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, TX, HOUSTON
OCTOBER 29 2011.
INVESTIGATORS: BETTER SECURITY NEEDED AT OIL STORAGE TANKS TO STOP DEATHS

Dozens of teenagers and children have been killed in explosions at oil and gas storage tanks over the past three decades, according to federal investigators who today are urging companies to better secure the sites.

The Chemical Safety Board’s examination focuses on three recent lethal explosions, including the death of a 24-year-old woman and injury of a 25-year-old man after an oil tank in New London, Texas exploded when they lit a cigarette while on top of it.

But in a report released today, the independent agency says the problem goes back for decades and demands immediate solutions. The CSB cites 23 similar instances — most involving partying teenagers or curious kids — at oil and gas storage sites from 1983 to 2010. All of the incidents involved victims under 25 and roughly a third of them — 27 percent — were in Texas, though none were in Houston.

Many oil and gas storage tanks are in remote areas — unfenced, unsupervised and without any warning signs — “a tempting venue for young people looking for a place to gather and socialize,” the CSB found.

It can be a devastating and lethal combination when young people hanging out at the sites light up cigarettes.

After probing the 2010 New London, Texas, explosion and two others in Carnes, Miss., and Weleetka, Okla., the CSB concluded all three could have been prevented with better warning signs, securing hatches on the tanks or the use of safer tank designs at the facilities.

Although Houston and some other large cities put constraints on the location of the facilities within city limits, that is not the case nationwide, where more than 800,000 oil and natural gas producing facilities dot the landscape.

“The growing number of oil and gas facilities nationally, their accessibility to members of the public and the lack of awareness among the public about the hazards posed by the tanks suggest a potential for similar incidents,” the CSB concluded.

The agency today is urging oil and gas companies to take swift steps to prevent more accidents, including adopting inherently safer tank design features that are already used in the downstream, refining sector. For instance, the CSB says, vents fitted with pressure-vacuum devices, flame arrestors, vapor recovery systems and floating roofs would go a long way to making the tanks — and the area around them — safer.

“There are more modern storage tank designs that make it much more difficult to accidentally ignite the flammable vapor inside,” said Rafael Moure-Eraso, the CSB chairman. “When the vapor ignites, tanks can explode — killing or injuring any people in the vicinity.”

Moure-Eraso noted that the storage tank designs recommended by the CSB are already utilized at oil refineries and other downstream facilities because “they are cost effective and they work.”

The CSB also points to some relatively inexpensive and easy changes that could pay off, including hatch locks to prevent access to flammable hydrocarbons inside storage tanks, fencing around the tanks and warning signs.

A “patchwork of” federal, state and local laws don’t go far enough, said Vidisha Parasram, who led a CSB task force that investigated the issue.

“There is a lack of consistent state or municipally mandated regulations for perimeter fencing, locks, and signage,” Parasram said at a news conference to discuss the report this morning. “Public safety is rarely considered in municipal or state rules for constructing or maintaining tanks on oil and gas well sites, even for new construction.”

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“These sites are dangerous and the people who live and work in these communities should be properly protected,” Parasram added. “Immediate action to (address shortcomings) will prevent future accidents and save lives.”

Although the American Petroleum Institute currently recommends specific security measures for storage tanks holding refined petroleum products, the group does not have similar standards for storage tanks at upstream exploration and production sites. The exploration and production storage tanks also are exempt from security requirements in the Clean Water Act and risk-management mandates in the Clean Air Act.

The CSB is urging the API to adopt new standards for upstream sites encouraging the use of safer tank designs meant to trim the chances of explosions. The agency also says API should bolster its existing standards by insisting on locked fences, hatch locks on tank manways and barriers preventing unauthorized access to external ladders and stairways at the sites.

API Spokesman Reid Porter said the group was still studying the CSB’s report. “We look forward to reviewing this report and its recommendations, and continuing to improve safe operations,” he said.

The CSB also wants state regulators in Texas to beef up oil and gas regulations with new security requirements. The agency urged the Texas Railroad Commission to mandate companies use locked fences, hatch locks, barriers on ladders and hazard signs near the facilities. The commission also should require the use of safer tank designs, the CSB said.

The Texas Railroad Commission did not immediately respond to a request for comment.

In the April 26, 2010 New London, Texas incident, an exploding tank flew 48 feet away from its original location after one of the two victims lit a cigarette while climbing the stairway of the catwalk at the site. Located at the end of an isolated road in the middle of a clearing surrounded by woods, the oil and gas site was leased by MC Production.

The site, which was in operation for at least 80 years, had three interconnected 1,000-barrel capacity tanks at the time of the accident. The tank that actually exploded had not stored any hydrocarbons for at least one and a half years before the incident. A graffiti-covered warning sign at the site warned against smoking, matches or open lights.

A separate oil tank explosion in Carnes, Miss., on Halloween 2009 killed two teenagers, Devon Byrd and Wade White, who were at a Delphi Oil production site about 150 feet away from one of their homes. The force of the explosion sent the upper part of a tank flying 225 feet away and propelled the bottom piece about 60 feet in the opposite direction. The resulting fire lasted four hours and sent flames 200 feet high.

Both teenagers were killed instantly, according to the CSB report, and there was no evidence of what caused the flammable hydrocarbons to ignite.

The Carnes, Miss., explosion has inspired memorials and state lawmakers to push for tougher regulations on oil and gas storage facilities — but they have had limited success.

Mississippi State Senator Billy Hudson says oil and gas leaders in the state have resisted his push for fencing around the facilities. But he insists that it should be a no-brainer.

“You fence a swimming pool to make sure children don’t drown,” Hudson said. And electric utilities wrap power stations in high fencing, he added.

When it comes to tanks holding flammable oil and gas, Hudson said, “you would think they would want a fence.”


AUSTRALIA, N.S.W, ERARING
OCTOBER 31 2011.
ERARING OIL SPILL FAILURE
Damon Cronshaw
Eraring power station’s oil-containment system failed when an explosion caused an oil spill into Lake Macquarie, industry and political insiders say.

The power plant conceded that oil spilled into the lake after an explosion breached barriers meant to contain oil.

But numerous firefighting and industry sources said the problem was worsened because oil leaked into the lake through a drain that should have been sandbagged after the explosion.

Lake Macquarie MP and mayor Greg Piper said the explosion and oil spill exposed “some flaws” in Eraring’s containment system, but the incident “could have been a lot worse”.

“I’m told there was a drain that allowed oil to escape,” Cr Piper said. “But you can’t model for every contingency.”

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Eraring managing director Peter Jackson said some oil had leaked into stormwater drains and the lake after the explosion and subsequent use of millions of litres of water to fight the fire. He was not aware a drain had been missed, as firefighters sought to contain the spill.
Mr Jackson said the utility would examine the design of its oil-containment system and look to improve it. “The transformer-generator was built close and adjacent to our outlet canal, that’s the way it was done 30 years ago,” Mr Jackson said.
An oil slick covered areas of the shore at Myuna Bay, Whiteheads Lagoon and Rocky Point.
Wind and the tide pushed oil across the lake at the weekend to Silverwater and Sunshine on the Morisset Peninsula, where residents reported brown oily sludge in the water.
Fire and Rescue NSW and the Office of Environment and Heritage said it was a thin variety of oil, too fine to clean up.
They said the pollution would dissipate and evaporate, despite concerns about it entering the food chain.
The environment office will investigate the incident, which began after an explosion inside a transformer-generator at 2.30am last Friday.
Mr Jackson said the fire was extinguished yesterday, despite concerns it could smoulder for a week.
He said the progress could mean firefighters that vacate the site today.

USA, TX, CORPUS CHRISTI
NOVEMBER 1 2011.
CREWS ALLOW OIL TANK BATTERY TO BURN

The downtown skyline included a large plume of black smoke, Monday morning. Many people, including emergency crews wondered where it was all coming from. Eventually it was tracked to an oil tank battery on fire along Nueces Bay. The decision was made to let it all burn off and there was good reason for that.
It was around 9:30 AM Monday, when the thick black smoke began to cloud the sky for miles around. It actually appeared to be coming from one of the refineries at the Port of Corpus Christi. But, it was actually an oil tank battery producing all of that smoke. It was located on the Portland side of Nueces Bay.
Officials say a pump caught fire after it had overheated. Luckily only 2 of the 8 oil storage tanks here contained oil. But that was enough to help fuel this fire which lasted for hours and fire crews on the scene decided to let it burn instead of trying to put it out.

"No one is fighting the fire because if we put water on the facility it will all go over the berm and then it will go into the bay. We'll have a huge oil spill in the Nueces Bay and that's not what you want. So it's all being contained by the berm around it, said William Zagoski with the San Patricio Emergency Management team.
If a spill reached the bay, it could have severely impacted the shrimp breeding grounds located there. The Texas General Land Office and Texas Commission on Environmental Quality came out to investigate and they could take regulatory action if they discover a preventable problem out there.
http://www.kiitv.com/story/15918146/crews-allow-oil-tank-battery-to-burn

USA, CA, BAKERSFIELD
NOVEMBER 2 2011.
WHAT LIES BENEATH, PART 1

March 1995. An explosion rips through the early morning in northwest Bakersfield, as gasoline fumes in an unvented refining tank go up in a ball of flames.
The explosion would kill 22-year-old Tracy Kildebeck whose Honda appeared to have ignited the fumes. His death resulted in a $5.5 million county settlement that also included provisions to clean up the land. "We just wanted to make sure World Oil was complying with all oversight from regulator bodies," says deputy district attorney John Mitchell.
It was the end for the 70-year-old refinery, but the beginning of a more in-depth effort to clean years of contamination that soaked into the soil and leached into the groundwater below. "The practices in the 20s, 30s 40s and 50s are not what they are today. The environmental standards, and what was done," says Clay Rogers, water control board.
Today, some 16 years after the closure, the toxic chemicals still remain. A chemical scrubber hums away, drawing up and condensing oil hydrocarbons and vapors of the toxic chemical MTBE from a series of groundwater wells hundreds of feet below the surface. "Well, it certainly is a lot of time, but we have to recognize this refinery went into 771, 772, 773, 774, 776, 777, 778, 779, 780, 781, 782
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business in 1923 and these impacts occurred over decades," adds Rogers.
And Rogers admits the contamination is immense. "Since 1995 over 10 million pounds of petroleum hydrocarbons have been removed in the vapor phase, an additional 20 thousand gallons of petroleum hydrocarbon that are in the liquid phase have been removed from the site."

The MTBE hasn't been drawn into the municipal water supply in Bakersfield yet. But Tim Trealor of Cal Water says they're preparing for the possibility. "Doesn't mean it couldn't happen. So we remain vigilant. So we continue to test more frequently than the rules require."

In some cases that means testing every 3 months rather than every 3 years. "There is a cost, and there is a cost to consumer. I think if the consumer was making the decision to test or not test, I think they would be right alongside the company."

Cal Water draws its nearest drinking water from a well about a half-mile away, near Vista West High School. A carbon filter installed in the system could buy the utility time if MTBE were ever to slowly seep into the supply.

Question: If you could put percentages on it, is there at 10 percent chance, a 20 percent chance it could seep down? "I can't put a percentage to that."

Question: How worried about it are you though? "Well, we are concerned about it I mean if we weren't concerned about it, we wouldn't require all of the work to be done."

Perhaps more concerning to regulators—the toxic plume beneath the refinery is on the move. It's creeping west/northwest with the flow of water about 300 feet per year underneath Coffee Road toward the old PG&E power plant on Rosedale Highway.

The regional water control board has ordered World Oil to drop a string of new testing wells on PG&E's land to find out just how far the chemicals have migrated.

One of the groundwater wells already is operational and a sample tested positive for MTBE at 10 times the amount considered safe. A second sample out of that well did not detect anything.

And so regulators are asking for more tests and more sites. As concerns grow that a strong rain this winter could drive more of the contaminants in the soil into the groundwater.

Question: Are you comfortable they have been monitoring it appropriately? "Well, I'd like to see, as I talk to the water agency, one let's do another study on it, and I'd feel much more comfortable," says Kevin McCarthy, congressman Bakersfield.

Hydrocarbon contamination does degrade over time. But the regulators we talked to say it will be years if not decades before the contamination on the site is cleaned up to levels considered safe. So what is the federal government's responsibility here?

And are our legislators pushing hard enough for answers? Are there other problem areas of concern?
We'll continue our search for answers and report again soon on what we find.

AUSTRALIA, SOUTH AUSTRALIA, ADELAIDE
NOVEMBER 3 2011.

ENGINEERING COMPANY FINED AFTER FUMES OVERTAKE WORKER IN CONFINED SPACE

DID Piling had earlier pleaded guilty to one count of breaching section 19(1) of the Occupational Health, Safety and Welfare Act 1986 in that it failed to provide an employee with adequate information, instruction, supervision and training. SafeWork SA prosecuted after investigating an incident in March 2009, at Lock 6 of the Murray River, near Murtho in the Riverland. The firm was preparing barges for use by a client; work which involved spraying a rust inhibitor inside the hull of the vessels. During this task, a male employee suffered ill-effects from exposure to the inhibitor fumes, causing him to briefly fall unconscious after experiencing giddiness, shortness of breath and skin irritation. He was conveyed to hospital, later discharged and returned to work after three weeks.

SafeWork SA’s investigation revealed that the employer mistakenly believed it was not obliged to train its employees about work in confined spaces, if someone experienced in such work was supervising. Further, it was found that information on the rust inhibitor was not conveyed to the employee, nor was he supplied with protective equipment such as a respirator. Industrial Magistrate Michael Ardlie said the risk to the employee was of being rendered unconscious, and suffering respiratory problems and lung function complications. He noted that while there were safety systems in place prior to the incident, these were not adequate enough. He fined the company $26,250 plus costs after a discount of 25% to acknowledge its guilty plea, cooperation, contrition and remedial measures.

SafeWork SA says work in confined spaces can be potentially fatal, and the utmost attention to safety is required when such work is carried out. "Near enough is never good enough as this case has shown,” says Acting
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Executive Director Bryan Russell. “Plenty of information is available on how to perform work in confined spaces safely as well as the potential dangers of substances that may be used in such work. This information always needs to be followed to the letter to ensure the job is completed without mishap.”


USA, MO, DESOTO
NOVEMBER 12 2011.
PROpane Tank EXPLOSIONS RATTLE JEFF. CO. RESIDENTS
Michael Calhoun
A series of propane explosions rocked residents in the Jefferson County town of Olympian Village late Thursday.

“There was a huge fireball. My guesstimation is that the fireball was about 300 feet in the air,” Christina Minks said. “We heard the rumble, then we heard and felt the ground shake.”

It happened at Routes 110 and 67 at a business called R&R Propane. A delivery truck, parked unattended at a pump at a nearby BP gas station rolled away and hit a transfer station, puncturing the main tank and causing that first explosion. Witnesses report at least five additional explosions.

“I think there was some safety equipment on the propane tanks themselves that helped to keep it from getting worse,” Sgt. James Kausler said. He said no homes were specifically evacuated, but some major roads had to be closed off. Nobody was hurt. Minks said it was a sight to see. “It looked like a miniature sun went up. It was big.”


USA, VT, ADDISON CO, MIDDLEbury
NOVEMBER 15 2011.
BEER Tank EXPLODES AT OTTER CREEK
Andrea Suozzo
A beer tank at Otter Creek Brewing exploded around 10 a.m. on Monday, according to Middlebury fire chief Rick Cole.

No one was hurt in the explosion of what Cole said was a large fermenting tank, but the incident brought emergency personnel rushing to the scene to ensure that the explosion of the pressurized tank did not cause further explosions.

Otter Creek president Brian Walsh said around 11 a.m. that a team from the company was on its way to assess the incident, but that the building was secure.

Cole said the explosion damaged piping and knocked over two or three other tanks, but that there was no fire and the beer that spilled was mostly contained within the building.

The explosion also blew a wall panel off of the side of the building between two outdoor tanks.

Cole said his crew spent a little over an hour on the scene stabilizing tanks and making sure that the scene was safe, and that employees had already re-entered the building by the time he left.

Walsh said he would have no further comment until after the team he was sending had assessed the situation.

In a Facebook posting later Monday, however, the company stated that it would resume full operations later in the week, and that it does not anticipate any shortages in beer supply.

http://www.addisonindependent.com/201111beer-tank-explodes-otter-creek

AUSTRALIA, NEW SOUTH WALES, NEWCASTle
NOVEMBER 15 2011.
CHROMIUM 'SPURRED OUT' OF ORICA STACK
ORICA staff tried to contain a chemical leak at a Newcastle plant by diverting the hexavalent chromium but it began "spurting out" of a temporary repair job on the side of another stack.

Night shift supervisor Warren Ashbourne has told a NSW parliamentary inquiry the plant became overwhelmed by the build-up of condensation in a chemical stack on the night of August 8.

In dramatic evidence to the select committee investigating the leak, Mr Ashbourne said he first became aware of the leak when a worker complained of yellow spots of chromium on his helmet.

Mr Ashbourne said the leak, caused by the build-up of tainted condensation, sent "a misty sort of rain" percolating out of one of the plant’s stacks.

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He said staff believed they had stopped the leak by diverting the condensation to a separate vent. But before long, it too became overwhelmed and the chemical began "spurting out" of a temporary repair in the side of the stack.

When staff realised the incident was getting out of control, the plant was shut down. Despite the dramatic series of events, Mr Ashbourne said he believed the leak had been contained on site because none of the vehicles in the staff car park were marked with telltale yellow droplets.

"When we left that morning, myself and all the other guys who worked that night thought we'd done a good job, in trying to contain it to the site," Mr Ashbourne said.

But when site manager Stuart Newman arrived at work at 7am the next day, the true extent of the leak became apparent.

"It became evident to me immediately that the extent of the material on site was much greater than was reported during the evening," he told the inquiry.

The Orica plant was shut down by the state's environmental regulator after a separate ammonia leak last Wednesday.


NORTHERN IRELAND, CO LONDONDERRY, MAGHERA
NOVEMBER 15 2011.
SLURRY TANK WARNING AFTER MAN KILLED IN MAGHERA FARMING ACCIDENT

The Health and Safety Executive (HSE) has warned people to take extra precautions with slurry tanks following the death of a farmer in County Londonderry.

The agency is investigating the 79-year-old man's death on a farm in Maghera on Monday afternoon.

Police have said his death is not being treated as suspicious.

Ken Logan, from the HSE said all openings into slurry tanks should be properly guarded.

"They should look to use safety slats when mixing in slurry tanks," he said.

"I would also draw attention to the dangers of gasses associated with mixing of slurry in the tanks."

Clark Black of the Ulster Farmers Union said it was another tragedy for the farming community.

"Unfortunately for farming this particular year we've had more than our share of fatalities," he said.

"I think it just does go to illustrate that farms can be very dangerous places."

http://www.bbc.co.uk/news/uk-northern-ireland-15729088

USA, TX, PORT OF BROWNSVILLE
NOVEMBER 15 2011.
WORKER INJURED AS PROPANE LEAK FORCES EVACUATIONS AT PORT OF BROWNSVILLE

Madeline Buckley

A gas leak at a Port of Brownsville business Monday injured one worker, caused the evacuation of seven companies in the area and released about 57,000 gallons of propane gas into the air, officials said.

Emergency personnel — including Cameron County Emergency Management, a HazMat team and Brownsville firefighters and police — responded about 9 a.m. and worked to fix a valve leak in a propane storage tank at TransMontaigne, a company that transports and stores petroleum and chemical products.

After nearly five hours of working on the valve throughout the blustery day, crews contained the leak, but the full tank of gas was released into the environment, Brownsville fire Chief Lenny Perez said.

Officials closed Highway 48 from Farm-to-Market Road 511 to Highway 100 during the leak, and the highway remained closed for much of Monday.

“We still have a danger zone,” Perez said at an afternoon news conference, noting that the gas is highly flammable.

He said the roads would open when authorities determined the area was safe, which he said could take several hours.

The leak started in one propane tank, filled with 57,000 gallons, that connected with three others. The tanks hold about 90,000 gallons of gas each when full, he said.

Workers eventually were able to shut off the valve that connected the four tanks, so that only the one tank leaked its contents.

The injured worker was transported to the hospital after part of the valve struck him when it ruptured, Perez
Tank and Petroleum Use Mishaps

said. He said he did not have details on the man’s condition, but he was coherent after the incident.
The Texas Commission on Environmental Quality, or TCEQ, is investigating the incident, said Jaime Garza, section manager with the Harlingen branch of TCEQ.
Garza said experts will examine the extent of the emissions and check that the facility had been operating in accordance with city codes and state law.
He said information about the environment impact of the leak is pending a full investigation.
“But at this point, there aren’t any immediate threats to human health,” he said.
The strong winds throughout Monday helped dissipate the gas quickly, Garza said.


USA, N.C, LEXINGTON
NOVEMBER 17 2011.
EXPLOSION SENDS MAN TO HOSPITAL
A man was transported to Wake Forest Baptist Medical Center in Winston-Salem with non-life threatening injuries after a gas explosion Wednesday morning at a Lexington business.
The man’s name is not being released.
The explosion occurred just after 8:30 a.m. at Air Craftsmen, a filtration system manufacturer at 617 Greensboro St.
Lexington Fire Department Commander Paul Jarrett said an initial investigation found that the explosion was caused by an employee who was cutting a pipe that was attached to an underground gas tank. Jarrett said it appears that the tank was filled with some form of petroleum-based fuel and that the employee was unaware the tank was underground.
Greensboro-based A&D Environmental Services was on-site by mid-afternoon removing the gas from the tank and checking it for safety.
“From there something will be done to secure the tank, either it will have to be abandoned in place or removed,” Jarrett said. The explosion did “moderate” damage to the floor, but there was no structural damage, Jarrett said.

Air Craftsmen president Ken Hodges declined to comment on the matter.
http://www.thedispatch.com/article/20111116/News/311169983

USA, WYO, ROCK SPRINGS
NOVEMBER 19 2011.
TANK FARM LEAK RESULTS IN LARGE GASOLINE SPILL NEAR ROCK SPRINGS
David Martin
A leak at the ConocoPhillips tank farm outside Rock Springs resulted in a spill of approximately 1,100 barrels, or 44,000 gallons, of unleaded gasoline Thursday night.
Officials were notified at about 9:30 p.m. Thursday when employees at the tank farm were alerted by atmospheric monitoring sensors at the facility. The call resulted in a multi-agency response, including the Sweetwater County Sheriff’s Office, Fire District No. 1, Wyoming Highway Patrol and Sweetwater County Emergency Management.
“Something like this is a major cooperative effort,” Dick Blust, public information officer for the sheriff’s office, said. The facility is primarily used to store gasoline and diesel fuels. There are two truck racks on location which allow fuel trucks to load fuel for distribution.
Blust said the leak was stopped immediately and the spill was contained inside the facility. Despite the smell of gasoline being present near the facility Friday evening, Blust said there are no concerns with air quality and monitoring systems are still checking the air quality around the facility.
Jim Wamsley, fire chief at Fire District No. 1, said Foothill Boulevard was closed at Gookin Road and near the entrance to the Volic mobile home park. Residents in the mobile home park and those staying at the nearby KOA campground were notified of the spill. Wamsley said the mobile home park is about three-fourths of a mile from the facility and the Clearview Acres subdivision is more than a mile away. The campground is directly adjacent to the tank farm.
Romelia Hinojosa, a spokesperson for ConocoPhillips said they don’t have an estimate for how much the spill will cost to clean up and said the cause of the leak is still under investigation. After an investigation is completed, additional prevention measures may be installed to prevent future leaks.
An independent contractor to ConocoPhillips is handling the clean-up work, which consists of vacuuming as 771, 772, 773, 774, 776, 777, 778, 779, 780, 781, 782
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much of the liquid as possible, then applying absorbent mats to collect additional fuel. After that phase, the ground will be excavated and contaminated soil will be sent to a processing facility to remove any gasoline still present.

Ground water monitoring wells are present around the facility and the tanks themselves have emergency dykes built near them to guard against spills, as per Environmental Protection Agency requirements. Wamsley said he was told a layer of ice had formed in the dykes and made a majority of the fuel recoverable.


USA, AK, HOMER
NOVEMBER 19 2011.

FIREFIGHTERS DODGE EXPLODING FUEL TANK

Michael Armstrong

An exploding heating fuel tank inside a garage narrowly missed hitting firefighters Sunday morning when the tank ruptured, spewing flames that one witness described as "a fire tornado." The blast shot the main part of the tank 150 feet through the wall and into a field, while the end of the tank blew through a steel door.

Miraculously, no one was hurt.

"It missed them by feet," Homer Volunteer Fire Department Chief Bob Painter said. "If pieces of that tank had hit anybody, they would have been seriously injured, if not killed."

Painter said several firefighters by the garage had just stepped away from the garage to check on water to hoses when the tank blew.

"I saw where the firefighters were," said Nick Varney, a resident in the area who witnessed the blast and the tank spinning away from the house. "It was like the finger of God was on them. It went right between them."

HVFD and Kachemak Emergency Services firefighters near the blast wore protective turnout gear, breathing masks and helmets and did not suffer blast or burn injuries. Painter said no one even had ringing ears or singed hair.

The explosion happened when firefighters went to a fully involved garage fire at the Bruce Avenue home of Lynn Pattie off East End Road below Wasabi's Restaurant.

Jane Varney, Pattie's neighbor to the south, called 911 at 8:07 a.m. after she looked out her kitchen window and saw flames licking at the eaves of the garage. Varney called Pattie and warned her of the fire, and Pattie escaped without harm.

Soldotna dispatchers paged out KES and then HVFD, Painter said. Bruce Avenue is in Kachemak City, but receives fire service under a contract with HVFD. KES crews had already arrived when the first Homer fire engine arrived at 8:23 a.m. A wind from the west pushed flames toward Pattie's house and had started to melt the vinyl siding on Pattie's home. The fire burned a porch and arctic entryway on her home, but otherwise did not damage the single-story house. The fire destroyed the garage and Pattie's car. Homes are on large lots in the area and the tank landed in an empty field. Burning embers did land on neighbors' yards, but because of snow and frozen ground weren't a threat. Firefighters did not realize a fuel tank was inside the garage, but did know a car was inside. Pattie had told firefighters of other dangers in the garage, but in her panic forgot to tell firefighters of the fuel tank, Painter said.

"The homeowner was just beside herself that it happened," he said. "I don't know if it would have made much difference."

Firefighters could hear something venting inside the garage.

"It sounded like a jet engine," Painter said. "The big thing is we could hear something. We couldn't see it. We couldn't get access because of the flames and the heat."

The explosion was a classic BLEVE, for "boiling liquid, expanding vapor explosion," Painter said. The 300-gallon tank was about a quarter full, Painter said. A fire that started elsewhere in the garage heated the tank and the fuel, showing a visible line where the tank was empty. When the fuel heated, it vaporized, and the vapors expanded in the tank. Because the tank had more room because of low fuel, the vapors could build up.

Vents in properly designed fuel tanks should allow vapor to escape, but Painter didn't know if the vents worked properly. Fuel oil tanks aren't designed to hold pressure, and when the vapor built up faster than it could vent, pressure built up, rupturing the welds on the tank. The catastrophic failure and the sudden release of vaporized fuel ignited, creating a huge fireball.

"What's amazing to me was this fire tornado came out. It was spinning," Nick Varney said. The fireball had one positive effect: with so much fuel burning, it sucked oxygen out of the fire, putting it out. Painter said it was lucky the fuel tank hadn't been propane.

"If it had been propane, it would have leveled the house and garage and probably killed 8 to 10 people," he said.

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State fire codes for commercial buildings or multiple-family dwellings prohibit storing fuel tanks inside structures. There are no state codes for residential tanks, said Megan Peters, a spokesperson for the Alaska Department Public Safety, Division of Fire and Life Safety.

"It's not something that should be kept indoors in the opinion of the Fire Marshal's office," Peters said. Homer city code doesn't address placement of residential fuel tanks. Commercial structures in the city need the State Fire Marshal's approval, and thus would not allow inside tanks, said Homer Planning Director Rick Abboud.

Most fuel tanks are outside, Painter said, and in other fires with outside tanks, firefighters can see them and take precautions, like turning off fuel valves and hosing down tanks to keep them cool. Gas tanks on cars usually vent or, if made of plastic, melt.

"They blow up on Hollywood, mostly," Painter said.

Painter said he planned to talk to HomeRun Oil and Petro Marine to see if there are many inside fuel tanks on the lower Kenai Peninsula.

Jeff Erickson, owner of HomeRun Oil, said there are a small number of inside fuel tanks he knows of, but that most are outside. This was the first he heard of a fuel tank exploding like that. He suspected there might have been a problem with the venting. Most tanks have proper vents, he said. Some tanks have fuel caps that flip open under pressure while others have a J-shaped pipe that curves up, with the open end on the bottom. If someone has a tank indoors, it should be vented outside, but HomeRun Oil encourages people to put tanks outside.

"It's just a safer bet," Erickson said.

He also advised keeping the tank full.

"The less fuel you have in there, the worse off you are," Erickson said. "The vapor pressure is much more dangerous than the liquid expanding."

Painter said if he finds out there is a significant problem, he's going to talk to the city manager and the borough about prohibiting tanks from being indoors.

Nick Varney said Pattie went next door to a neighbor's house after she got out of her house.

"Everybody in the whole neighborhood surrounded her and took care of her," Varney said.

Pattie has family in Homer. A message was left with her daughter, Shelly Fraley, but at press time she did not return a call.

Painter said the cause of the fire remains under investigation, but he suspects a space heater by a water pump might have caused the fire.

http://homernews.com/stories/111611/news_fdef.shtml#.TseEUT24qso

USA, CA, LOS ANGELES, WILMINGTON
NOVEMBER 19 2011
CONFINED SPACE RESCUE FREES TWO WORKERS
FUEL STORAGE TANK

Two workers performing routine maintenance in a large underground tank, were rescued today after one fell and was injured, and the other followed him down trying to try to help.

At 12:06 pm on Friday, November 18, 2011, the Los Angeles Fire Department responded to a "Confined Space Rescue" at 3171 North Gaffey Street near Harbor City. A large response was dispatched and even more resources were called to the scene, when it was confirmed that two male employees were approximately 27 feet below ground and in need of help. The incident would require a very technical rescue to be performed by the LAFD's Urban Search & Rescue Team.

Once all technical aspects of this emergency operation were addressed and assembled by the nearly 80 personnel on-scene, two Firefighter/Specialists "made entry" and descended into the "50,000 barrel, fuel-storage tank."

A 21 year-old, male employee was found conscious at the bottom of the tank with an injury to one of his lower extremities. He had apparently lost his balance attempting to install a piece of equipment in the tank, resulting in the fall. A male co-worker, of approximately the same age, was not injured as he attempted to assist in his colleague's misfortune. Once rescued, both were evaluated, treated and then transported to a local hospital for further observation.
Tank and Petroleum Use Mishaps

While the entire incident took much longer, the "Confined Space Rescue" was accomplished in just over one hour. There were no other injuries reported.

USA, CA, SAN PEDRO
NOVEMBER 19 2011.
2 MEN TRAPPED IN SAN PEDRO STORAGE TANK RESCUED
Larry Altman and Kristin S. Agostoni

Two men cleaning the inside of an underground fuel storage tank at a military facility in San Pedro were hospitalized Friday after one fell 30 feet to the bottom, firefighters said. The man suffered bruises and other injuries and was unable to climb from the tank himself. The other waited at his side for emergency workers to arrive and was not injured, firefighters said. Both were covered with sludge.

The men were cleaning the inside of the 130-foot-wide, 30-foot deep underground tank at the Defense Fuel Support Point San Pedro facility at 3171 N. Gaffey St. when the accident occurred about noon. The facility is operated by United Paradyne Corp.

The men, both in their 20s, were contract workers. "It appears one of them lost his balance and fell," Los Angeles city fire Assistant Chief Ralph Terrazas said. The man suffered injuries preventing him from leaving the tank himself, Terrazas said. His co-worker could have climbed a ladder and gotten out through the 3-by-3-foot entry hatch, but remained at the bottom. Terrazas said neither man was trapped.

About 75 firefighters responded, including an urban search-and-rescue team and a hazardous-materials unit. The rescuers provided the men with air and made sure the tank's fumes were safe so that the men and rescuers were not overcome.

By 2 p.m. both men were brought out, cleaned up and taken to hospitals. One man went to County Harbor-UCLA Medical Center near Torrance and the other to Kaiser Permanente Medical Center in Harbor City. The facility is a fuel terminal for the energy branch of the military's Defense Logistics Agency, supplying fuel to the western region of the country. Lt. Col. Tam Gaffney, the unit's commander, said the workers involved in the accident were among the many contractors employed on the site.
http://www.contracostatimes.com/california/ci_19366254

BRAZIL, RIO DE JANEIRO
NOVEMBER 20 2011.
BRAZIL OFFICIALS CRITICIZE CHEVRON OVER OIL SPILL
Simon Romero

Chevron came under intense scrutiny in Brazil on Friday over an oil spill at an offshore field the company operates, with federal investigators here threatening fines for Chevron and potential prison terms for its officials if they are found guilty of violating environmental contamination laws.

The response to the spill, which Chevron said it was notified of on Nov. 8 and which left an oil sheen near Brazil's southeast coast, is an important test for the authorities as Brazil moves to tap oil from its large recent offshore discoveries. If Brazil meets its ambitious production goals, it may emerge by the 2020s as the world's fourth-largest oil producer after Russia, Saudi Arabia and the United States.

While the spill, from an appraisal well in the Campos Basin, is thought to be much smaller than BP's oil spill last year in the Gulf of Mexico and is said by Chevron to have almost dissipated, it also presents an additional challenge for Chevron in Latin America. In nearby Ecuador, Chevron has faced seething resentment and a protracted legal battle over oil contamination in the country's rain forest.

Fábio Scliar, the head of the environment affairs division of the federal police, flew this week over the area of the spill, where Chevron has said it has 18 vessels controlling and is monitoring the sheen. In an interview on Friday, Mr. Scliar expressed annoyance over Chevron's handling of the spill and its methods of cooperating with Brazilian investigators.

"They've been very resistant about providing information, and they were hesitant about allowing me to land on the platform," Mr. Scliar said. "We had to be rather energetic with them about our requests."

Mr. Scliar said Chevron employees could face prison terms of several years if they were found to be have violated environmental laws. He said he would request testimony next week from several Chevron employees.

Responding to Mr. Scliar's assertions, Kurt Glaubitz, a spokesman for Chevron, said Friday in a statement: "We are working with all appropriate agencies to resolve the issue. We have provided all available resources to manage the
Mr. Glaubitz said that Chevron had “accommodated all requests for information in a timely manner,” and that the “situation is largely resolved.” He said that Chevron was told by Petrobras, the national oil company and Chevron’s partner in the affected area, the Frade field, of the spill on Nov. 8, and that Chevron found oil seeping from the ocean floor the next day.

Several Brazilian government entities monitoring the spill, including the National Petroleum Agency, said Friday in a statement that Chevron had achieved a “substantial reduction” of the oil seepage in recent days.

Mr. Glaubitz said that the volume of the sheen on Friday was estimated at about 18 barrels.

Earlier in the week, Chevron estimated that the spill involved 400 to 650 barrels of oil from its Frade field, in waters about 3,800 deep. (The BP oil spill involved nearly five million barrels.) Mr. Glaubitz said Chevron was planning to conduct an internal investigation, and would cooperate fully with the authorities.

Marina Silva, a former environment minister and presidential candidate, said in a telephone interview that the spill served as a warning as Brazil moved ahead with exceedingly complex projects to produce oil from its “pre-salt” discoveries, beneath waters almost 10,000 feet deep and thick layers of salt, sand and rock.

“This event is a three-dimensional alert to the problems that may occur,” Ms. Silva said. “This certainly does not smell good.”

Despite Chevron’s assertions that the problem was contained, it faced mounting criticism from various other quarters in Brazil. Legislators said they would summon Chevron officials to appear for questioning. And here in Rio, where Brazil’s energy industry is largely based around Petrobras, activists from Greenpeace emptied black ink on Friday in front of Chevron’s headquarters to protest the spill.

Carlos Minc, the top environmental official for the state of Rio de Janeiro, said the spill was “much bigger” than Chevron’s estimates.

Speaking on the Globo television network, Mr. Minc said that the authorities would “demand compensation” for any damage done to fishing or wildlife.

Several Brazilian news media reports referred to information from SkyTruth, an environmental group in the United States that uses satellite images to track oil spills and other accidents. John Amos, the group’s president, said he estimated that the spill was perhaps 10 times larger than Chevron’s estimates, meaning it extended over about 918 square miles.


GIBRALTER
NOVEMBER 20 2011.
CORROSION CAUSED FATAL FUEL TANKS EXPLOSION AT GIBRALTAR PORT

An independent report commissioned by the Gibraltar government into the fuel tanks explosion at the port at the end of May gives the direct cause as corrosion perforations in the roofs of the two tanks. A Spanish worker died from the serious burns he suffered in the explosion.

The report by Capita Symonds reveals more than 20 perforations in Tank No. 1 and more than 40 in Tank No. 2, ‘all of which had been caused by long term corrosion, wastage of the steel.’ The Gibraltar government said in a press release on Thursday that these holes allowed flammable vapour to escape from the tank and into the atmosphere. The escaping vapour ignited when the welder struck an arc while welding a pipe to the guardrail of the roof of Tank No. 1, and this then caused the vapour in the roof void to also ignite.

The flash then spread to Tank No. via pipe work on the top of each tank.

The report also notes that the perforations had been identified but had not been repaired.

The report’s main conclusion is that, before the explosions, the integrity of both tanks would have been breached by the many corrosion perforations in their roofs and that neither would have been hermetically tight.

The sullage plant facility at Gibraltar port is operated by Nature Port Reception Facilities, and it’s understood that their licence is to remain suspended until the government considers its decision on the matter. The operation of the plant in its present location will also be subject to a detailed review.

Tank and Petroleum Use Mishaps

USA, WASHINGTON DC
NOVEMBER 21 2011.
CONNOLLY INTRODUCES BILL TO CRACK DOWN ON LEAKS AT TANK FARMS
Fredrick Kunkle

U.S. Rep. Gerald E. Connolly (D-Va.) has returned to an issue that not only hits close to home but also long ago put him on a path to politics: leaky oil tanks.

Last week, Connolly introduced a bill that would require the federal government to shut down any petroleum storage facility that repeatedly leaks oil in a residential area or contaminates its groundwater.

The Protecting Neighborhoods From Oil Pollution Act of 2011, filed Nov. 15, would modify the Federal Water Pollution Control Act by requiring the closure of any plant that is within one mile of 100 or more dwellings and has had two or more discharges within a 10-year period.

The measure also would close any oil storage facility that causes groundwater contamination affecting 100 or more dwellings. The bill, H.R. 3426, would require the facilities to close even if the discharges resulted from an act of God, war or negligence by the federal government.

Although the proposed law would affect any tank farm in the United States, Connolly’s bill takes aim at a storage depot in his back yard: the Pickett Road Tank Farm in the eastern part Fairfax City, which has been fueling tanker trucks since the 1960s.

In 1991, Connolly was president of the Mantua Citizens Association when a large, underground spill from the tank farm seeped into his Fairfax County neighborhood, according to a Washington Post account at the time. There have been other leaks, including one in January 2010 that spilled more than 7,000 gallons of diesel fuel on the premises.

This year, Virginia’s General Assembly, pushed by Sen. J. Chapman “Chap” Petersen (D-Fairfax) and Del. David L. Bulova (D-Fairfax), moved to tighten regulations on the above-ground storage depot. A law signed by Gov. Robert F. McDonnell (R) in May requires that all tank farms follow current safety codes, such as ensuring that their tanks have double hulls.

But one of the companies with operations at Pickett Road suggested that Connolly’s bill might go too far.

“I think it’s important the environment be protected and people’s neighborhoods need to be protected, but if you closed it down you’d also have to deal with how you distribute motor fuels in Northern Virginia,” said Sam Whitehead, a spokesman for Colonial Pipeline, which operates a pipeline at the tank farm.

Five companies — Citgo, a Houston-based petroleum company; Motiva, a Houston-based venture that is jointly owned by Shell Oil and Saudi Arabia Refining; TransMontaigne, a Denver-based fuel supply firm; Buckeye Partners, a publicly traded pipeline company headquartered in Houston; and Colonial Pipeline — use the site, said the city fire marshal, Andrew S. Wilson.

Wilson, whose office is charged with inspecting the depot, estimates that the tank farm supplies about 40 percent of the gas used by the region’s service stations.

Wilson said workers have recovered nearly 7,500 gallons from the Jan. 28, 2010, leak of diesel fuel from TransMontaigne’s terminal. The leak was caused by a rupture in underground piping, and none of the spillage left the site, Wilson said. The underground piping has been replaced with above-ground pipes that are easier to inspect.

Wilson said the state’s Department of Environmental Quality recently formed an advisory panel, of which he is a member, on implementing the new Virginia law.

A spokeswoman for Buckeye Partners said the company would not comment on the measure. Calls to other companies that use the terminal were not returned.

Tank and Petroleum Use Mishaps

USA, LA, DEQUINCY
NOVEMBER 22 2011.
VANDALS TARGET BEAUREGARD OIL WELL, CAUSE SPILL
Beauregard Parish sheriff's officials responded early Sunday to a vandalism call from an oil-well site off Highway 389 near DeQuincy. The caller said that someone vandalized the oil site, creating a major spill. Sources say 220 barrels were spilled. Environmental issues are not expected since sites like these are normally encircled by a berm. Hazmat teams were called out to clean up the oily mess. Midstates Petroleum representatives have not commented on the spill.

USA, CA, TORRANCE
NOVEMBER 22 2011.
CLEANUP AT CARSON’S CAROUSEL HOUSING TRACT STILL STALLED AFTER 2 YEARS
More than two years after oily sludge was discovered trapped in the soil several feet below Carson's 50-acre Carousel housing tract, plans to clean up the mess are still moving slowly.

The bureaucratic process, beset by delays and weighed down by demands from numerous regulatory agencies, is frustrating residents who occupy the 285-home community.

"How much more does anyone think we can take?" Barbara Post, president of the Carousel Homeowners Association, wrote in an email. "Our lives have been turned upside down, we are between a rock and a hard place, we are trapped in here. We are stressed and so frustrated."

Work on the final sitewide cleanup could be months - or even years - away. The next step is a test on three to six homes that will analyze several methods to determine the best way to go about removing and replacing contaminated soil.

That pilot plan is finished and awaiting final approval from state regulators. Once given the OK, work should begin within a few weeks.

That phase is set to take 120 days but will first require homeowner approval.

Residents are involved in an ongoing lawsuit against Shell Oil Co., which operated an oil tank farm on the property from the 1920s to the 1960s and caused the existing problems. That suit is being litigated by Girardi Keese, the firm that famously won a case against Pacific Gas and Electric for contaminating drinking water in Hinkley, Calif.

That case was dramatized in the 2000 feature film "Erin Brockovich."

Tom Girardi, who represents the residents, has argued that Shell should immediately relocate them and compensate them for their homes. He has argued that the contamination is more dangerous than state officials have acknowledged.

"We have more testing of the Carousel stuff than I've ever seen in my life," he said. "We have everything we need to show that this place is not livable. No question about it. Shell even put out a memo that says not to let your children dig in the backyard. This area is not fit to have a family living in it."

State environmental regulators have said that testing, which is ongoing and includes four phases of soil and air monitoring, has revealed little risk to human health.

"We've found problems below the houses but they are not affecting the air inside the house," said Gene Freed, program manager for Shell Oil Products' Environmental Services division.

Contamination is also unevenly spread, Freed said. Testing will determine where cleaning will take place.

The Los Angeles Regional Water Quality Control Board - the agency charged with approving cleanup plans - ordered Shell to clean affected soil to 10 feet deep, and to possibly remove concrete reservoirs left in the ground when the tank farm was demolished and homes were built at the site in the late 1960s. It sits north of Lomita Boulevard between Marabella and Panama avenues.

Freed said the pilot program will give the company an opportunity to determine which of three methods of removing the soil and debris works best.

One way would be to dig narrow, deep holes and remove concrete with backhoes. Another would involve shoring trenches with material to keep dirt from falling in on workers who will climb in and dig out the debris. A third method involves digging a huge hole that progressively gets smaller with depth in order to keep the walls from falling in on workers.

Once the test plan is completed, Shell officials must submit a final work plan to the water board for approval.

Freed said four rounds of soil and air tests have been taking place at the Carousel tract since last year in an effort to determine whether hazardous methane and hydrocarbons from underground oil are seeping into the air inside people's homes.

771, 772, 773, 774, 776, 777, 778, 779, 780, 781, 782
However, Shell officials said that while 90 percent of the homeowners have allowed testers to check the soil around their houses, only about 15 percent have permitted an extensive indoor air sampling test that requires them to leave the house for a day while testers remove all chemicals in the home and leave machines to monitor for any and all hazardous particles.

"The testing of the inside of our homes means packing up all kinds of items. (They) go through our drawers and closets to make sure we haven't overlooked anything. We have to board our pets and then pack up and go to a hotel," Post wrote in an email. "We do not like it but I am not aware of any refusals."

Shell, state environmental regulators and residents' attorneys are at an impasse about the level of risk to human health. While Shell officials continue to argue that more testing is needed to determine if there is any immediate hazard in the air inside homes, Girardi said that they are simply stalling to complete work.

"We have benzene coming up in the cement grooves of patios," Girardi said. "This is an abandoned oil field with nothing but benzene and other products harmful to people. I think that the water board has their rules and the people have theirs.

"Shell is the most miserable, rotten defendants we've ever sued. The law says you can't pollute or expose people to benzene and arsenic. That's what the law says."