deputies went door to door to homes and farms within a 2-mile radius, evacuating about 400 residents as a precaution.

By Monday night, the evacuation zone had been reduced to a 1-mile radius, the Benton County Emergency Management agency said. Road and river restrictions were lifted.

About 75 people checked into a shelter set up in Oregon at the Umatilla County Fairgrounds, but emergency officials said few were expected to stay the night.

The evacuation was described as voluntary.

The facility provides supplemental gas during times of high demand for a 4,000-mile pipeline stretching from the Canadian border to southern Utah. Its two storage tanks for liquefied natural gas each have a capacity of 1.2 billion cubic feet, Williams spokeswoman Michele Swaner said. The one that punctured was about a third full.

Swaner said the 14 employees working at the time were all accounted for. A total of 17 or 18 people work at the facility.

She added it was too early to determine the extent of the damage or the cause of the explosion. The pipeline was shut down in the area of the storage facility, but was still carrying gas on other stretches.

Video taken by a Washington State Patrol bomb squad robot was being evaluated.

Emergency crews and Williams personnel entered the hazard area to assess the situation Monday night, the emergency management agency said in a statement.

A pipeline engineer with the Washington Utilities and Transportation Commission will investigate the cause of the explosion and communicate with the western region of the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration, the commission said.

Workplace safety investigators from the Washington Department of Labor & Industries will join the investigation, department officials said.

The state Pipeline Safety Program regulates 28 pipeline companies and inspects more than 24,000 miles of natural gas and hazardous-liquid pipelines in Washington.

Williams operates about 15,000 miles of interstate natural gas pipelines, according to its website.

The liquefied natural gas facility is owned by Williams Partners' subsidiary Northwest Pipeline LLC.

There was no pipeline rupture, and no customers were affected, company officials said.

A secretary with the Patterson School District, about 7 miles away, said it provided three school buses to help with the evacuation. Students are on spring break, Rachelle Munn said.

<http://www.usatoday.com/story/news/nation/2014/03/31/washington-gas-plant-explosion/7139923/>

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USA, N.D, FAIRVIEW

APRIL 2 2014.

OIL SPILL NEAR FAIRVIEW

Oil and water don't mix. The full extent of the March 11 oil spill at Private Frazier Well site north of Fairview remains to be seen. The Zavanna LLC well site is on land owned by Cayko Farms. Although the North Dakota Oil and Gas Commission says they sent out warnings of ice jams and potential flooding four days in advance, David Hodges, senior vice president of operations for Zavanna says the company received notification by voice mail at approximately 8 a.m. on March 11. Workers were in the area, monitoring conditions until 5 p.m. when everything appeared normal. At 11 p.m. that evening a truck driver notified Zavanna of flooding near the location. Zavanna personnel, including the production superintendent, pumpers and field personnel began shutting in the well but flood waters breached the 12' dike area. One tipped tank leaked approximately 33 barrels of oil. Another tank, or tanks, may be compromised.

Further containment efforts began the afternoon of March 13 after notification from the NDIC that an aerial photograph showed a release on the Private Frazier. A containment boom was placed around the tank that was tipped over. Hodges said that sometime between the morning and afternoon of the 13th is when the release occurred, providing further reasoning that it was the middle tank that leaked and not the outside one which had tipped over. With 15 wells in the Lewis and Clark field, Zavanna focused on securing all their wells on both the east and west sides of the river.

Hodges said that Zavanna knows exactly how much oil was on the site, but he could not speculate on how much oil leaked. The company is in the process of pumping approximately 85,000 barrels of contaminated water from the site and hauling it to an approved disposal site. Once that water is removed, Zavanna will be able to determine the full extent of the damage.

Adjacent land owners Paul and Joan Eldridge didn't discover the spill until March 26, almost two weeks after the flood. Paul noticed some oil on ice chunks piled against his fence. Further investigation revealed a stripe of oil a few inches wide and approximately 6' up on the trees in their pasture, plus globs of oil scattered on the ground. They had not been notified of the spill. Initial conversations with Zavanna representatives did not go well. Angry and frustrated, Paul called the National Oil Spill Hotline which is connected with the North Dakota Oil and Gas commission, the EPA, ND Game & Fish, the Health department and several other entities. By the end of the day, Eldridges had received calls from all those entities and had an appointment with Game & Fish for the next morning.

Hodges explained the non-notification by stating that their concern, first and foremost, was containment and cleanup. With data coming in that was not necessarily accurate, Zavanna didn't understand where the oil had gone at first. They had notified Terry and Vickie Cayko of the spill, unaware that Eldridges owned the property just 550' away.

"I hate to say it, but we were focused on the waterways. After Paul called, we realized we hadn't contacted all the right people," Hodges said.

Kent Luttschwager, wildlife resource supervisor, ND Game & Fish Department, surveyed the damages Thursday morning with Paul. They met up with Zavanna personnel at the well site and gave them a tour as well.

Luttschwager said the oil spill involved a rupture or tipped tank on private property. The question is where the plume went. Aerial photos initially showed it headed west, then northwest. Impacts occurred mostly on Game & Fish land, plus a bit of BLM land on Big Oxbow Island, plus adjacent private property. Until the phone call, Game & Fish was unaware of damage to the Eldridge property. Now, they are looking at a possible northeast direction for the plume and checking the Ochs Point Wildlife Management Area as well since that joins the Eldridge land. "With flood conditions, it's difficult to get around. We'll continue to survey the area," Luttschwager said. "Our concern now is where it (the plume) went. Especially with ice jams and flooding, it's not predictable."

Game & Fish is not against development and extracting of minerals according to Luttschwager. Their concern is that there has to be vision and planning in place that allows the extraction of resources in a

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safe and prudent manner. "There are real concerns about lasting damage and the long term affect on sensitive species such as the pallid sturgeon," he said. "The downstream intakes, whether residential, agricultural or commercial may be affected. It may not be a big concern if the spill is small, but if it continues to happen, everyone downstream has to be concerned."

Game & Fish concerns with the spill are first, the cleanup of private and public property. Second, the river bottom of the Yellowstone River, the last unregulated great river in the U.S. Luttschwager said he hopes the spill will launch a discussion of future techniques and protection measures by all involved to prevent another spill. Short term planning involves the traditional June rise which has the potential for more flooding. Long term plans need to be developed for the life of the oil wells.

Garner Environmental from Texas has been hired by Zavanna to do the cleanup. Forty-five people have been working, with another 20 added last Saturday. The crew uses boats to reach the Big Oxbow Wildlife Management site. Shovels and pitchforks are used to remove oil soaked debris, which is then placed in heavy duty garbage bags and shipped back to the Confluence for disposal at an approved site. Hodges estimates that the Game & Fish and BLM land will be cleaned within the next few days, with the Eldridge property taking approximately 7 more days.

Hodges said Zavanna will work with all the different agencies to make sure the right things are done with the cleanup. "We fully support the interagency comprehensive approach," Hodges said. "We want to get this done as quickly and thoroughly as possible. We are committed to cleaning this up."

Hodges added that Zavanna is always working to avoid environmental impacts from their operations. On this site, he says they are not going to cut corners. "If we caused it, we will take care of it."

In an unusual move, representatives from Zavanna, Game & Fish, ND Oil and Gas commission and others are scheduled to meet with Eldridges to discuss the impacts of the oil spill and the best solutions to the problem.

When all is said and done, they all want the same thing. Eldridges want satisfaction for the spill, Zavanna wants to get it cleaned up and get back to work producing oil, and the Game & Fish wants oil development done responsibly.

<http://www.roundupweb.com/story/2014/04/02/news/oil-spill-near-fairview/4389.html>

USA, KY, PIKEVILLE

APRIL 4 2014.

CRUDE OIL STORAGE TANK SPILLS IN EASTERN KY.

Workers in eastern Kentucky are trying to clean up thousands of gallons of crude oil that has spilled into a tributary of the Big Sandy River. Pike County Emergency Management Director Doug Tackett says a landslide broke the piping off a storage tank sometime overnight, releasing the oil inside the tank into the Levisa Fork of the Big Sandy. He says an estimated 4,200 gallons spilled from the tank. Tackett says the spill is downstream from Pike County's water intake valves and the water supply isn't affected. An environmental cleanup company has been brought in, and WCHS-TV in Charleston, W.Va., says officials believe the spill can be cleaned up with booms that float on the water and collect oil.

<http://www.seattlepi.com/news/science/article/Crude-oil-storage-tank-spills-in-eastern-Ky-5374455.php>

USA, FLOYD CO, BETSY LAYNE

APRIL 4 2014.

OIL SPILL THREATENS WATER COMPANIES

Ralph B. Davis

A Thursday morning oil spill into the Big Sandy River is expected to lengthen a water outage in the Right Beaver area and could expand it to Left Beaver, while water officials in Prestonsburg are keeping a close eye on the river and preparing for an emergency shutdown.

The spill happened just inside the Pike County line, at Harmon's Branch. Doug Hyden, with Kinzer Drilling, which owns the property where the spill occurred, said a landslide knocked a line loose from a

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storage tank, causing a spill of 75 barrels, or 3,150 gallons.

"I was notified around 8 a.m.," Hyden said. "By 8:30, we had personnel on the scene creating dams to try to contain the oil."

Hyden said that, while some oil did get into the river, he believes most of it was contained before it got that far.

"I know we still have a lot of oil where we're at, so not a lot of it made it to the river," Hyden said.

Peter Goodman, director of the state Division of Water, corroborated Hyden's account.

"Some of the oil made it to the Levisa Fork, but most of it is still in Harmon's Branch," Goodman said.

Goodman said two underflow dams were built to contain the oil, and two vacuum trucks and absorbent booms were deployed to trap the oil and skim it from the water's surface.

Goodman could not say whether Kinzer would face any penalties as a result of the spill, saying the cleanup was the first priority.

"That's something we'll address a few days down the road," Goodman said.

Goodman and Doug Tackett, with Pike County Emergency Management, said the spill itself should not pose much risk to humans, but it could cause problems for fish and wildlife. Goodman also said there was no immediate danger of the oil igniting and that the public was in "no immediate danger."

At noon, Thursday, the spill had slowly made its way near Betsy Layne, due to the slow speed of a low river, and work crews were busy trying to clean the spill before it caused problems for water companies.

"They're working now on getting booms in the river to corral it and soak it up," Tackett said.

For Southern Water and Sewer District, the news only added another headache to an already problematic week. Dean Hall, assistant general manager with Southern, said the utility had just completed repairs to a water line break that had knocked out water to the Right Beaver area for two days, when they received news of the spill. Now, the utility is keeping its intake shut down, which could delay restoration to Right Beaver "for another day or two" and could lead to outages in the Left Beaver area, as well.

Hall said the shutdown was regrettable, but unavoidable, due to the impact the spill could have on the water system.

"We've been told by the Division of Water, if that [oil] gets in our system, it will be another West Virginia," Hall said, referring to Elk River chemical spill that knocked out water to 300,000 customers across nine counties. Hall said if oil got into Southern's intake, "We could be without water for a month."

Prestonsburg City's Utilities Manager David Ellis said shortly before noon Thursday said all his office could do at that time was to wait and watch. He said crews had been stationed several miles above the utility's intake — which is downriver of the Southern intake — to monitor progress of the spill.

"If we see it coming, we'll just shut it down until it passes," Ellis said. He added that should not prove to be a problem for water customers, because, "We have plenty of storage."

http://www.floydcountytimes.com/news/breaking_news-home_top-news/3235885/Oil-spill-threatens-water-companies

USA, MS, NEW ALBANY

APRIL 4 2014.

FIRE, EXPLOSION AT NEW ALBANY BIOFUELS PLANT RULED ACCIDENTAL

Angie Barmer

The state fire marshal has ruled as an accident the January fire and explosion at JNS Biofuels plant near New Albany.

The report was released Wednesday.

The Northeast Mississippi Daily Journal reports the fire marshal found the likely cause of the incident was a problem with a thermal oil heater or pump used in the distillation process to produce biodiesel.

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However, investigators couldn't determine an exact cause for the fire and subsequent explosions because of extensive damage to the area of the blast.

The estimated damage to property and contents was \$3.5 million.

Most of the damaged equipment has been removed from the site, and crews have been seen working there.

The Mississippi Department of Environmental Quality says it has had discussions with JNS, "but they have not applied" for permits to resume production, said spokesman Robbie Wilbur.

"In addition, we would need specifics on the facility to determine what permits would be needed," Wilbur said.

The JNS Biofuels plant used chicken fat, soybean oils and other oils to produce B100 biodiesel.

It was equipped to store 8,000 gallons of methanol, 37,000 gallons of glycerin, 46,000 gallons of feedstock oil, 8,000 gallons of sodium methylate and 2,000 gallons of fuel oil.

According to the fire marshal's report, JNS employee Jimmy Clowers walked out to take a sample from one of the chicken fat container tanks. Clowers heard a hissing sound around 5:45 a.m. and saw an orange glow from one of the chicken fat tanks.

While he didn't see a fire, he told investigators he knew the glow was a fire.

He then ran to a trailer where another JNS employee, James Rhodes, was sleeping and woke him up. As they ran, the plant exploded.

The men were not injured, and no other injuries were reported. The fire spread to the other tanks, and two explosions later followed the initial blast.

<http://www.clarionledger.com/viewart/20140403/BIZ/304030041/Fire-explosion-New-Albany-biofuels-plant-ruled-accidental>

SOUTH KOREA, SEOUL

APRIL 4 2014.

OIL LEAK FROM S.KOREA'S S-OIL CRUDE TANK DUE TO CRACK – REPORT

An oil leak from a crude tank owned by South Korea's S-Oil Corp was reported on Friday due to a crack in the tank although the exact leaked amount and the damage are not known yet, Yonhap News agency and the refiner said.

The leak occurred at 3:40 pm (0640 GMT) in Onsan, Ulsan city, about 380 km (236 miles) southeast of Seoul, as a crack in the tank was found. The tank has a capacity of 750,000 barrels, according to Yonhap.

The exact leaked volumes and the impact on supply are not immediately available, a spokesman at S-Oil said adding they are looking into details of the accident.

S-Oil, South Korea's third largest refiner, is owned by Aramco Overseas Co B.V., a unit of Saudi Arabian Oil Company, with a 35 percent stake.

Earlier this year, South Korea's No.2 refiner GS Caltex, with a 775,000-barrels-per-day (bpd) capacity, also suffered from an oil spill accident that leaked 164,000 litres of oil off South Korea's southern coast.

In November 2013, a small amount of oil leaked into the sea east of South Korea from a cracked pipeline run by the country's top refiner, SK Energy, owned by SK Innovation.

(Reporting By Jane Chung; Editing by Gopakumar Warriar)

<http://af.reuters.com/article/commoditiesNews/idAFL4NOMW2EJ20140404>

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USA, N.D, WILLISTON

APRIL 5 2014.

EXPLOSIVE QUESTIONS: STUDY OF OIL FROM DEADLY QUEBEC DERAILMENT POINTS TO BAKKEN CRUDE'S VOLATILITY

Amy Dalrymple

Last July 6, a train carrying crude oil from North Dakota to a refinery in eastern Canada was left parked on a hillside in Quebec. It rolled backward down the hill, derailling and crashing into a small town, with railcars bursting into flames, killing 47 people.

While investigators pointed early on to the train's brakes, the violent explosions prompted Canadian officials to question the volatility of the Bakken crude.

The crude oil that train carried had volatility similar to gasoline, said Sylvie Dionne, author of the Transportation Safety Board of Canada's laboratory report published last month on samples taken from the train.

The oil had a low flash point, which indicates it would ignite at low temperatures, and a high vapor pressure, which indicates how readily the oil would ignite at the temperature that was prevailing at the time of the derailment, Dionne said.

"Those two conditions together explain why it caught fire so easily," said Dionne, manager for materials analysis and structures at the TSB. "The large amounts of it, because there were many tank cars and some of them released product that explains why the fireball is so large."

Other factors that contributed to the fireball were the rapid rate of release and the oil's low viscosity, the report found.

The crude oil tested also had a low boiling point, the report said. The low flash point, low boiling point and high vapor pressure suggest the samples contained very light hydrocarbons, the report said.

"The lighter the hydrocarbons that are present in the crude, the more volatile it's going to be," Dionne said.

Questions about the volatility of the Bakken crude would come up again with other explosive derailments, including the one near Casselton on Dec. 30.

"We had no idea it was this volatile," Casselton Fire Chief Tim McClean said in an interview last month, the same day he testified to a congressional committee about responding to the fiery derailment.

A federal study and a study commissioned by the North Dakota Petroleum Council are underway to analyze the characteristics of Bakken crude, but the results are not yet available.

"Bakken crude is comparable to other light sweet crudes according to all the information we have to date, but we know that some have questioned whether it is somehow different," said Kari Cutting, vice president for the NDPC. "This study will provide a thorough third-party analysis to help regulators and industry determine the facts so we can make decisions based on sound science."

Canadian investigation

The Canadian report may underestimate the volatility of the crude oil because some of the light hydrocarbons may have evaporated, Dionne said.

The engineering laboratory report analyzed samples from nine non-derailed tank at the end of the train and two tank cars from a different unit train that was transporting crude oil from the same origin in the Bakken.

Other findings include:

- There were multiple sources of ignition at the derailment site, such as damaged power lines.
- The Bakken crude analyzed had characteristics similar to other light, sweet crude oils.
- There was no indication that chemicals used in hydraulic fracturing affected the crude oil.
- The crude had a low sulfur content. Portable detectors used to measure hydrogen sulfide gas during the response did not detect the gas, which is extremely flammable and toxic.

While the report tests many characteristics of the Bakken crude, its scope was limited to the derailment and the Lac-Megantic investigation.

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"It's only applicable to the Bakken crude that was on that train," Dionne said. The Transportation Safety Board's final investigative report on the derailment is still pending.

Industry study

The North Dakota Petroleum Council recently announced it is doing its own study, a Bakken quality assurance study, to help ensure public safety and consistent product quality.

The industry group is working with Dallas-based consultant Turner, Mason & Company and an independent commercial laboratory to study the range and variability of Bakken crude oil qualities.

"There's a lot of independent sampling going on right now," said Ron Ness, president of the Petroleum Council. "You need to do it across the entire specific areas of the Bakken, so it's not just a point A or point B."

The consultant will take multiple samples from 12 locations and six rail depots in North Dakota and Montana, including samples from newer wells and more mature wells.

"We haven't done this particular type of study and I don't know that anybody has to be honest with you," John Auers, executive vice president of Turner, Mason and Co. and head of the study, said in a recent interview.

A progress report on the study will be given in May at the Williston Basin Petroleum Conference, and results of the study will be shared with PHMSA and the American Petroleum Institute.

"This whole issue of rail and crude has brought that out," Auers said. "In reality, Bakken isn't a whole lot different than a lot of other light crudes."

Federal response

Days after the train carrying Bakken crude derailed and exploded near Casselton, the federal Pipeline and Hazardous Materials Safety Administration issued a safety alert indicating that Bakken crude may be more flammable than other types of oil.

Inspectors from PHMSA and the Federal Railroad Administration have been examining the chemical properties of Bakken crude through unannounced spot inspections and data collections.

Based on preliminary findings, PHMSA and FRA expanded the investigation to include bottom sediment and water, true vapor pressure, hydrogen sulfide, concentration limits of flammability and corrosiveness to steel and aluminum.

The results have not yet been released.

PHMSA issued an emergency order that requires crude oil shipments to be designated as Packing Group I or II, requiring the oil to be shipped in stronger rail cars.

PHMSA has proposed \$93,000 in fines against three companies the agency says failed to properly classify Bakken crude. The agency's legal counsel is reviewing responses from the three companies, a PHMSA spokesman said.

In January, the National Transportation Safety Board, which investigated the Casselton derailment, issued recommendations to PHMSA and the FRA.

One recommendation would require trying to avoid shipping hazardous materials through populated and sensitive areas. A second recommendation is to ensure rail carriers can handle the worst-case scenarios of a hazardous materials accident. A third recommendation called for checking on shippers and rail carriers to ensure they are properly classifying hazardous materials and have adequate safety and security plans.

"If unit trains of flammable liquids are going to be part of our nation's energy future, we need to make sure the hazardous materials classification is accurate, the route is well planned, and the tank cars are as robust as possible," NTSB chairwoman Deborah Hersman said at the time.

Sen. Heidi Heitkamp, D-N.D., said it's important to get the results of the PHMSA study to inform regulations. While many are now saying that Bakken crude is more flammable, Heitkamp said she wants to see the results of the study.

Tank and Petroleum Use Mishaps

"I suspect that might be true, but until I see test results, I'm going to withhold judgment," she said. Heitkamp said she wants the PHMSA study to be thorough, but hopes to see results within weeks. "We need to move forward on regulation," she said.

<http://www.inforum.com/event/article/id/431289/>

USA, TX, MIDLAND

APRIL 6 2014.

TWO PEOPLE HURT IN TANK BATTERY FIRE

A tank battery fire near FM 1788 sent two people to the hospital Friday afternoon. Midland Fire Department responded to the call regarding a tank battery fire near FM 1788 and Loop 40 at approximately 1:53 p.m. on Friday. Two male victims were transported to Midland Memorial Hospital, one in critical condition with severe burns and the other with non-life-threatening injuries. Seven fire units responded from MFD with assistance from the Northeast Midland County Volunteer Fire Department. The fire was dissipating due to lack of fuel as crews arrived on scene, and firefighters were able to quickly extinguish remaining spot fires. The investigation into the fire has so far revealed that a work crew was changing a valve at the tank battery and relieving pressure from the heater treater when a sudden ignition occurred. The victim who was transported in critical condition was said to have caught on fire during the incident. The cause of the ignition and other factors are currently under investigation by the Midland County Fire Marshal's Office.

<http://www.newswest9.com/story/25166164/two-people-hurt-in-tank-battery-fire>

USA, OK, TULSA

APRIL 11 2014.

HAZMAT CREWS CLEAN UP SITE AFTER TULSA BUILDING EXPLODES

Tony Russell

A big clean-up effort is underway after an east Tulsa business exploded into flames Wednesday night. Hazardous material crews joined the cleanup.

A shell is all that's left after the blast and fire at Sabre Chemical Company on 47th Street and Mingo Road, which required more than 75 firefighters to knock down the flames.

Anyone driving along Highway 169 or the Broken Arrow Expressway saw the large fireballs rising into the night sky. The fire burning so hot caused the roof to collapse onto petroleum products.

Pat Meirose with Lawn Masters Quality Pays, said, "Boom. Boom. Boom. Boom. Boom. It just kept exploding and flames shot up real high, and smoke and it was terrible.

People in a next door business used their pickup truck to rip down a fence and free two men trapped inside the property.

"I was like, 'Are you OK? Do you need help?' And he was like, 'Yeah, get me out, get me out, I'm on fire,'" said Sarah Meirose, with Lawn Masters Quality Pays.

Crews worked into Thursday morning to put the flames out from the building. The fire would flare up from time to time, as fire investigators got a birds-eye view of the damage.

Stan May with the Tulsa Fire Department, said, "They have a pretty good idea of what happened, they are just not ready to release it yet till they get some of their tests back."

The business stored high-octane racing fuel and lubrication products. Businesses have to provide fire departments with a list of chemicals they store so crews know what they are walking into and are able to plan a response.

As the investigation continues, Sooner Emergency Service is digging through the nearby drainage ditches cleaning out any area that may be contaminated with fuel spilled during the fire.

The Tulsa Fire Department said the business owner and the insurance company have to make sure hazardous chemicals didn't leak out.

"They're going to have to remove all that soil around the building, down the ditches. They're going

Tank and Petroleum Use Mishaps

to have to bring in fresh dirt," May said.

Mechanics at a repair shop across the street were surprised to see the extent of the damage.

"I just saw a whole lot of black metal all burned up, just a lot of craziness," said Nam Le with Modern Imports. "It was, you know, a nice warehouse, full warehouse. Now it's just, like, nothing you know, just pretty much trashed."

The results of the investigation could take week to complete.

As for the men trapped behind the fence, they made it out with minor burns.

<http://www.newson6.com/story/25216472/hazmat-crews-clean-up-site-after-tulsa-building-explodes>