

Tank and Petroleum Use Mishaps

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By learning about the misfortunes of others, it is STI's hope to educate the public by creating a greater awareness of the hazards with storage and use of petroleum and chemicals. Please refer to the many industry standards and to the fire and building codes for further guidance on the safe operating practices with hazardous liquids. Thanks and credit for content are given to Dangerous Goods-Hazmat Group Network.

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

USA, DE, FORT MIFFIN

JANUARY 25 2014.

OIL SPILL CLEANUP UNDERWAY IN DELAWARE RIVER

The U.S. Coast Guard is overseeing the cleanup of an estimated 200 gallons of crude oil Friday after a valve on a pipe leaked at the Sunoco Logistics Terminal Facility in Fort Mifflin Thursday.

Coast Guard Sector Delaware Bay watchstanders received notification of the spill at approximately 2 p.m. Thursday after the National Response Center relayed that a pipe broke and an estimated 2,000 gallons of crude oil discharged onto a parking lot at Sunoco Logistics.

Additionally, it was reported approximately 200 gallons spilled into a drain, which leads to the Delaware River. After further investigation, it was estimated 50 gallons of oil went into the water.

Clean Venture, an oil spill response organization, is on scene working to recover the spilled oil from the water and remove the oil from the drain. Both the source of the spill and the drain are secured. Boom is deployed in the river to contain the oil during cleanup.

"A pollution response team from Coast Guard Sector Delaware Bay is on scene to monitor the cleanup operation," said Senior Chief Petty Officer Steven Dukes, a Coast Guard marine science technician. "We are doing our best to ensure a thorough cleanup with minimal environmental impact."

The Coast Guard said it will continue to monitor the cleanup efforts.

<http://www.marinelink.com/news/underway-delaware-cleanup363398.aspx>

USA, W.VA, CHARLESTON

JANUARY 26 2014. DEP ORDER:

DISMANTLE FREEDOM TANK FARM

CHEMICALS MUST BE OUT BY MARCH 15

David Gutman

The Freedom Industries tank farm responsible for the Elk River chemical contamination is going to be shut down and dismantled, according to an order from the West Virginia Department of Environmental Protection that was announced Saturday by Gov. Earl Ray Tomblin.

All chemicals must be removed from the facility by March 15.

Freedom must begin the process of dismantling, removing and disposing of all of its above-ground tanks and all associated piping and machinery by that same day, according to the order.

All 17 tanks at the Freedom facility are in inadequate secondary-containment areas, according to a news release from Tomblin's office that was issued with the order. Fourteen of those tanks still have chemicals in them.

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The release says that those chemicals include calcium chloride and glycerin, both of which are common additives to household products. DEP Secretary Randy Huffman said three smaller tanks contain a semi-solid substance that is "like fatty acids." Huffman said none of the tanks contain any harmful or hazardous substances.

"During the dismantling of the tanks, Freedom Industries is ordered to install measures that ensure that secondary containment is adequate to contain any potential spills resulting from the work," the release states.

Huffman said workers from the company and the DEP are digging cutoff trenches and taking other remediation efforts to protect the river, should there be another leak before the chemicals can be moved. He also said just having people on the site is a help.

The release states that Tomblin ordered the dismantling of the tank farm, although his signature does not appear on the order. It is a "consent order," meaning the company agreed to the terms. That also means the company cannot appeal the order.

The release states that Tomblin and Huffman began discussing the option of dismantling the tanks on Jan. 10, the day after the leak was discovered.

"The DEP's authority is being used, obviously, but I've been in a lot of conversations with the governor over the last couple weeks over what's next, what authority do we have, how can we use that authority?" Huffman said Saturday night.

Freedom previously had moved its Crude MCHM, the coal-processing chemical that leaked into the river, to its sister facility in Nitro. However, the company was cited afterward by the DEP because that facility also did not have adequate secondary containment.

A woman who answered the phone Saturday at Freedom Industries said company officers would have no comment.

The initial chemical leak contaminated the drinking water of 300,000 West Virginians in Charleston and eight surrounding counties.

The order requires Freedom to provide weekly written reports to the DEP, describing how the company is dismantling the tanks and disposing of the materials.

The order states that Freedom has not brought any additional chemicals to its Elk River facility -- Etowah River Terminal -- since the leak was discovered Jan. 9. By Jan. 20, Freedom had removed nearly 270,000 gallons of chemicals from its facility, about 20 percent of its Jan. 9 inventory, the order says.

That would mean that, as of Monday, there were still about 1.3 million gallons of chemicals in Freedom's Elk River tanks.

The order states that Freedom must, "either sell the material to its customers, return the material to the original vendor, or store the material in an off-site area which provides adequate secondary containment."

Freedom previously had written to the DEP, saying that all materials would be moved off-site by March 30. The DEP told Freedom that date was unacceptable and ordered the chemicals moved as soon as possible.

The order cites two long articles of state code, the Water Pollution Control Act and the Groundwater Protection Act, as authorizing the DEP to close down Freedom.

On Thursday Sen. Joe Manchin, D-W.Va., had called for Freedom's entire facility to be torn down, to "start from scratch."

The order is signed by Gary Southern, Freedom's president, and it states that Freedom will not contest the government's jurisdiction regarding the order.

Complying with the order does not relieve Freedom from any other laws, permits or requirements. The order is subject to a 30-day public-comment period.

On Friday, Freedom wrote a letter saying that the facility would be shut down. It did not say all tanks would be dismantled, just the one that leaked.

"You are likely to have heard that the Etowah River Terminal facility of Freedom Industries is going

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to be decommissioned," Paul Vey, a lawyer representing Freedom, wrote to lawyers involved in lawsuits against the company. "It is anticipated that tank number 396, which appears to have leaked MCHM, will be removed from the site."

The letter, obtained by the Sunday Gazette-Mail, was faxed Friday evening to 39 law firms and private attorneys involved in litigation against Freedom. It also was sent to lawyers representing Freedom executive Dennis Farrell; the West Virginia DEP; Eastman Chemical Co., which makes Crude MCHM; and West Virginia American Water and its parent company, American Water Works.

Prior to the release issued by Tomblin, DEP officials did not respond to requests for comment Friday night and Saturday about Freedom's letter.

The letter says the plaintiffs lawyers, who have filed more than two dozen class-action lawsuits against Freedom and West Virginia American, will have access to the site to investigate some time early next week.

All civil lawsuits against Freedom are on hold as it negotiates its way through bankruptcy, but the site will be opened up to lawyers before big changes are made.

"Because it is apparent that the current configuration of the site will be changing significantly over the next few weeks, Freedom Industries . . . intends sometime early in the week of Feb. 3, 2014 to make the site available for a visual inspection by counsel in the civil actions," Vey; of the Pittsburgh law firm Pietragallo, Gordon, Alfano, Bosick & Raspanti; wrote.

The site also will be open to experts retained by lawyers, but no sampling or testing of soil or water will be permitted, the letter states.

A temporary restraining order, to preserve evidence, has been in effect at the tank farm since Jan. 13, four days after the chemical leak was discovered. That order was extended at a bankruptcy hearing last week.

Freedom's letter states that the company is attempting to "balance competing interests" of a number of regulatory agencies interested in cleaning up the site and also in evaluating and analyzing it.

The federal Chemical Safety Board began an investigation of the site almost two weeks ago. CSB officials said Friday they expect the investigation to take about a year.

Harry Bell, a Charleston lawyer whose firm has filed a class-action lawsuit against Freedom and West Virginia American, said he has hired a number of experts who are doing preliminary research before they can go on-site.

"The normal standard is, you end up with a preservation order that tells everyone: save everything, secure everything, make mirror images of all electronic data," Bell said. "Then, once you've secured everything, you start talking about physical examination and inspection."

Freedom's letter states that the company aims to fully preserve all evidence, but if there's another emergency it will respond appropriately.

"The debtor has every intention of preserving documentary, electronic and physical evidence and appropriate litigation holds have been placed," the letter states. "If any additional emergency response is required, every effort will be made to document, as practicable, any changes to the site that result from such a response."

Vey did not respond to repeated requests for comment.

A spokeswoman for West Virginia American Water confirmed that its legal counsel received the letter, but declined further comment.

<http://www.wvgazette.com/News/201401250068>

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CANADA, NFL, MOUNT PEARL

JANUARY 26 2014.

YEARS IN, MOUNT PEARL OIL SPILL STILL BEING DEALT WITH AMOUNT WASTED WAS SIGNIFICANT, DESPITE NO CLEAR ESTIMATE

Ashley Fitzpatrick

On March 6, 2012, nine federal investigators walked through the doors of North Atlantic Refining's offices at 29 Pippy Place in St. John's and began a search.

Seven enforcement officers from Environment Canada and two from the Department of Fisheries and Oceans, armed with a warrant, collected records about oil spills at the company's facility in Donovans Industrial Park in Mount Pearl.

They were already more than a year and a half into an investigation into the discovery of oil products found running through storm sewers in the industrial park in August 2010. The oil flowed out into a nearby marsh feeding into Powers Pond.

Before the search of North Atlantic's offices, investigators had gathered information from the provincial government on North Atlantic's worksite, used laboratory testing to match oil found near a sewer outfall to oil at the site, conducted inspections and monitored the company's cleanup work.

But the case was not over.

"During the execution of the search warrant upon the business premises, North Atlantic Refining Ltd.'s legal counsel claimed that some of the documents were potentially privileged and that others were potentially not within the scope of the warrant to search," notes documentation later filed with the Supreme Court of Newfoundland and Labrador.

The information went to the Office of the High Sheriff and a judge would determine what was relevant. The legal back and forth continued.

On Dec. 20, 2013, the investigation, legal work and a guilty plea by the company resulted in a conviction under the Fisheries Act and a penalty against North Atlantic of \$100,000 in fines.

Long-term environmental monitoring continues and, The Telegram has learned, costs associated with the spill are still being dealt with.

A sizable event

North Atlantic Refining pleaded guilty to a single charge in relation to the oil product that leaked onto its property between July 16 and Nov. 15, 2010 and from there entered the storm sewer.

In an agreed statement of facts, several potential contributors were noted: a tank overfill and a resulting 146-litre fuel spill in the summer of 2010; oil from a leak in an underground pipe occurring some point between August and November 2010, and a "plume" of oil products already in the ground at the site from a spill in the 1990s.

The statement outlines how 122,000 litres of oil and contaminated water were removed in mitigation and cleanup efforts in 2010 and 2011, but a spokeswoman for North Atlantic confirmed this week there is no estimate available on the total amount of oil spilled.

"It would be speculation to provide an estimate," she said.

In the same year as the 2010 oil leak in Mount Pearl, the largest spill in the province's offshore oil industry, as recorded by the CNLOPB, was 165 litres of lubricating oil.

In 2011, the largest spill was 26,400 litres of drilling mud dropped from the Henry Goodrich.

In 2012, less than 30 litres of drilling mud lost from the drilling rig GSF Grand Banks topped the list of spill incidents.

The most significant spill in the oil industry offshore Newfoundland and Labrador last year, in terms of size, is the 6,000 litres Hibernia management has estimated was lost from its offshore infrastructure at the end of December.

The amount of oil and oiled water taken out of Mount Pearl, as a result of problems at North Atlantic, is 20 times larger.

Onshore, Service NL has stated the "vast majority" of spills reported are less than 1,000 litres.

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Provincial response

According to a spokeswoman with the provincial Department of Environment and Conservation, Service NL oversees environmental protection work at the North Atlantic site.

“Service NL has been aware of and monitoring issues at North Atlantic Petroleum, 23 Kyle Avenue, since November 1995,” stated a response to questions, offered in consultation with a Service NL rep. “Estimates for the specific volume spilled were not conclusive.”

Service NL was not involved in the federal investigation started in response to events in 2010, other than to provide access to its files.

After the spill, the company submitted an action plan for a cleanup to the federal and provincial governments. The provincial Environment Department got involved at that time.

A spokeswoman for the department said it kept on top of the remediation work through assessment reports and meetings with regular status updates. Department staff continue to receive updates from the environmental monitoring.

Meanwhile, “Service NL continues to inspect this and all bulk storage facilities on an annual basis. The most recent inspection was conducted on Nov. 27, 2013.”

Municipal response

Powers Pond is where the Sunrise Trail and Arboretum Walk meet. It is where the City of Mount Pearl opened a new dog park in August 2013 and is promoted as a recreation area.

Complaints from residents sparked the initial investigation into North Atlantic. Clear signs of followup work were noted, but information on what was going on was not being freely offered to residents.

Coun. Lucy Stoyles asked about the cleanup at a July 26, 2011 Mount Pearl city council meeting.

“I think the major problem, as far as I can see, is I think the residents — especially in Power’s Pond — that’s walking that every day, they don’t know what’s going on,” she said at the time.

“One man said to me ... he said this has been on the go a long time. You know, it’s our park and we’re out walking our animals and you know, we don’t know what’s on the go,” Stoyles said.

She asked for a public awareness campaign.

Contacted this week, Stoyles said she didn’t know if there was ever an attempt by city staff to complete a mailout, hold a public meeting or make any other move to increase awareness about the spill and cleanup. She said she did speak to city officials and returned calls to any residents who had asked her questions.

The city has been happy with the cleanup work, she added.

“I raised it (at council) because the residents raised it with me and I wanted to get some answers,” she said.

“I spoke to at least four individual families and one gentleman I had, like I said, arranged to meet. I met with him and we walked the boardwalk and that, because he was very concerned.”

You can walk from the pond area today and along the railway, past “G-Unit” graffiti painted on the asphalt and along the wooden boardwalk.

Visible along one section of the boardwalk, behind two industrial park buildings on Sagona Avenue occupied by United Rentals and Wärtsilä Canada, there is a chain-link fence around a raised pit — a legacy of the oil leak.

It is a retention pond lined with hard plastic, meant to catch sewer outfall and collect any oil products. It is checked regularly, as part of long-term environmental monitoring.

Mount Pearl’s director of infrastructure and public works, Gerry Antle, said city staff were the first to investigate complaints of a diesel smell and oil running from the sewer outfall. The city had absorbent pads and a containment boom to try and get a handle on what was coming from the storm sewer.

“The work was the subject of investigation by provincial and federal officials and has legal implications. Hence, the city was reserved in its comments while the investigation was ongoing,” he stated,

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in an email response to questions this week.

Antle estimated the city spent about \$130,000 on initial investigation and response work.

It will now be seeking to recover those costs, he said, but the city has yet to begin that process.

<http://www.thetelegram.com/Business/2014-01-25/article-3590189/Years-in,-Mount-Pearl-oil-spill-still-being-dealt-with/1>

USA, OK, PERRY

JANUARY 28 2014.

CREWS BATTLE TANK BATTERY FIRE NEAR PERRY

Thick black smoke filled the sky as crews battled a tank battery farm fire west of I-35 Monday afternoon.

The fire struck eight tanks two miles west of Perry off of John Wayne Rd.

The fire was contained after 5:30 p.m. once crews used foam to put the fire out.

No injuries were reported.

<http://www.newson6.com/story/24557983/crews-battle-oil-field-fire-near-perry>

USA, USA, PA, CHESTER

JANUARY 28 2014.

OIL SPILL SENDS 1,000 GALLONS OF CRUDE INTO DELAWARE RIVER

The Coast Guard responded to a crude oil spill in the Delaware River Monday afternoon.

Coast Guard Sector Delaware Bay received notification of the spill at approximately 1 p.m. after the National Response Center reported an estimated 1,000 gallons of crude oil spilled into the Delaware River near Monroe Energy LLC, located about one mile south of the Commodore Barry Bridge.

Oil containment booms were used to surround the spill while responders used skimmers and vacuums to remove the oil from the water, according to a press release from the U.S. Coast Guard.

A pollution response team from Coast Guard Sector Delaware Bay is on scene to verify the cleanup is completed.

The cause of the leak was not announced as of Monday night.

http://www.nj.com/gloucester-county/index.ssf/2014/01/oil_spill_sends_1000_gallons_of_crude_into_delaware_river.html

USA, IN, INDIANAPOLIS

JANUARY 30 2014.

WORKER EXPOSED TO BENZENE AT SOUTHWESTSIDE CHEMICAL PLANT

Joe Vitti

A worker at a Southwestside chemical plant was sent to an Indianapolis hospital after being exposed to an open tank of benzene Wednesday night. The incident was reported around 6:15 p.m. at Vertellus Specialties, 1500 S. Tibbs Ave., according to the Wayne Township Fire Department. Capt. Mike Pruitt said a 1,000-gallon tank had a crack in it and used to hold benzene, though it was now empty. He said paramedics were concerned that residual fumes may have exposed the worker to danger. The employee was decontaminated at the scene, then sent to Eskenazi Hospital to be evaluated. He was alert and speaking. The fire department at one point reported two workers had been exposed, but issued a correction later in the evening. Benzene is used in chemical processing. Firefighters said the public was not at risk.

<http://www.indystar.com/article/20140129/NEWS02/301290048/Worker-exposed-benzene-Southwestside-chemical-plant>

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USA, VA, RICHMOND

JANUARY 30 2014.

EPA, 3 VA. MILITARY BASES SETTLE FUEL TANK ALLEGATIONS

Federal regulators and military officials have settled allegations of underground storage tank violations at three bases in Virginia. The U.S. Army paid a \$41,427 penalty to resolve alleged violations at Fort Pickett. The Environmental Protection Agency says the Army didn't inspect 13 tanks for fuel line leaks. The U.S. Air Force paid a \$12,709 penalty for alleged violations at Joint Base Langley-Eustis. The EPA says the Air Force didn't inspect nine tanks for fuel line leaks. The U.S. Navy paid an \$8,498 penalty to resolve alleged violations at Joint Expeditionary Base Little Creek-Fort Story. The EPA says the Navy failed to comply with required corrosion prevention safeguards for steel tanks at the base. The EPA announced the separate settlements Tuesday in a news release.

http://www.timesdispatch.com/news/latest-news-ap/epa-va-military-bases-settle-fuel-tank-allegations/article_9a0ccee-88e7-11e3-81e7-001a4bcf6878.html

USA, PA, PETROLIA

FEBRUARY 1 2014.

NOBODY HURT IN TANK FIRE AT W. PA. PETROLEUM PLANT

Nobody was injured when a storage tank at a western Pennsylvania petroleum processing plant caught fire. The fire at the Sonneborn Corp. plant in Petrolia was reported about 3 a.m. Friday. The plant is located about 50 miles north of Pittsburgh. The company makes waxes and other products including petrolatum, which is used in baby oil and petroleum jellies. Anita Orozco, the company's director of human resources, says crews were still trying to determine what tank burned and why. She says the tank was burning from the top, which suggests some kind of was might have caught fire. A fire alarm summoned company and local volunteer firefighters, who quickly controlled the fire

<http://www.wfmj.com/story/24599695/nobody-hurt-in-tank-fire-at-w-pa-petroleum-plant>

USA, N.Y, ALBANY

FEBRUARY 1 2014.

CHEMICAL LEAK, NOT EXPLOSION, INJURES WORKERS

When Albany firefighters arrived at Building 12 on the Harriman State Office Campus Thursday night, they found two workers down, and a huge, 500 pound pressurized container of halon nearby on the back loading dock.

"To a lay person, it could be construed as explosion, but there was NO catastrophic failure of the cylinder itself," said Paul Martin, Chief of Inspections and Investigations at the Division of Homeland Security & Emergency Services at the New York State Office of Fire Prevention and Control.

Martin says during removal from the building, the tank valve was damaged and began to discharged, and unfortunately the two men, Carlton Smith and Michael Lambertsen, who work for a private company, wound up in the inadvertent line of fire suppression.

"Gas, as it's released, is very cold," Martin says, "That resulted in the thermal burns to the (men)."

Because of its cold properties, halon has long been the chemical of choice in fire suppression systems, especially effective in computer room settings.

Ever since the Montreal Protocol in the 1980s, when scientists declared halon a harmful greenhouse gas, detrimental to the ozone layer, there's been a worldwide effort to eliminate its use.

The removal of the tank Thursday night was the last phase of the halon elimination at Building 12, Martin said.

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An Office of General Services spokeswoman tells News Channel 13 there are still tanks of helon at other state buildings but she emphasizes they pose no danger to occupants of those buildings.

Both men are expected to recover.

OSHA and New York State Police investigations are continuing.

<http://wnyt.com/article/stories/s3306014.shtml>

USA, W.VA, CHARLESTON

FEBRUARY 1 2014.

NEW SPILL REPORTED AT FREEDOM INDUSTRIES

A spokesman for a West Virginia environmental agency says cleanup crews at the site of a previous chemical spill severed an underground pipe, but none of the chemical that tainted the area's water supply earlier this month reached a nearby river this time. Department of Environmental Protection spokesman Tom Aluise says crews didn't know the pipe was there when it was struck Thursday night at the Freedom Industries site along the Elk River. The crews were using an excavator to enlarge an existing trench. Aluise says the trench prevented any of the minor amount of leaking crude MCHM from being released into the river. A Jan. 9 spill of 10,000 gallons of crude MCHM tainted the water supply of 300,000 residents in nine counties for days.

<http://www.wsaz.com/news/charlestonnews/headlines/Crews-at-WVa-Chemical-Spill-Site-Sever-Pipe--242981551.html>

USA, MI, FERNDALE

FEBRUARY 12 2014.

CHEMICAL SPILL 'UNDER CONTROL' AT GAGE PRODUCTS IN FERNDALE

Crystal A. Proxmire

Extremely cold temperatures helped the Ferndale Fire Department in their efforts to contain a chemical spill at Gage Products, 625 Wanda, at around 10 p.m. Tuesday night.

Fire Chief Kevin Sullivan said that 390 gallons of ethanol from a 500 gallon tote were spilled on the property and into the sewer. This also caused steam to billow into the air. A Gage crew placed "pigs," a tubular absorbent device, to prevent any further drainage.

"An emergency cleanup crew has been dispatched to clean catch basins and sewer," Sullivan said. "Everything is under control at this time. I have notified Michigan DEQ (Department of Environmental Quality) and other parties required by law.

"This is the first time the extreme temperatures are working for us. It's approximately 70 percent ethanol and the balance gasoline. There was no danger to the public at any time. The biggest concern would be ignition. That's where extreme cold is very helpful, no one is out, so accidental ignition is barely a factor."

Police and fire personnel kept vehicles away during the initial cleanup.

According to their website, gageproducts.com, Gage produces solvents for cleaning and manufacturing, as well as custom test fuel blends, and calibration fluids.

<http://www.dailytribune.com/general-news/20140212/chemical-spill-under-control-at-gage-products-in-ferndale>

ENGLAND, DORSET

FEBRUARY 14 2014.

SAFETY FAILURES LED TO FUEL TANK EXPLOSION

A Hampshire contractor, who specialises in decommissioning fuel tanks, has been prosecuted for safety failings after a worker was burned while cutting up a disused tank.

The man, in his 20s and from Ringwood, suffered burns to his face and wrist when sparks from the disc cutter he was using ignited fuel vapour in the tank. The worker, who doesn't wish to be named, was in intensive care for two days but has since made a full recovery.

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The incident, on 13 March 2012, was investigated by the Health and Safety Executive (HSE), which prosecuted Ringwood-based contractor Laurence Greenland, trading as Fuel Pump and Tank Services, at Bournemouth Crown Court today (13 February).

The court heard how 54 year old Mr Greenland had employed the worker to help remove two 20,000 litre fuel tanks from the site of a former filling station in Iwerne Minster near Blandford Forum.

Before removing the tank that exploded, fuel was emptied and the tank de-gassed so it appeared there was no flammable material or vapour left. The tank atmosphere was monitored using a gas detector until a zero gas reading was given.

Despite his concerns, the worker used a disc cutter, brought by Mr Greenland for this specific task, to cut the tank into sections so it could be removed more easily from the site. However, shortly after he started to cut the petrol end of the tank, an explosion occurred.

As well as injuring the worker, a number of nearby properties and vehicles were damaged by flying debris. HSE discovered a number of safety failings:

- The safety assessment carried out before the work started was inadequate and there was no safe system of work in place;
- The gas detector used to monitor the atmosphere had not been suitably calibrated and may have given false readings;
- The tank had not been properly cleaned and flammable residues remained;
- Although it would not have completely eliminated the risk of explosion, cold cutting techniques should have been used rather than a disc cutter, which generated heat and sparks, thus igniting the vapour when the tank was pieced.

Laurence Greenland, of Forest Side Gardens, Ringwood, Hampshire, pleaded guilty to breaching Section 3(1) of the Health and Safety at Work etc. Act 1974 and Regulation 6(3)(a) of the Dangerous Substances and Explosive Atmosphere Regulations 2002. He was fined £4,000 and ordered to pay £1,000 in costs.

Speaking after the hearing, HSE Inspector James Powell said:

"A number of failings led to this incident, which was entirely preventable. It was only a matter of good fortune that the worker was not killed and other workers and members of the public not seriously injured.

"This case emphasises the need for employers to give proper consideration to work hazards before they place their employees in situations where they might be put at significant risk. Laurence Greenland failed to manage the risks of explosion and eliminate the risk of injury to workers and the public, and damage to property.

"People working with potentially explosive equipment should follow the safety procedures set out in industry guidance and all employees engaged in such work must be given adequate training in the risks involved and the precautions required."

<http://press.hse.gov.uk/2014/safety-failures-led-to-fuel-tank-explosion/>

USA, TX, SMITH CO

FEBRUARY 14 2014.

CONDENSATION TANK EXPLODES, CAUSING EARLY MORNING NATURAL GAS LINE FIRE

Mitch Goulding and Lane Luckie

A mechanical failure is being blamed for a large explosion and fire Friday morning at a Smith County natural gas well.

At least six fire engines from Red Springs, Winona, and Lindale fire departments responded to the 17700 block of Farm to Market 14, near Tyler State Park. Crews arrived at the scene sometime around 3:00 a.m. Around that time, nearby residents said they awoke to "multiple pops" and a loud "boom" that "sounded like a bomb went off."

Fire crews were not immediately able to get close to the source of the rupture, staying back until

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valves cut off gas flowing from area pipelines into the site. Representatives with Griffin Operating, Inc. were at the scene to assist with shutting off gas line valves that run through the neighborhood into the well.

Smith County Assistant Fire Marshal Oren Hale said the fire was caused by a condensation tank explosion, which also spread to a nearby grassy field. Although he determined the fire to be caused by a mechanical failure, he said the source of ignition was indeterminable. He added that the gas company may elect to do their own investigation, bringing in engineers to determine the source of ignition.

According to emergency officials, the fire was put out by 5:30 a.m. and four residents initially evacuated were then allowed to return to their home. At one point, authorities closed a portion of FM 14 to traffic. That portion has since reopened.

<http://www.kltv.com/story/24722509/multiple-smith-co-fire-departments-respond-to-gas-line-fire>

USA, N.D, BISMARCK

FEBRUARY 14 2014.

TWO OIL SPILLS REPORTED, DEPARTMENT OF HEALTH: MORE THAN 200 MINOR SPILLS SINCE BEGINNING OF YEAR

David Rupkalvis

An oil spill eight miles east of Williston released 300 barrels of oil Wednesday with five barrels escaping a storage containment dike.

The North Dakota Department of Health reported the spill occurred at a well site owned by Zavanna LLC. Initial estimates report 300 barrels of oil were spilled with some spraying off the site onto agricultural land.

According to the Department of Health, approximately 295 barrels had been recovered in the containment dike. As of early Wednesday evening, Zavanna was working to clean up the remaining oil.

A second spill was reported Wednesday in McKenzie County, approximately 20 miles northeast of Watford City.

The Department of Health reported 35 barrels of oil was released at a site owned by Newfield Production Company. The spill is reported to have impacted an area of approximately 90,000 square feet over two acres. The land was mostly agriculture and included a small, frozen pond.

The oil landed on top of snow and ice and is being removed by Newfield. As of early Wednesday evening, 20 barrels of oil had been recovered.

The Department of Health has officials on the ground at both locations and is working with both companies to remove all the oil.

On Monday, the Department of Health reported a 250-barrel spill of brine water in McKenzie County, approximately three miles west of Alexander.

Initial reporting from the scene shows that barrels of produced salt water were released from a site owned by RIM Producing Inc.

Some of the salt water escaped the location and ran into an iced-over drainage, a tributary to Lonesome Creek, the Department of Health reported. There is no water flowing in the drainage at this time and no public water supplies were threatened. The brine has been contained.

In the first nine days of February, the Department of Health reported 59 spills in the state. Twenty-three were reported in McKenzie County and 11 in Williams County. The spills included oil, saltwater, fresh water, surface hole mud, diesel fuel, natural gas, drilling mud and methanol. All 59 spills were reported as contained.

Most of the spills ranged from one to five barrels. The largest spill before Wednesday was a 180-barrel oil spill Feb. 7 in Divide County.

In January, 175 spills were reported throughout the state.

http://www.willistonherald.com/news/two-oil-spills-reported/article_cb81f386-94c8-11e3-90ce-001a4bcf887a.html

Tank and Petroleum Use Mishaps

**USA, HI, RED HILL
FEBRUARY 15 2014.**

RED HILL: EPA MAY FORCE NEW FUEL LEAK DETECTION SYSTEM FOR TOXIC SPILLS

Sophie Cocke

The Navy may soon have to install a sophisticated leak detection system at its massive Red Hill Underground Fuel Storage Facility where thousands of gallons of fuel leaked last month.

The state Department of Health urged the Navy to put in a better leak detection system as far back as 2008, but the Navy has resisted despite evidence that fuel has been contaminating the groundwater and the pollution may be moving toward a nearby Navy well that supplies drinking water to about 65,000 people at Joint Base Pearl Harbor-Hickam.

The Honolulu Board of Water Supply says it also is concerned that decades of contamination could close in on important drinking water supplies, and wants to be much more in front of any potential threats. Local officials are already stepping up testing at a cost of tens of thousands of dollars after last month's 27,000-gallon spill.

And now the U.S. Environmental Protection Agency is moving to tighten a law — as early as the end of the year — that has allowed the Red Hill facility and other "field constructed tanks" to escape leak detection and prevention regulations. About half a million underground storage tanks throughout the country have been subject to the regulations for three decades.

"Field constructed tanks are extremely rare," said Steven Linder, a program manager for the EPA's underground storage tank program. "But when something does go wrong, they are so big that it is a big problem."

Dozens of leaks from Red Hill's 20 underground fuel storage tanks over the past 70 years have contaminated groundwater with hydrocarbon levels as high as 25 times what the state considers safe, records show.

Test results for nearby drinking water wells have so far come up clean for contamination, but monitoring is ongoing.

A History of Leaks

Civil Beat reviewed hundreds of pages of records related to the Red Hill facility, including groundwater contamination reports, Navy risk assessments and correspondence between Navy and state health department officials. The documents were provided by the Hawaii Department of Health through a public records request.

The documents show that leaks from the facility began as early as the late 1940s, just a few years after the World War II-era facility was built, and continued for decades. Meanwhile, groundwater near the facility has repeatedly tested positive for high levels of hydrocarbons since regular monitoring began in 2005.

The 144-acre Red Hill Underground Fuel Storage Facility is less than three miles northeast of Pearl Harbor in Halawa Heights.

Military personnel, as well as local and mainland laborers, buried 20 giant tanks, each the size of a 20-story building and capable of holding 12.5 million gallons of fuel. Encased in concrete, the tanks are laid out in two rows and connected to Pearl Harbor through a system of pipes, as well as an underground rail system. For decades the tanks have supplied jet and marine fuel to the military's Pacific operations.

The tanks are surrounded by a number of drinking water wells, the closest being a Pearl Harbor well that is 3,000 feet to the west. Contamination below the facility appears to be moving slowly and has shown up in a monitoring well downhill from the tanks.

In 1995, the American Society of Engineers deemed the Red Hill facility a historic landmark, a category it shares with the Hoover Dam, Panama Canal and Statue of Liberty.

But while Red Hill is considered an engineering marvel, documents show that it also has a long history of leaks.

Historic records compiled by the Navy in a 2008 groundwater protection plan indicate that there

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were more than 30 leaks over the course of six decades at the facility, spilling tens of thousands of gallons of fuel.

The records, including inspection reports and written histories, are spotty, however. Many of the reports of leaks contain no information about how much was spilled or when the leak was finally fixed and in some cases the leaks may have been internal to the tank.

But the records suggest that at least 170,000 gallons of fuel was spilled over the years, or the equivalent of all the fuel on site at six modern-day gas stations.

For many tanks, the history of spills ends in the early 1980s and it's unknown exactly how many leaks there may have been in the decades since then.

But the records show that there were likely two spills in the 1990s. And in 2002, the Navy submitted a fuel release report to the state health department indicating that there had been a spill of jet fuel at Tank 6 and that the tank had been drained and taken out of service. Navy spokesman Tom Clements said it was not clear if the report was in response to a leak that year or detection of an old spill.

A 2008 groundwater protection report prepared by the Navy says that "based on various types of leak tests conducted since 1997, other releases may have occurred."

The Navy has been aware of the risks that groundwater contamination poses to drinking water supplies for at least 15 years.

A 1998 analysis conducted by Willbros Engineers warned of the dangers involved in a worst-case scenario if large amounts of fuel were to leak.

"An uncontrolled massive fuel release from the Red Hill tanks . . . would cause irreparable damage to the drinking water source below the site," according to the report. "The cost of clean up would be prohibitive, long term, and may not be completely successful."

As the facility ages, risks associated with leaks are expected to increase.

The "aging of the facility will increase the possibility that such a release could occur as a result of leaks breaching both steel liners and concrete containment of the tanks," according to a 2009 Navy work plan. "While the tank steel liners have been repaired, the concrete containment cannot be maintained."

Chemicals from Fuel Pollute Groundwater

State health officials, who are responsible for regulating the facility, say they first became aware of the leaks in 1998 when the Navy began testing the bedrock beneath the tanks for fuel contamination.

By 2002, the tests showed that all of the Navy's tanks had been leaking, except for one, according to Steven Chang, head of the state health department's solid and hazardous waste branch.

Monitoring wells can show significant drops in fuel levels, but it's possible that tanks can also have chronic low-level releases that are not being detected, he said.

Under pressure from the health department, the Navy began conducting extensive tests of the groundwater and its drinking water well, documents show.

In 2004, Chang threatened to start fining the Navy \$500 for every day it failed to submit reports related to fuel contamination, according to written communications with the Navy.

By 2013, the Navy had drilled seven monitoring wells that start near the northern tip of its tanks and follow the projected flow of water toward the Pearl Harbor drinking water well. The monitoring wells help track whether chemicals contained in fuel are migrating at dangerous levels toward the military base's water supply.

A review of the past six years of records shows that the levels of hydrocarbons in the monitoring wells often exceed state standards, but the levels vary. The tests, conducted several times a year, show that hydrocarbon levels rise and fall at various wells.

The levels that are of most concern are in the monitoring well that is just 600 feet away from the Pearl Harbor drinking water well.

That well "is of greatest concern because its (hydrocarbon) results have been consistently greater than HDOH environmental action levels," according to a 2010 risk assessment.

As of September, the last available report from the health department, two of the six wells tested

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above the state's acceptable level for hydrocarbons. Two months earlier, three of the monitoring wells exceeded state standards.

Navy and state health officials say that there have never been any tests that show that the Pearl Harbor drinking water supply has been contaminated with unsafe levels of chemicals associated with fuel.

Still, in recent years low levels of hydrocarbons and lead have shown up sporadically in the Navy's drinking water well.

"It appears and it disappears and reappears," said Chang. "It is very dilute and we really are not sure what is happening to any petroleum that was released" in the past decades.

Stuart Yamada, of the health department's safe drinking water branch, said that it is hard to track the movement of fuel through the ground, but that modeling suggests it moves slowly. And while tests show that there is "an awful high presence" of hydrocarbons in the groundwater, he said that it doesn't appear to be moving at high concentrations toward the Navy's drinking water well.

Still, a 2009 Navy analysis warned that a release of just 16,000 gallons of fuel from some of the tanks could potentially send benzene, a known carcinogen, into the well that supplies water to homes and offices on the military base.

County Wells a Mounting Concern

While the Pearl Harbor well is of greatest risk for contamination, county water officials worry that the fuel also threatens a critical drinking water supply for Oahu.

The Red Hill facility sits just 100 feet above the water table, straddling the Waimalu and Moanalua aquifer systems. The closest county drinking water well is about 5,000 feet to the northwest of the facility and supplies approximately 12 percent of the water to a system serving more than 600,000 Oahu residents. Another three county wells are about 6,700 feet to the south.

Even though Navy and state health officials have known about the groundwater contamination since the late 1990s — and generated thousands of pages of reports on the topic — officials from Honolulu's Board of Water Supply say they were never informed about the problems until after this most recent spill. The BWS is responsible for the county's drinking water.

"I'm very concerned about the situation," said Ernest Lau, manager and chief engineer for the BWS. He stressed that the nearby aquifers are critical to Oahu's drinking water supply.

Lau said he hoped to get help from the Navy in coming up with some sort of modeling to tell if a fuel plume was moving toward the county's wells and wanted to talk with the Navy about trying to remove the fuel contamination to reduce the risks.

However, Clements, the Navy spokesman, said that cleaning the groundwater is "impractical and cost prohibitive" because of the unknown nature of the basalt underneath the facility.

There are no requirements that the Navy clean up past groundwater contamination, according to the EPA, unless the military closes the facility. Only spills that were reported to the state health department, such as the most recent one, require the Navy to take any action.

The water board temporarily shut down nearby wells after last month's spill and is increasing tests for fuel contaminants from once every three years to four times a year for the next two years at a cost of \$52,000.

But if officials had known earlier about the decades of leaks and contamination, increased surveillance would have begun a lot sooner, said Erwin Kawata, quality control administrator for the Board of Water Supply.

Yamada called the health department's failure to notify the Board of Water Supply an "oversight." "Normally we like to keep them informed," he said.

But he stressed that the current risk to the county water supply was likely minimal.

Studies conducted by the Navy in 2007 and 2010 indicate that the contaminated groundwater wouldn't migrate into county wells because they are situated at a higher groundwater elevation.

However, if the Navy's Pearl Harbor drinking water well were to be shut down for any reason, things could change, said Yamada.

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The Navy well acts like a "vacuum," he said, sucking water downhill from the facility. Without it, there would be an increased risk that the contamination would flow into the county drinking water wells, he said.

New Oversight Could Prove Costly for Red Hill

Although the 27,000-gallon spill was announced by the Navy in mid-January, Chang of the state DOH said there's evidence that the leak could have begun as early as the end of December. Navy and government officials are still trying to determine where the leak occurred and whether it escaped the facility or contaminated groundwater.

Health officials have urged the Navy in the past to implement a "viable leak detection method," and the Navy responded by making this a key component of its 2008 work plan.

Navy spokesman Clements said that the Navy did implement a system in 2009 that includes performing "tank integrity tests" every two years. This is in addition to routinely checking the fuel levels in its tanks and sampling groundwater and soil vapor, he said.

"We continue to improve our system of monitoring and detection and incorporate new technologies whenever possible," Clements said by email.

But state health department officials don't believe the Navy's leak detection system has improved or is effective.

Chang noted that the recent leak was only discovered based on readings of fuel levels in its tank and increases in vapor levels below the facility.

"If they had anything else they would have shared that with us," he said.

Clements said that the Navy's system of checking fuel levels is the best way to tell if there is a leak. But regulations for the Red Hill facility are expected to get a lot stricter.

In the 1980s, media reports about the health and environmental dangers posed by leaking underground fuel storage tanks prompted a series of federal laws that increased regulatory oversight of the tanks.

However, those regulations were focused primarily on gas stations.

Red Hill and about 40 other military facilities throughout the country were exempted from leak prevention and detection requirements, according to Linder of the EPA.

The EPA is currently in the process of proposing new rules for the military tanks that could take effect as early as the end of this year.

That could mean that the Navy will have to invest in costly new technology, including double lining its tanks and installing sophisticated sensory systems that can better detect leaks and where they are happening.

"The main thing is how could we move forward to identify where the release is and what can we do to capture it before it moves any further," said Chang.

The costs for the Navy to comply with new rules could be substantial.

"The Navy will really have to take a hard look and say, is it even reasonable for them to spend the kind of money necessary to provide all the proper release detection systems," said Chang, noting that some tanks might end up being shut down.

"It may come down to well, they don't have enough money to upgrade all 20 tanks, maybe they will only be able to upgrade five."

Clements said that it was too speculative to comment on what technologies the Navy may have to implement in the future or whether added costs could hamper Red Hill's operations.

<http://www.civilbeat.com/articles/2014/02/14/21045-red-hill-epa-may-force-new-fuel-leak-detection-system-for-toxic-spills/>

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USA, N.C, CANDLER

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CANDLER OIL SPILL TAINTS HOMINY CREEK

Clarke Morrison

Environmental officials and contractors worked Saturday to contain a spill of some 5,000 gallons of fuel oil, some of which made its way into Hominy Creek and the French Broad River.

Workers at Vulcan Materials on Smoky Park Highway first noticed fuel running across the property from Harrison Construction Co. about 1:30 p.m. Friday, said Landon Davidson, regional supervisor for the N.C. Division of Water Resources.

Davidson said the liquid leaked out of an above-ground storage tank when a coupling on a pipe failed. Also contributing to the spill was the fact that a valve on a containment basin had been left open, he said.

Workers placed booms across the creek in several locations in an attempt to contain as much of the oil as possible, but it was clear that some of it made it to the river.

"There is definitely a sheen visible in the French Broad and in Hominy Creek," Davidson said. "We don't know how much of the product actually reached the creek."

It's difficult to say what sort of environmental damage was caused by the spill, he said.

"I haven't seen any fish kills," he said. "I don't see any observable damage at this point. We'll see what happens in the next couple of days."

Harrison Construction, the tank's owner, could face fines or other penalties, Davidson said. No one with the company could be reached Saturday for comment.

Hartwell Carson, the French Broad riverkeeper with the environmental group Western North Carolina Alliance, paddled the tainted section of the creek Saturday along with Eric Bradford of Asheville Greenworks to get a close look at the oily mess.

"It's very frustrating to see regardless of whose fault it is," Carson said. "There is significant oil all over the creek. It's in the sediment."

Carson said the spill likely will be harmful to aquatic life. He believes more booms should have put in the creek closer to the site of the spill.

"There was oil at French Broad River Park and Hominy Creek Park," he said. "It was just a sheen stretching all the way across the creek. It smelled of gasoline. You could smell it all the way down at Hominy Creek Park."

Vulcan workers who spotted the leaking oil used sand and berms in an initial attempt to contain the spill. Contract workers with NEO Corp. soon arrived on the site, said Terry Gentry, Buncombe County deputy fire marshal.

Vacuum trucks were used to remove oil that was contained on the site and soil was excavated. An official with the U.S. Environmental Protection Agency also was on the scene.

Davidson said he doesn't know why the valve on the containment basin below the fuel tank was left open or why the pipe coupling broke.

http://www.citizen-times.com/article/20140215/NEWS01/140215006?nclick_check=1