

# 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/>

## **AUSTRALIA, NEW SOUTH WALES, ULADULLA**

**MAY 26 2011.**

### **MAN CRITICALLY HURT IN OXY-WELDER BLAST**

Police and WorkCover are trying to establish the cause of an explosion at Narrawallee, on the New South Wales south coast, which has left a 35-year-old man in a critical condition in a Sydney hospital. Police say the man was using his oxy-welder on a 44-gallon drum in a garage in Ross Street late yesterday morning when the explosion occurred. They say the man appears to have been struck by the lid of the drum as it exploded, the lid was found in the driveway of a house three doors down. The man was taken to Milton Hospital with a fractured skull, severe facial and head wounds and extreme blood loss. He was airlifted to Sydney's Royal North Shore Hospital for specialist treatment last night.

<http://www.abc.net.au/news/stories/2010/05/27/2910764.htm>

## **USA, N.J., BAYONNE**

**MAY 26 2011.**

### **FIRE REPORTED INSIDE BAYONNE CHEMICAL PROCESSING FACILITY**

*Peggy McGlone and Tomás Dinges*

A fire erupted tonight inside the International Matex Tank Terminal, a chemical processing facility in Bayonne, sending black smoke into the sky and forcing the brief closure of a nearby highway and bridge.

The fire broke out shortly before 7:30 p.m. at the 520-acre facility near the Bayonne Bridge at a switching station. None of the facility's 620 tanks storing petroleum and specialty chemicals were involved in the blaze.

Bayonne Public Safety Director Jason O'Donnell said there was no need for alarm and that no chemicals were released.

The fire was electrical, no chemicals were involved at any time, he said. Eight employees were at the plant, but no injuries to them or police and fire responders were reported, he said.

O'Donnell said the fire appeared to originate from a switching station where the power from the plant transfers to lines where utility companies can access it, he said. "One of the systems failed, causing some kind of electrical overload," he said, adding the overload probably caused the minor explosion heard by nearby residents. "This is a regular fire, just on a bigger scale."

Firefighters originally hesitated spraying the fire with water because they were unsure if it was an electrical fire, which is why residents reported seeing so much smoke, he said.

Traffic was shut down for about a half-hour on Route 440 near the facility and New Jersey-bound traffic was halted on the Bayonne Bridge, which connects Staten Island and Bayonne. The bridge was reopened around 8:30 p.m., authorities said.

Pedro Martinez, who lives across from the site, said he was in his kitchen when he heard what sounded like an explosion.

"The black smoke was really wide. You couldn't see anything for a while until the wind started blowing," Martinez said.

After the smoke dissipated, Martinez said, the flames were 25 feet high.

Across Route 440, residents also said they heard what sounded like an explosion. One thought it was a tanker

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truck, another thought it was a car accident.

"We were on the porch and it was just like ba-boom," said Jillian Pena, 18. "And then I heard like a rumble."

Pena climbed the berm that borders Route 440 and saw thick black smoke filling the air.

Police officers told them to go back into the house.

A privately held company founded in 1939, IMTT owns and operates 12 bulk liquid storage facilities at 10 marine terminals in North America. Its total storage capacity is 42 million barrels.

IMTT handles and stores petroleum products as well as vegetable and tropic oils, renewable fuels and chemicals, according to the company's website. It stores about one-third of all bulk liquid in New York Harbor, and about two-thirds of bulk liquid in the lower Mississippi River, another key U.S. port. An affiliate company, Oil Mop LLC, offers environmental services, including spill remediation and tank and pipeline cleaning. Headquartered in New Orleans, the company employs between 100 and 250 people.

According to the company's website, the Bayonne facility is the second largest of its terminals, behind the 1,000-acre site in St. Rose, LA, just west of New Orleans. The Bayonne terminal stores refined petroleum products and specialty chemicals.

[http://www.nj.com/news/index.ssf/2011/05/fire\\_reported\\_at\\_bayonne\\_power.html](http://www.nj.com/news/index.ssf/2011/05/fire_reported_at_bayonne_power.html)

## **USA, WYO, SHERIDAN**

**MAY 27 2011.**

### **FUEL TANK FLOATS INTO YARD**

*Maryjo Johnson*

Sheridan Fire Marshall Brian Songer issued a media release indicating that Sheridan Fire-Rescue {SFR} responded with the Hazardous Material Response Vehicle, Haz-Mat 1, to the 2000 block of Dana Avenue Wednesday morning for mutual aid at the request of the Goose Valley Volunteer Fire Department.

The flooding in Downer Addition on Tuesday brought a large gasoline storage tank from somewhere upstream into the yard of Jacob Dunham at 2046 Dana Avenue. Songer reports that Mr. Dunham had been evacuated the night before, and returned Wednesday morning to find the tank leaking fuel onto his property.

Dunham was able to maneuver the tank to prevent further fuel loss, but the tank leaked an unknown amount of fuel near his home; some had already flooded his basement.

SFR found the basement to have approximately eighteen inches of water. Air monitoring equipment showed there were gas fumes within the structure. As a precaution, Dunham had already shut down the water heater in the basement, and sump pumps were used to discharge the water from the area.

Songer indicates that positive pressure ventilation was also used to clear fumes from the home, and an absorbent boom was placed at the sump pump discharge to recover any gasoline pumped from the structure.

Goose Valley Volunteer Fire Department remained on scene until the home was safe to occupy. Songer says that the owner of the tank and its original location are not known at this time.

<http://www.sheridanmedia.com/news/fuel-tank-floats-yard17006>

## **USA, MI, WHITE OAK TWP**

**MAY 28 2011.**

### **GASOLINE LEAK'S EFFECT OVER LONG TERM WORRIES MANY**

### **NEIGHBORS SEEK ANSWERS FROM COMPANY**

*Melissa Domsic*

Residents are curious just how Marathon Pipeline LLC could have gone from telling them that 126,000 gallons of gasoline leaked from a storage tank in April, to now estimating as many as 462,000 gallons escaped.

Marathon knew the much larger leak estimate would draw questions from those who live nearby, so the company held its second public meeting on Thursday evening at the White Oak Township Hall.

"How did we lose this many gallons? We're just as perplexed as you," Marathon representative Rob Roy told a crowd of about 60 residents.

The plume spans about 300,000 square feet, the equivalent of more than five football fields. So far about 71,000 gallons have been recovered.

Local farmer Marvin Speer reported the leak on April 13 after finding gasoline in a county drainage ditch on his property. The leak resulted from a faulty gasket on a pipe leading to Marathon's tank. Wolverine Pipe Line Co. owns three other tanks on the site.

Officials from Marathon, Ingham County and the Michigan Department of Environmental Quality tried to

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assure residents that the leak remains contained and they're doing what they can to ensure it won't happen again.

Despite those attempts, neighbors expressed worries and frustrations.

"Our basic concerns are still the same," said Kim Straub, who lives near the site. "They're the same as whether it's 126,000 or 462,000 (gallons)."

They have immediate concerns: Is the water, air, soil and plant life that surrounds their homes and farms safe?

## **No problems surface**

So far, tests are showing no signs of contamination to local wells or to soil outside the immediate area of the plume. Air monitoring is ongoing and has not shown any problems, officials said.

And there are more long-term issues.

How will the spill impact their property values? How will Marathon, and Wolverine, for that matter, ensure nothing like this will ever happen again, and how will officials make certain the leak won't manifest years down the road?

"I really worry about five years from now," home-owner Carol Stevenson said. "What's going to happen with my water and my house?"

There weren't clear answers to those questions, and officials say they're still monitoring the issue and getting a grasp on its magnitude.

## **More monitoring**

As for making sure another leak won't occur and go unnoticed again, Roy said Marathon is going to remove underground tanks and expose them above ground and install more advanced monitoring devices.

Wolverine's Jerry Johnson said his company is taking its tanks out of commission this summer and implementing new monitoring procedures.

"We did get some questions answered tonight," resident John Koval said. "I'm still concerned, and I'm still going to monitor how this all progresses."

<http://www.lansingstatejournal.com/article/20110527/NEWS01/105270331/Gasoline-leak-s-effect-over-long-term-worriesmany?odyssey=tab>

## **USA, TN, CHATTANOOGA**

**MAY 28 2011.**

### **WOMAN BURNED IN FIRE AT KANGAROO GAS STATION**

Fire investigators are trying to determine what happened last night when a woman was severely burned in a fire at a gas station in Riverview. The incident occurred shortly after 10 p.m. at the Kangaroo gas station at 1005 Hixson Pike, while a woman and her boyfriend were putting gas in their Jeep Cherokee.

A store cashier told firefighters that he saw fire break out at the pump next to the Jeep, so he hit the cut-off switch to the pump and called 911. The woman's clothes caught on fire, and she screamed for help. The clerk and another employee then grabbed a fire extinguisher and put the fire out.

Captain Anthony Moore with the Fire Investigation Division Moore identified the woman as Samantha Lawrence, 20. When Chattanooga firefighters arrived on the scene moments later, they got Ms. Lawrence to sit down so they could apply dressings to her burns. Captain Moore said she was suffering from 2nd and 3rd degree burns to approximately 30% of her body.

She was then handed over to paramedics with Hamilton County EMS and rushed to Erlanger Medical Center. Hours later, Captain Moore said Ms. Lawrence was airlifted to the Joseph M. Still Burn Center in Augusta, Georgia.

Chattanooga police are assisting with the investigation. Samantha Lawrence is listed in critical but stable condition at the Joseph M. Still Burn Center in Augusta, Georgia.

[http://www.chattanoogan.com/articles/article\\_202252.asp](http://www.chattanoogan.com/articles/article_202252.asp)

## **USA, WYO, RAWLINS**

**MAY 28 2011.**

### **OIL SPILL CONTAMINATES EMIGRANT CREEK**

*Jeremy Fugleberg*

Malfunctioning equipment at an oil well storage site dumped an undetermined amount of crude oil into Emigrant Creek south of Rawlins, the Bureau of Land Management announced Friday.

Melting snow and ice revealed evidence of the spill, which probably took place four months ago, officials said. A piece of equipment that separates water from oil, known as a heater-treater, malfunctioned at a site near the stream, a BLM investigation showed.

716, 717, 718, 719, 720, 721, 722, 723,724, 725, 726

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The spill probably took place within a 24-hour period, said BLM spokeswoman Serena Baker.

Federal and county hazardous material teams have deployed containment booms, known as socks, at three spots in the stream to soak up the oil sheen from the site, located five miles upstream from Teton Reservoir near Bridger Pass Road.

Nadel & Gussman Rockies LLC, which operates the oil well and its storage site, is also pitching in to clean up the pollution, Baker said.

"The company has hired a service company and Thursday they had approximately 20 personnel along Emigrant Creek collecting that contamination," she said. "They have also hooked up a siphon to soak up as much oil as possible."

The company is also deploying additional containment booms, said Mike Newberry, hazmat coordinator for the BLM's field office in Rawlins.

Denver-based Nadel & Gussman voluntarily shut down the well. The company was cited for failing to report the spill and further action is pending, the BLM said. Calls and an email to the company weren't immediately returned.

A "concerned citizen" reported to the spill on Sunday, the agency said. Baker said the information wasn't released until Friday because of consultations with state and federal agencies and the BLM's investigation of the spill.

"I think BLM wanted to make sure they knew the scope before they put this out," she said of the spill announcement.

The spill is located along State Road 71/Carbon County Road 401, approximately 15 miles south of Rawlins and upstream from the Teton Reservoir, which is a popular recreational spot.

The BLM said specialists have walked the waterway above and below the reservoir and found the heaviest contamination on Emigrant Creek. The creek flows into Little Sage Creek, but the BLM found no evidence the contamination had traveled upstream into Little Sage Creek from where the two creeks meet.

The BLM has collected water samples from Emigrant Creek and the Teton Reservoir, which are now being tested at a laboratory in Laramie, Baker said.

Fishing is still permitted at the reservoir, the BLM said.

"BLM is regularly monitoring the situation," the agency said in a media release.

[http://billingsgazette.com/news/state-and-regional/wyoming/article\\_dc23e8d6-0c3b-5e9d-a71f-0fc6e6d3f833.html#ixzz1QsXBpFgQ](http://billingsgazette.com/news/state-and-regional/wyoming/article_dc23e8d6-0c3b-5e9d-a71f-0fc6e6d3f833.html#ixzz1QsXBpFgQ)

### USA, N.C. CALDWELL COUNTY, HUDSON

MAY 29 2011.

#### HUDSON PLANT SMOLDERS AS INVESTIGATORS LOOK FOR CAUSE OF MASSIVE FIRE

*Diana Rug*

A chemical plant exploded into a fireball Saturday afternoon, closing down a major highway and forcing evacuations of nearly 750 people from their Caldwell County homes.

A storage area at RPM Wood Finishes Group off U.S. 321 in Hudson caught fire just before 3 p.m., according to witnesses. The plant, home to three companies -- including Chemical Coatings Inc., Mohawk Finishing products, and Guardian Protector products -- makes products like spray paints and furniture coatings. It houses several highly toxic chemicals used to make its products.

Hudson firefighters got the call about the fire at 3:07 p.m., and were on the scene in six minutes, according to Hudson Fire Chief Tommy Courtner. They were eventually joined by at least 14 other agencies, from as far away as Wilkes and Mecklenburg counties. The chemical were their main concern.

"Our biggest threat was the nitrocellulose, which is very volatile," said Courtner. "It's kind of like gunpowder." Nitrocellulose is also sometimes called flash paper.

Courtner said the chemical, when burned, can cause explosions and release toxins in the air. Those toxins can make eyes burn and make it difficult to breathe.

Firefighters and HazMat crews worried the fire, which started in the storage area on the back of the property, could spread to other parts of the complex containing more potentially explosive chemicals. They closely monitored weather reports to see where winds were carrying the flames and the thick black plume of smoke rising from the property.

"When we saw the wind was shifting, we were afraid we were going to get into the main RPM (offices)," said Courtner. "And if that would have happened and we would have gotten into the tank farm right here behind you, they would have had major problems and that would have escalated into a bigger picture for us."

The plant also contained xylene and acetone, but Courtner said those chemicals were not as big of a concern.

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Firefighters said they got the fire under control at 6:01 p.m.

The fire destroyed the storage area, but left the rest of the plant untouched. Caldwell County Sheriff's spokesman B.J. Fore said 300-350 people work at the plant, and their jobs will not likely be impacted by the fire. Two nearby furniture upholstery plants, however, were destroyed.

Chief Courtner said barrels sent airborne by the explosions landed on the upholstery plants and set them on fire. The names of the two plants were not immediately available Saturday night.

Melissa Steelmon witnessed saw the barrels flying into the air as she passed by.

"We couldn't believe it .. just couldn't believe it happened," said Steelmon. "We just hoped nobody got hurt."

U.S. 321 was closed between Granite Falls and Lenoir for more than six hours while emergency crews fought the fire. Law enforcement officers went door-to-door for a mile in every direction around the plant, evacuating homes. They also evacuated more homes up to two miles downwind of the plant because of concerns about chemicals in the air.

The Red Cross set up two shelters at Granite Falls Recreation Center in Granite Falls, and Mulberry Recreation Center in Lenoir. About 20 people stopped in at the Mulberry shelter, including Amanda Haas and her family.

"Sure enough we got there just as some of the fire trucks were pulling in and you could see the flames coming out of the black smoke," said Haas. "It was huge – like an inferno."

Haas's mother knew it was the chemical plant, and the family decided to leave. She, her husband, her mother, two daughters, and a cousin waited at the shelter until the evacuation order was lifted around 8:45 p.m.

Investigators are working to find the cause of the fire. They're grateful the plant was closed Saturday, so there were no serious injuries. Two firefighters had to be treated for the heat, but they are okay.

<http://www.wcnc.com/news/Chemical-plant-fire-forces-evacuations-in-Caldwell-County-122778109.html>

## **RUSSIA, KAMCHATKA, PETROPAVLOVSK-KAMCHATSKY**

**MAY 30 2011.**

### **3 DEAD, HOMES EVACUATED IN RUSSIA FUEL TANK EXPLOSION**

Three workers died at a Russian Far East oil storage facility after a fuel reservoir exploded, officials said Monday.

The blast took place in the Pacific Ocean port Petropavlovsk-Kamchatsky, on the east coast of the Kamchatka peninsula.

The three male victims were welders working inside an empty fuel storage tank still containing trace oil and gas fumes, according to news reports.

The explosion in the underground reservoir broke windows of residences hundreds of metres from the storage site. A evacuation of nearby homes was in progress, Interfax reported.

Fires were localised and there was no threat to surrounding fuel storage tanks, said Yulia Samtsova, a Russian Emergency Situations Ministry (RMES) spokeswoman.

Welding in a location potentially containing explosive fumes is a violation of Russian labour safety protection law. Police were investigating why the welder team was working inside a poorly-ventilated storage unit.

Oil and gas production is a key economic driver in resource-rich Russia. Poor enforcement of safety standards sometimes make work in the industry dangerous, with equipment failures and accidental explosions the most common causes of fatalities.

[http://www.monstersandcritics.com/news/europe/news/article\\_1642318.php/Three-dead-homes-evacuated-in-Russia-fuel-tank-explosion](http://www.monstersandcritics.com/news/europe/news/article_1642318.php/Three-dead-homes-evacuated-in-Russia-fuel-tank-explosion)

## **USA, LA, ACADIA PARISH, CROWLEY**

**MAY 30 2011.**

### **OIL SPILL SEEPING INTO CROWLEY WATERWAYS**

*Chris Welty*

In Acadia Parish, crews are working to clean up an oil spill in Crowley.

The oil began spilling Saturday from an oil storage tank near the intersection of West Mill Street and South Western Avenue, and that oil has made its way into nearby Bayou Blanc.

"We are trying to figure out why nothing has been done," said Patrick Miller a concerned resident.

Residents along Bayou Blanc are outraged. Saturday afternoon neighbors noticed a sheen to the water and a telltale smell in the air.

"It smelled like oil. There's no oil field around here and there's no tanks that we know of so to see that in our

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backyard. It's out of the ordinary," said Miller.

Less than one mile away, a storage tank is leaking oil into drainage canals that connect into Bayou Blanc and beyond the Crowley city limits to the Roller Road bridge.

Miller believes the oil could end up in other bodies of water if boom isn't set up soon. "This actually ends up going to Bayou Plaquemine which then connects to the Mermentau River, and then the Gulf of Mexico. It's a pretty bad oil spill."

The oil is so thick that when you stir it with a stick, it doesn't break up very much and it cakes onto the stick. This is something that concerns residents.

"We've got wood ducks and birds, fish, and everything else. with oil on top of that, they can't breathe and they are going to start dieing. it's just not a good thing," said Miller.

It's unknown how much oil actually spilled, but the Department of Environmental Quality is planning on testing the air and water, as well as laying boom to prevent the oil from spreading any further. Investigators from the Environmental Protection Agency are in Crowley and are working with the party possibly responsible for the spill to begin clean-up.

"I think now they are starting to wake up and realize hey we need to do something and contain it as fast as we can to get it cleaned up."

A clean up process that residents wish could have started sooner.

If you do see oil, the D.E.Q. advises that you do not touch it and to call law enforcement or the DEQ offices immediately.

<http://www.katc.com/news/oil-spill-seeping-into-crowley-waterways-10pm/>

## **USA, FLA, STUART**

**MAY 31 2011.**

### **FIRE DAMAGES BIOFUEL PLANT IN STUART SUNDAY NIGHT**

*James Kirley*

Fire broke out Sunday night in a building where used vegetable oil is refined into biofuel for diesel engines, but a fire official said the blaze did not involve the oil or fuel that is produced from it. Firefighters were called to Viesel Fuel, 4401 S.E. Commerce Ave., Stuart, shortly after 7 p.m., when a passing Martin County sheriff's deputy reported seeing smoke coming out of the building, said Doug Killane, spokesman for Martin County Fire Rescue. The business had been shut down for the long Memorial Day weekend and nobody was occupying the building at the time of the fire, Killane said. Firefighters battled thick smoke and intense heat inside the metal building, Killane said. No injuries were reported. "It was a structural fire that had nothing to do with what's manufactured at the business," Killane said. A state fire marshal was on scene Sunday night to determine the cause of the fire. Killane estimated at least \$30,000 damage was done to the building — possible more, if the metal beams sustained damage. Stuart-based Viesel Fuel converts waste vegetable oil from area restaurants into a high grade biofuel, which company officials say burns cleaner and is less expensive than No. 2 petroleum diesel fuel.

<http://www.tcpalm.com/news/2011/may/29/fire-damages-biofuel-plant-in-stuart/>

## **GIBRALTAR**

**JUNE 1 2011.**

### **PASSENGERS INJURED AS CRUISE SHIP IS ROCKED BY BLAST IN GIBRALTAR FUEL TANK**

*John Honeywell*

Twelve passengers on board one of the biggest cruise ships in the world were injured when an explosion in a fuel storage tank rocked the port of Gibraltar.

Independence of the Seas, carrying more than 4,000 passengers, felt the full force of the explosion, according to reports on Gibraltar Radio. The ship made an emergency departure, pulling up its gangways and moving further out at sea.

The cruise terminal on the North Mole was immediately evacuated and two passengers were left behind.

Dense black smoke billowed from the blazing oil tank after the blast, which was felt up to a mile away. Police have not ruled out a terrorist involvement, but the more likely cause appears to have been welding work which was being carried out on the top of the tank.

A Spanish workman was seriously injured and after being taken to a local hospital was transferred to a specialist unit in Seville. A policeman received burns while attempting to rescue him.

Flights in and out of Gibraltar airport were temporarily suspended as the tank continued to burn out of control

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well into the night.

A spokeswoman for Royal Caribbean Cruise Lines said today that the 12 injured passengers - 11 of them from the UK - sustained minor injuries including burns, abrasions and a dislocated finger. They have been treated by the medical team on board.

The two passengers who were still ashore when the explosion happened were not injured. The cruise line is arranging for them to rejoin the ship on Thursday in France.

Independence left Southampton on Saturday for a 14-night Mediterranean cruise. It arrived in Gibraltar, the first port of call, this morning and was due to depart at 4.00 pm, about the same time as the explosion. It is now continuing with its scheduled itinerary to Cannes, Barcelona, Palma, Alicante, Lisbon and Vigo. Of the 4,153 passengers on board, 3,894 are from the UK and Ireland.

Cruise ship Ocean Princess arrived in Gibraltar this morning. Instead of tying up, the ship was anchored a few hundred yards off-shore and passengers were taken ashore by tender.

A video posted to YouTube by a Gibraltar known as "Mendenge" shows Independence of the Seas pulling out of port as the fire raged.

<http://blogs.mirror.co.uk/captain-greybeard/2011/05/cruise-ship-hit-by-gib-explosi.html>

## **USA, ILL, MORRIS**

**JUNE 1 2011.**

### **MORRIS EXPLOSION THREAT CAUSES EVACUATION**

More than 100 residents were evacuated from their homes Sunday afternoon when a power outage opened up the possibility of a tanker explosion at the Lyondell Bassell chemical plant in Morris.

During severe thunderstorms Sunday, lightning hit the portion of the plant that produces electricity, said Bob Coleman, chief of the Morris Fire Protection and Ambulance District. This ultimately caused the pressure in a tank to increase, causing officials to fear an explosion. Morris is about 22 miles east of Ottawa along Interstate 80.

"They lost all power affecting the switch that transfers electricity back to ComEd, so the whole plant went down, and the compressors wouldn't work to keep the pressure in the tanks at a certain (level)," Coleman said.

At that time, a fire did occur, but the plant fire department was able to extinguish it. A minor explosion in the furnace area and another fire also broke out during the incident, but those were also handled by the plant's firefighters.

There has not been an evacuation at Lyondell since 1989, Coleman said, but in 1989 it was done twice. Surrounding plants were also shut down during the incident.

The reverse 9-1-1 calling system was utilized to call area residents to evacuate. Emergency officials also went to the neighborhoods to encourage people to leave. Residents were evacuated to the Minooka Fire Station, No. 1, and later moved to the Minooka Bible Church.

"We used the reverse 9-1-1, which is a lifesaver for those people," Coleman said.

The community evacuation was lifted at about 7 p.m., when all vehicle, rail and river traffic in the area was allowed to resume normal travel and residents were allowed to return to their homes. The incident was deemed over by 7:56 p.m., although the Grundy County Emergency Management Agency and local officials continued to monitor the situation.

Coleman did not know as of presstime how many fire departments assisted on the call, but said more than 75 firefighters were on scene, plus 25 to 30 more covered area stations while they worked on scene. The Division 19 Task Force was activated, said Coleman, which means equipment and a fire chief were brought in from other stations to cover local stations since all the local equipment was at the plant.

"The main thing is no one got hurt and the plant is back in a safe atmosphere," Coleman said.

A damage amount is not yet available. The plant was not to be in "100 percent" working order Monday, Coleman said.

<http://mywebtimes.com/archives/ottawa/display.php?id=433046>

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## USA, S.C, NEWBERRY

JUNE 1 2011.

### PREGNANT WOMAN, 2 TEENS INJURED BY TRASH FIRE

#### DOUSED WITH GASOLINE AND VAPORS CAUSED A FLASH FIRE AND MINOR EXPLOSION

A pregnant woman is still in the hospital following an accident while burning garbage in Newberry County.

The incident took place on Clark Street in Whitmire Monday night.

Newberry County deputies say a man tending the fire doused it with gasoline and the flames spread, injuring four people including the woman.

Tuesday, News19 spoke with two teenagers who were there when the fire took place. They say they were just hanging out while a friend burned his trash when he added fuel to the smoldering fire and it exploded.

"It was like this big old fireball just whew like it was just a real big fireball it's nothing like I've never seen in my life before I didn't think it was coming," said Dominique Holmes. "I'm not going to lie it was scary to me."

Newberry Sheriff Lee Foster said Holmes and two other people have been treated for burn injuries, including 19-year-old Desiree Geyer, who is eight months pregnant, and a 13-year-old who is still at the Burn Center in Augusta, Georgia.

Foster said one person sprayed gasoline onto the fire that was almost out.

"The vapors caught on fire and there was a flash fire or a minor explosion," Foster said. "Pouring gas directly on a fire is bad enough but when you put it in a spray form you create more vapors that way which creates a wider flash field."

The sheriff said all the victims were conscious and alert on the scene. Holmes got a second degree burn on his leg, and said his friend Desiree got burnt protecting her three-year-old.

"The reason she got burnt is because her baby was sitting right beside her when the fire came she turned her back to save her baby," Holmes said.

Holmes's younger brother barely escaped the explosion.

Sheriff Foster said he doesn't expect charges to be filed in this incident.

<http://www.wltx.com/news/article/138610/2/Pregnant-Woman-2-Teens-Injured-by-Trash-Fire->

## GIBRALTAR

JUNE 2 2011.

### GIBRALTAR EXTINGUISHES FUEL TANK BLAZE

Firefighters put out a huge blaze on the British territory of Gibraltar on Wednesday, a day after a fuel tank exploded near a cruise ship and injured at least 14 people, officials said.

They battled through the night and finally extinguished the flames shortly before dawn.

An oil tank explosion probably caused by a spark from welding operations shook the Rock on Tuesday afternoon, nearby the giant cruise ship Independence of the Seas.

The inferno, which sent dense black smoke billowing across the port, later spread further when the heat and flames caused a second nearby fuel tank to explode, the authorities said.

"There was an explosion and full collapse of the second tank," said a senior fire service spokesman.

Firefighters had focused on extinguishing the fire and cooling the adjoining tanks. But when the second tank went up, it resulted in a "much larger fire", a government spokesman said.

Land-based firefighters had to withdraw and battle the blaze from the sea, he said.

Initial reports indicated two workers were welding on top of the tank, which contained a mixture of water and used oil, when it exploded, the government said.

One of the welders, a 40-year-old Spanish national, suffered life threatening injuries and was taken to a Gibraltar hospital and then a specialist burns unit in a hospital in Seville, Spain.

The other worker, a 25-year-old Spaniard, suffered minor injuries and was in the Gibraltar hospital.

Gibraltar's government said 12 passengers onboard the 'Independence of the Seas' suffered injuries, mostly minor burns, but one passenger suffered a fractured shoulder.

The cruise ship had arrived in Gibraltar Tuesday morning and had been scheduled to leave the same afternoon.

The tank exploded 25 minutes before the ship's scheduled departure, and the vessel had to abandon its berth near the tank in an emergency departure. "The ship did not suffer serious damage," said a government spokesman.

<http://www.vancouver.sun.com/travel/Gibraltar+extinguishes+fuel+tank+blaze/4873138/story.html>

## USA, HI, HONOLULU

716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726



# Tank and Petroleum Use Mishaps

**JUNE 2 2011.**

## **TOXIC WASTE IN HAWAII**

### **HOW BROWNFIELDS AND CONTAMINATED SITES AFFECT DEVELOPMENT**

*Dennis Hollier*

Thirty years after it shut down, the old Gasco site in Iwilei is still a vacant lot. For generations, it converted heavy petroleum into synthetic gas and light oils. Now, its storage tanks, thermal cracker unit and pipelines are long gone and, in their place, is a field of gravel and weeds.

All that remains of the old gasworks is its contamination – a vast underground reservoir of viscous tar and toxic aromatics, like benzene, toluene and ethylbenzene. Indeed, the Gasco site is one of the most contaminated sites in the state, and the technical and legal consequences of that contamination are why the land sat vacant for more than three decades. Even so, three years ago, Weston Solutions, an international environmental engineering company, bought the property – and all the liability that goes with it.

That's because the four-acre site is prime real estate. It's near downtown, the harbor, airport, highways and the planned rail line. Weston plans to clean it and redevelop it, but three years after buying the land, Weston's project still faces technical glitches and regulatory hurdles, and has become a symbol of Hawaii's contaminated lands problem.

#### **Distribution of toxic sites**

Here's the good news: Hawaii is much less affected by contaminated sites than most Mainland states, according to Fenix Grange, manager of Site Discovery, Assessment and Remediation for the state Department of Health. That's largely because we haven't had as many heavy industries as in the Rust Belt or the petrochemical regions of the Gulf Coast. Also, according to Grange, it's rare for contaminated properties here to sit idle.

"In Hawaii, because land is so valuable, most large, urban properties that have contamination on them get developed anyway," she says. "People just make the cleanup and control costs part of their redevelopment plans," Grange says.

Nevertheless, industrial areas like Iwilei, Campbell Industrial Park, Mapunapuna and Kakaako are heavily contaminated, which complicates land sales and development. The main issue, of course, is liability for the required cleanup, which can mean millions of dollars in uncertain expenses.

Beyond these large, well-known industrial sites, there are hundreds of anonymous, smaller sites: dumps, auto-repair shops and old underground tanks at gas stations. Former sugar and pineapple plantations have dozens of contaminated sites that were once used for fertilizer storage or pesticide mixing.

The state Department of Health has investigated more than 1,700 sites of potential contamination, nearly half of which merited further action. "We have about 800 sites in our database that have current or historic contamination that are either still dirty, or were dirty and have been cleaned up," Grange says.

#### **Joint and several liability**

Hawaii's rules on toxic sites are mostly derived from the U.S. Environmental Protection Agency's regulations. "In federal law," Grange says, "liability is 'joint and several,' which means anybody associated with the contamination is in the chain of responsibility. The regulators look first to the party that actually caused the contamination. Then they look to the current property owner. But anyone associated with the contamination is in the chain of responsibility." That means, the current property owner is on the hook, but so is the previous owner.

An excellent example is Weston's other Oahu project, the old Chem-Wood facility in Campbell Industrial Park. From 1973 to 1988, Chem-Wood, a Campbell Estate tenant, used copper chromate arsenic to pressure-treat lumber there. Campbell sold the property to Chem-Wood in 1989, but, under duress from the EPA to clean up the site, Chem-Wood went bankrupt in 1997, leaving behind tanks of the toxic chemical. In 2008, vandals broke in, spilling 300 pounds of the copper chromate arsenic. Arsenic levels in the soil are now some of the highest in the state.

In the intervening years, other responsible parties have disappeared. The most recent owner, a Japanese businessman who also faced pressure to clean up, walked away from the property, taking haven from the EPA in Japan. His predecessors went bankrupt. But bankruptcy is not an option for the Campbell Estate; its pockets are too deep. Until it sold the site to Weston Solutions, it was stuck with all the liability for the cleanup, even though it hadn't been the owner of the property for more than 20 years. That's the principle of "joint and several."

The uncertainty and risk created by joint and several liability has made it difficult to redevelop parcels that are contaminated – or are even suspected of contamination. As a result, the EPA and state regulators have devised programs intended to ease liability for buyers that want to redevelop a contaminated property. The state's Voluntary Response Program, for example, provides owners and purchasers with technical assistance, quicker oversight and some relief from future liability.

"With the VRP," Grange says, "a developer comes in, agrees to characterize a site and take responsibility for

## Tank and Petroleum Use Mishaps

the contamination up to a level suitable for their proposed use, and then they're free from additional liability." She adds that the liability for the remaining contamination doesn't simply go away. "That liability stays with whoever caused the contamination in the first place."

She gives an example from Iwilei: "The site of the Lowe's store has a bunch of petroleum-contaminated soil from the old ConocoPhillips tank farm. Lowe's wanted to build its store there, but it didn't want to assume all of ConocoPhillips' responsibility. So it entered our VRP and agreed to remediate within the property boundaries to a level that was safe and appropriate to build a commercial store. The VRP leaves the remaining environmental responsibility with ConocoPhillips."

Probably the most important program for encouraging the redevelopment of contaminated lands has been the federal Brownfields Program. This law, which was mirrored at the state level in 2009, provides many of the same protections as the VRP. "We have about 20 VRP sites in the state," Grange says. "But with the new Brownfield purchaser law, I think there will be less need for those in the future, because they can get those protections automatically now."

One of the big differences with the Brownfield Program is its funding options. "Right now, we have what's being presented as the poster child for Brownfield," says Mike Yee, one of the principals at the local consulting firm EnviroServices and Training Center. "That's our East Kapolei site, the pesticide-mixing site and surrounding area in Ewa that the Department of Hawaiian Homelands wants to put homes on." Through the Brownfield Program, DHHL is funding some of its environmental assessment costs with a \$200,000 EPA grant. DHHL is also the first entity to use a \$1 million EPA revolving fund administered by the state Department of Business, Economic Development and Tourism. This money can be used for the actual cleanup and paid back after the property has been redeveloped.

"Wow," says Yee. "What a wonderful way to use federal money: to bring that money into our state to investigate and clean up contaminated sites. It's good for the developer, good for the state and, ultimately, good for the community – not to mention the environment."

Weston has created an interesting business model for its Gasco and Chem-Wood projects. Typically, environmental firms are simply consultants or subcontractors; the developer remains liable for the contamination. But Weston bought these properties outright. In effect, Weston has gambled on its expertise in environmental engineering, believing it can purchase properties at a discount, clean them and sell them at a premium. In the interim, though, Weston is the responsible party as far as DOH is concerned. In the lingo of environmental engineers, Weston has bought the liability.

"I'd like to tell you that we're really smart at this," says Dave Griffin, Hawaii Operations Manager, "but we have a card up our sleeve: We buy an insurance policy. We engage insurance to underwrite this risk for us, so if we encounter 50 drums of methyl-ethyl that nobody knew about, we can recover some of our expenditures."

While being the property owner is much riskier, Griffin points out some advantages. To begin with, any upside on the development end of the deal belongs to Weston. And since the company's cleanup agreement with DOH is based upon the end use for the property, Weston can tailor its cleanup process to a specific function, potentially saving money.

There's also the method of payment. Although Weston technically "bought" the property from BHP, the details of the contract are more complicated: The seller pays most of the downstream costs. "Instead of billing for hours," Griffin says, "we get paid up front. So now we're sitting on that money, drawing interest. Financially, that makes a lot of sense."

Rick Smith elaborates: "You get paid for everything up front," he says. "So they (property sellers) pay for the insurance. We don't pay for that. ... The cost of the cleanup, what we actually do in the field, all that's paid up front. All that's part of the calculation." But he notes there's a lot of prelude before the symphony of cash. "That reward, that big lump of money, doesn't just stroll in the front door. There's a lot of work that goes into putting one of these deals together." In this case, the deal took 18 months to arrange.

"It's not for the faint of heart," says Griffin. "The truth is, we're trying to do the right thing here. By redeveloping this property, we get jobs, we get tax base and we get a more vibrant community out of the deal. That's our kind of model. Would we like to make some money at the end of the deal? Absolutely. We found a piece of property that's been sitting vacant for 30 years (the old Gasco site), and it's right next to the highest-selling Costco in the country. We think we've found a little gem here. But, in the end, it's Weston's contamination now."

### Bankers and Consultants

Although a large, international company like Weston Solutions can afford to self-finance its projects, most local companies interested in redeveloping contaminated property will need a lender. And that's just the beginning, says Scott Rodie, environmental risk manager at Bank of Hawaii.

## Tank and Petroleum Use Mishaps

“Banks don’t like uncertainty,” says Rodie. “What we try to do, cooperatively with the client, is help them avail themselves of the experts that are out there.”

That means making sure their clients have qualified environmental consultants and appropriate insurance, and that, overall, they know what they’re getting into.

One problem is figuring out if your advisors are knowledgeable. “It’s unregulated and unlicensed,” Rodie says. “Under federal law and Hawaii Revised Statutes, there are requirements that you have an ‘environmental professional,’ as defined by the rule, perform a Phase-1 (site investigation). But, again, it’s unlicensed. You have nearly nothing to go after” if they get it wrong.

“So it’s buyer beware,” Rodie says. Or, better yet, listen to your banker.

### How Toxic Land is Cleaned

Environmental engineering companies have several ways of cleaning contaminated land, from the most basic method to high-tech solutions.

First, figuring out if there is anything toxic in the ground, what it is and where, can be complicated. Mike Yee, of EnviroServices, elaborates: “How far down does the contamination go? How wide has it spread? What are the actual contaminants and what is the level of the contamination? Then we look at remediation alternatives – what’s the best way to treat it? Normally, there’s not just one way to clean up a site, and there are a lot of factors that go into determining which one you select.”

One option is very basic: dig up the contaminated soil and remove it. Damon Hamura, project manager for EnviroServices, calls it “Bag it and tag it.” With this method, you’re not actually getting rid of the contaminant; you’re just moving it – often to a landfill.

That’s sometimes the only solution, particularly with metals contamination, but it presents its own problems, including moving truckloads of contaminated soil through the neighborhood.

“Sometimes,” Hamura says, “they just put it back on the same site – a kind of reinterment. They dig a pit, put all the contaminated soil in there, then cover it with concrete or asphalt. That’s called ‘encapsulation.’”

This is the strategy being used at the Chem-Wood site in Campbell Industrial Park.

When it comes to cleanup options, Hamura says, “Removal is a pretty short list, but when you get to remedial action, it’s a relatively long list. And it’s getting longer as technology grows.” This is particularly true for petroleum-based contaminants, the prevalent form of soil and groundwater pollution in Hawaii. For example, you have various kinds of bioremediation – basically using petroleum-eating microbes, either natural or introduced – to remove the contaminant. This is often combined with sparging, essentially bubbling oxygen through the groundwater to improve the effectiveness of the bacteria.

A more radical approach is thermal desorption. “Basically,” Hamura says, “you’re heating up the soil, trying to burn off the contaminants. But you also need to capture the vapor that’s produced. Usually, you use this method for organic contaminants. If you have a metals issue, that’s not going to do much for you.”

Often, remediation is an ongoing responsibility. Many properties, especially those that have passed through the VRP or Brownfield Program, require “administrative controls.” These controls might forbid digging or strictly limit the use of the property.

The remediation can also be engineered into the new development. In areas with petroleum contamination, like the Lowe’s and Costco sites in Iwilei, this probably involves the installation of a vapor barrier and a vapor extraction system.

Weston plans a more aggressive approach with the tar and benzene at the Gasco site. “We’re proposing to use in situ chemical oxidation,” says David Griffin, Weston’s operations manager in Hawaii. “That’s pumping 40,000 gallons of diluted industrial-grade hydrogen peroxide into the ground. That treats the contamination. (The byproducts are carbon dioxide and water.) Plus, it destroys the contaminants in place, so we’re not bringing them to the surface, putting them in trucks and hauling them through the local neighborhoods.” This drives the benzene out of the groundwater to a ventilation system on the surface, where it’s burned off. “Then, we do a monitoring program to make sure we’re meeting the levels we signed up for,” Griffin says.

This system is not without risks. Last September, the flame arrester failed on the thermal oxidizer – basically a big furnace – and the resulting backflash caused an explosion in the PVC ventilation system, which ignited a small fire in a benzene vent. No one was hurt, but the fire department arrived in HazMat gear and took two hours and 200,000 gallons of water to put out the tiny fire. Nevertheless, Weston is confident in its system – early tests suggest it’s already lowered the benzene level 60 percent – and only awaits Department of Health approval to expand from the current test grid to the whole site.

<http://www.hawaiibusiness.com/Hawaii-Business/June-2011/Toxic-Waste-in-Hawaii/>

# Tank and Petroleum Use Mishaps

**USA, MA, SHREWSBURY**

**JUNE 2 2011.**

**OIL SPILL A COSTLY MYSTERY FOR TOWN**

**OLD TANK LEAKED NEAR WARD HILL**

*James O'Brien*

Shrewsbury police and state environmental officials would like to find out who is responsible for an oil spill from an illegally dumped 1,000-gallon tank that was left some time ago on town property near Ward Hill.

The spill, which occurred at the site of a former waste-water treatment plant, was discovered April 30 and has cost \$32,500 so far to clean up. Fire Chief James Vuona said finding answers about the spill will be difficult.

"There was very little if any evidence to work with," Vuona said in an e-mail. "The tank was very old, rusted, and had no markings, name plates, or serial numbers, to my knowledge."

The investigation is under the jurisdiction of Shrewsbury police and state environmental officials.

Ed Coletta, spokesman for the state Department of Environmental Protection, said the likelihood of catching whoever dumped the tank seems small.

"Without obvious markings on the tank itself, the town could look to talk to people in the area," he said. "But it's not something that we'd be likely to follow up on."

Police Chief James Hester said his department would assist state environmental officials if a lead emerges.

As for why the tank ended up out in the woods, Coletta could only speculate.

"Occasionally there are issues with people pulling out old oil-heat systems," he said. "What do you do with the tank? That might be an issue that is in play here."

After a Shrewsbury police officer discovered the ruptured tank, state and town officials worked for at least four days to clean up the spill.

Vuona said state environmental officials described the contamination as "contained, controlled, and mitigated."

Town Manager Daniel Morgado said the final bill for the cleanup will be paid out of the town's Sewer Department budget, and an insurance claim has been filed.

"Sure it's a significant amount of money," said Morgado. "Anything over \$100 is a significant amount of money, in my parlance. It's not something we were planning to spend, no question about that. It's not something we take lightly."

Morgado said a final report detailing whether further remediation of the soil is necessary is expected within a month from a cleanup consulting company, Weston & Sampson Inc. of Peabody.

Chad Chysna, the Police Department's K-9 officer, first noticed the leaking tank while training a dog in the wooded area near Ward Hill, Hester said. It had come to rest along an embankment next to a gravel access road.

The tank was leaking slowly from a breach in its side, Vuona said, one that could not be plugged due to the poor condition of the container. Coletta said that when Fire Department personnel cut the top off the tank they found three to four inches of oil still inside.

Robert Ljunggren, the Fire Department's hazardous materials technician, headed an initial-response team that laid down absorbent pads to stop the oil from spreading. They then injected the drum with Speedy Dry, an absorbent chemical, to solidify the remaining contents.

"A perimeter of hay bales and more absorbent booms was also set up to contain runoff due to rainfall," Vuona said.

"Finally, plastic sheathing was put underneath the tank and above it to shield the tank and the immediate spill area from rain and weather," he said.

A short time later, Weston & Sampson workers, led by Sean Healey, a licensed site professional with the firm, arrived to help minimize the environmental damage.

With the help of the town Water and Sewer Department, which provided heavy machinery to provide access to the area, contractors removed the tank and dug up enough oil-soaked soil to fill a dump truck.

Healey said the leak was relatively minor and it did not appear to have caused any harm to wildlife or vegetation in the area.

The oil never reached nearby wetlands or a stream that flows some 75 feet from where the tank ended up, he said.

"We can't tell, by testing, how many gallons spilled," Healey said. "The tank was at some point deposited there, and some residual oil eventually leaked out, but it was probably a slow leak."

# Tank and Petroleum Use Mishaps

The most recent tests, Healey said, show that the soil at the site is clean enough that they can conclude the operation.

[http://www.boston.com/news/local/massachusetts/articles/2011/06/02/shrewsbury\\_oil\\_spill\\_proves\\_a\\_costly\\_mystery/](http://www.boston.com/news/local/massachusetts/articles/2011/06/02/shrewsbury_oil_spill_proves_a_costly_mystery/)

## **GIBRALTER**

**JUNE 3 2011.**

### **AMIDST THE FURY OF THE FLAMES, POLICE RECRUIT'S HEROIC RESCUE**

*Brian Reyes*

In the shadow of a huge and intense fireball yesterday, a local police officer helped two injured workers down the steep steel ladder that curled around the fuel tank where they had been working just minutes before.

The adjacent tank was in flames and one of the men had been seriously injured. Thanks perhaps to the efforts of this hero officer, the man was last night fighting for his life in a hospital in Seville. While most people were running away from the fire, he ran towards it on hearing that there were people on the tank.

Without a thought for his own safety, he climbed the ladder to help the workmen down.

A Chronicle reader captured the dramatic image of the officer – he has not been officially named as yet - and the other worker dragging the injured man to safety.

Last night the man's prognosis was not good and a spokeswoman for the hospital said he remained in critical condition having sustained burns to 70% of his body.

Initial reports suggested the two workmen had been welding atop the tank that exploded but investigators, based largely on images sent to the Chronicle, are now exploring another possibility: that the two were in fact working on the adjacent tank.

Officials cautioned yesterday that it was too early to draw any conclusions on the cause of the fire. All options remained open, though foul play had all but been ruled out.

The site of the fire on the Western Arm lay in blacked out ruins yesterday, still smouldering in the morning as fire crews continued to pour water on it to cool the steel down.

By late afternoon, firemen could be seen resting close to where they had spent 14 hours battling one of the worst blazes in Gibraltar's recent history.

A multi-agency investigation is now underway to analyse the incident from every possible angle. Officials want to know about health and safety issues, what procedures were followed, how the response unfolded and what lessons can be drawn from this.

Some fire fighters felt that, despite their best efforts on the night, the scale of the fire required additional resources.

"At times it was like pissing on a bush fire," said one.

A key issue will be the role played by Spanish salvage tugs, particularly following concerns raised by Spanish Popular Party politicians who insisted yesterday that specialist help should have been brought in faster. Officials here played down those criticisms.

"It was a very fluid situation," one senior source said. "With hindsight, you can always take better decisions."

The fire was extinguished in the early hours of yesterday morning, some 14 hours after it first started.

Throughout the night, men and women from the City Fire Brigade, the Defence Fire and Rescue Service, the Royal Gibraltar Police, the Gibraltar Port Authority and Gibraltar Health Authority "rapid, professional and effective response", a government spokesman said.

The Gibraltar Defence Police and the new Highways Enforcement Officers also provided support to the RGP, as did numerous local companies.

There was Spanish help too, in the form of two tugs provided by towage company Grupo Boluda and one large vessel sent by Salvamento Marítimo, the Spanish state maritime rescue agency. The CEPESA refinery sent stocks of fire fighting foam that could still be seen on the quayside yesterday, ready for use.

Some of those involved in the operation described their dramatic experience yesterday morning, still pumped with the adrenaline that had kept them going through a tough night.

Anthony Partridge, Marine Technical Manager for local shipping services company James Molinary, was on board the company's tug Ana, one of the first vessels at the scene.

He described how the crew brought the tug to within 10m of the fire, turning one hose on an adjacent tank to cool it down and another hose on the vessel itself.

"The heat was intense," Mr Partridge said. "I've never felt anything like it before in my life."

# Tank and Petroleum Use Mishaps

"And all the time you're thinking, what are we going to do if those tanks explode?"

"You're expecting the worst, but hoping for the best." On the quay itself, land-based crews risked their lives to get as close as possible to the fire. But it was a perilous task.

At one point, crews from the Defence Fire and Rescue Service were ordered by their senior officer to pull out as a huge fireball flared up over them, leaving their trucks behind. When it died down a little, two officers ran back and reversed the vehicles away from the fire, tearing hoses that were still connected to manifolds.

Chief Fire Officer Alec Button praised his men and said they had worked hard through the night alongside their colleagues from the City Fire Brigade and other agencies.

"They worked well with the City Fire Brigade and they were constantly thinking on their feet," he said.

Throughout the night the teams struggled with the fire. At times it seemed they were gaining the upper hand but the fire kept coming back.

In response, the fire teams tried different tactics, attempting to keep the fire under control using fire retardant foam and water.

Then, at around 6am, there was a breakthrough. Relentless hosing had suppressed the flames and, just at that moment, a large Yokohama fender filled with compressed air exploded.

"It exploded at the same time as the fire was extinguished," said Dennis Gonzalez, who is Deputy Chief Fire Officer at the City Fire Brigade but was the acting Chief Fire Officer yesterday.

The upshot was the blaze, after 14 hours, was finally under control.

[http://www.chronicle.gi/headlines\\_details.php?id=21884](http://www.chronicle.gi/headlines_details.php?id=21884)

## UK, WALES, PEMBROKE

JUNE 3 2011.

### FOUR KILLED IN PEMBROKE CHEVRON OIL REFINERY BLAST

Four people were killed in an explosion and fire at an oil refinery in west Wales, Dyfed Powys Police have said.

The blast happened at the Chevron refinery at Pembroke Dock on Thursday.

Ch Supt Gwyn Thomas said the explosion was in a 730 cubic metre storage tank where maintenance was being carried out. An adjacent tank was also damaged.

He said police were informing the victims' families and an investigation was under way into what appeared to be a "tragic industrial incident".

'Tragic incident'

Milford Haven coastguards reported a "blast large enough to shake the windows" with "black smoke in the air" shortly after 1820 BST.

Ch Supt Thomas said: "A police investigation is now under way, with the Health and Safety Executive, and early indications show that this was a tragic industrial incident.

"Police officers have secured the scene, and colleagues from Mid and West Wales Fire and Rescue are working to make the site safe to enable a multi-agency investigation into the cause of the explosion to commence."

Assistant Chief Fire Officer Chris Davies said there was no ongoing risk to health to members of the public as a result of the incident.

"We can confirm that any material released into the atmosphere as a result of the blast was immediately dispersed. The wind was blowing off shore, away from residential areas," he said.

The Health and Safety Executive said it was too early to speculate about the cause of the blast.

'Massive bang'

The Mid and West Wales Fire and Rescue Service sent 10 engines to the scene and brought the incident under control within an hour and a half.

Wales Air Ambulance said a man had been airlifted to Morriston Hospital in Swansea with severe burns.

Eyewitnesses reported hearing a "massive bang" and saw plumes of black smoke following the blast.

Phil Horne was in his back garden in Milford Haven, on the opposite side of the waterway, at the time of the incident.

"I heard a large explosion, turned around and saw a large fireball disappearing into the sky," he said.

"It went about halfway up the chimney stack of the refinery."

Liz Herbert, who also lives on the other side of the haven, said: "I heard a massive bang and saw a huge plume of thick black smoke.

"It was really frightening."

In a statement on Thursday evening Chevron said: "Emergency services were called and responded

# Tank and Petroleum Use Mishaps

immediately and remain on the scene. The fire has been extinguished.

"We are taking appropriate action to respond to the situation. We are still in the process of accounting for all personnel."

Milford Haven Port Authority said it was aware of the incident but it was not affecting any ship movements on the waterway.

It said it had two pilot boats on standby if needed but their assistance had not been requested.

The refinery was formerly known as Texaco, later rebranded Chevron-Texaco and known as Chevron since around 2005.

In March, Chevron confirmed Texan oil company Valero Energy had agreed to buy the refinery for \$730m (£446m) and pay a further \$1bn (£611m) for the stocks of oil, petrol and other products on site.

The site, which can refine 220,000 barrels of crude oil a day into petrol and other products, has yet to change hands.

<http://www.bbc.co.uk/news/uk-wales-south-west-wales-13635757>

## **UK, PEMBROKE**

**JUNE 5 2011.**

### **PEMBROKE CHEVRON REFINERY: SAFETY RECORD 'EXCEPTIONAL**

The safety record of a west Wales oil refinery where four contractors were killed in an explosion and fire has been defended.

An investigation is under way after a blast on Thursday in a storage tank at the Chevron plant in Pembroke.

Despite a number of incidents at the plant in the past two decades Pembrokeshire council said it had an "exceptional record of safety".

Pembroke Dock mayor Andrew McNaughton said some risk had to be accepted.

There have been a number of incidents at the refinery since it opened in 1964. The most serious before Thursday evening occurred in July 1996 when 26 workers were slightly injured in an explosion and fire.

In June 2001 a fire was caused by a hydrogen leak, with smoke seen by eyewitnesses rising hundreds of feet into the air, but no-one was injured.

Ch Supt Gwyn Thomas of Dyfed-Powys Police insisted there was no ongoing risk to the public after the latest incident.

John Davies, Pembrokeshire council leader, told BBC Wales that in the 46 years since first Regent then Texaco and now Chevron had operated the plant it had had "a truly remarkable and exceptional record of safety".

"I'm not aware of any lives being lost in similar circumstances with regard to fire and explosion," said Mr Davies. "I think this is the first of its kind.

"Given that they refine the best part of 220,000 barrels of crude a day into refined product I think it's a truly exceptional record. But last night the ultimate price was paid.

"These things tragically happen. But we are prepared for these incidents from time to time."

He added that the council had upheld its responsibility to ensure public safety after the incident.

### **'Relatively rare'**

Chevron has launched its own investigation to run in tandem with the Health and Safety Executive's inquiry into Thursday night's incident.

It happened during routine, planned maintenance.

Julian Lee, senior energy analyst at the Centre for Global Energy Studies, said the plant was an important part of the UK's oil infrastructure with the capacity to process 14% of the UK's annual oil consumption.

"Industrial accidents do happen," said Mr Lee. "Fortunately, given the scale of the oil business and the number of refineries and the amount of oil that they are processing, they are relatively rare. But it is impossible to avoid them entirely."

Andrew McNaughton, mayor of Pembroke Dock, said there had not been a serious accident at the refinery in nearly 20 years.

"You have to accept some risk," he said. "You assume that all accident precautions are taken. You cannot cover all risks for everything... but you can make sure that unavoidable risks are prevented."

Simon Hart, Conservative MP for Carmarthen West and South Pembrokeshire, also praised the plant's safety record.

"It's a really important business but it is a dangerous one and it's had a fantastic safety record," he said. "Credit where credit's due, it's had a long and good record."

# Tank and Petroleum Use Mishaps

He added: "I don't think we should go around dishing out blame until the investigation is over."

Angela Burns, Conservative AM for Carmarthen West and South Pembrokeshire, said the Pembrokeshire area contained several very large companies engaged in oil refining and gas production and that there some very stringent safety precautions in place.

"This is a very important company within our community," she said. "They contribute millions and millions to our economy every year.

"We have to stand shoulder to shoulder with them, support the families and keep prodding and poking and make sure that Chevron and other companies like them do have absolutely the best of best safety standards possible."

<http://www.bbc.co.uk/news/uk-wales-south-west-wales-13640521>

## **UK, PEMBROKE**

**JUNE 5 2011.**

### **TRAGIC OIL BLAST VICTIMS NAMED**

Victims killed in a blast that ripped apart an oil refinery were today named by police.

Four people were killed in the explosion at Pembroke Oil Refinery in Wales on Thursday.

Grandmother Julie Jones, 54, granddad Dennis Riley, 52, dad-of-seven Robert Broome, 48, and Andrew Jenkins, 33, a father of young twins did not survive the blast.

Dyfed Powys Police said a fifth person is still in a critical but stable condition in hospital.

A joint police and Health and Safety Executive investigation is being carried out into the blast after it tore through the refinery in Pembroke Dock.

Maintenance work had been carried out on a 730 cubic metre storage tank which exploded around 6.20pm.

Detective Chief Inspector Martin Davies, the senior investigating officer, said: "The bodies of the deceased were removed from the scene yesterday evening.

"We are now working with forensic experts to formally identify the bodies.

"Since the incident occurred our specially trained officers have been supporting the families and next of kin of those who tragically lost their lives.

"A fifth casualty remains in a critical but stable condition in hospital.

"The family have asked police not to release the name or any other details at this stage."

<http://www.thesun.co.uk/sol/homepage/3618808/Tragic-oil-blast-victims-named.html#ixzz1QsmMmxUH>

## **KENYA, NAIROBI**

**JUNE 6 2011.**

### **ONE KILLED, 46 INJURED IN CITY BLAST**

*Cyrus Ombati*

At least one person was killed when a powerful explosion went off behind a petrol station along Kirinyaga Road in downtown Nairobi.

It was a lucky escape for scores of mechanics and motorists who would have flocked the area if it were a weekday.

The explosion injured 41 people, six of whom are critically wounded and undergoing treatment in various city hospitals. Most of the victims were hit by flying objects triggered by the explosion that occurred at about 11.30 am.

The loud explosion could be heard more than two kilometers away, and city residents said they were taken aback with buildings shaking while those near the scene had windows shattered.

A thick black smoke billowed later as a fire broke out at the adjacent Shell Petrol station. The blaze is suspected to have been caused by the explosion.

The victim, a man, died at the Guru Nanak hospital where he was rushed to soon after the incident, Nairobi PPO Anthony Kibuchi said.

The area of the explosion is a busy street behind Kirinyaga Road that is dominated by motor vehicle spare part dealers.

Most observers said things could have been worse had the blast not occurred on a Sunday when city streets have fewer pedestrians and vehicles. The street is usually heavily populated and a beehive of activities during weekdays, and the fatalities and injuries could have been higher.

Police and military officials who rushed to the scene said the source of the explosion was an unoccupied room near the petrol station.

But they could not immediately confirm the nature of the explosive that went off, shattering several buildings'



## Tank and Petroleum Use Mishaps

windows, flinging eight cars and ripping open two 20-foot containers packed with motor vehicle spare parts.

At Kenyatta National Hospital (KNH) where a majority of victims were admitted, Dr Peter Wanyoike, the hospital's chairman in charge of disaster preparedness allayed fears there would be more fatalities.

Dr Wanyoike said all victims admitted in KNH wards by 2.30pm were in a stable condition. He said majority had suffered burns, while others had fractures and injuries caused by sharp objects.

"Actually 60 per cent of the victims suffered burns while five had fractured limbs. The rest suffered soft tissue injuries. Others had cuts from glass and other sharp objects," he explained.

On Sunday, bomb disposal experts who arrived at the scene described the device as a high velocity explosive. It first ripped off the rear wall of the room, before shattering the steel containers and cars, some of which were on a slow motion, witnesses said.

It was at that point the victims, some of them residents of a nearby residential house who were in their rooms during the explosion, were hit by flying shrapnel.

The shock of the blast ripped through the windows and doors injuring several residents. Some who were cooking and those caught on the street suffered burns on their bodies.

Director of police operations Julius Ndegwa visited the scene, but said the security personnel were yet to know the cause of the loud explosion.

"The bomb experts here say the explosion came from inside the underground room causing the damages and injuries. We are yet to know what caused it," said Ndegwa.

Other experts who arrived at the scene suspect the explosion was caused by a fuel leakage from the underground tanks that are at the same level of the room where the explosion started.

But the station manager Wambui Kiago said that was unlikely because they had only what she termed as "dead stock" of petrol then.

"We have dead stock which is about 1,000 litres and which is not usually touched until we refill. And I do not think there is any form of leakage here because we could have noticed," she said.

Kiago said she was in her office at the station when the explosion went off, and dashed out forgetting her shoes.

An attendant at the station, Boniface Mutua, also said he ran for his dear life after the explosion and stopped few meters away only to see the fuel pumps catch fire.

"I saw fire from the pumps and knew a disaster would occur minutes later, forcing me to escape from the scene," he said.

The fire was, however, contained by firefighters who arrived at the scene in time. Emergency services also rushed to the scene and police officers evacuated nearby buildings as the area was cleared.

Another employee at the station said there was an unusual smell from the floor where the explosion occurred in the past two days, but they did not bother to check what it was.

The employee pointed an accusing finger at leaked fuel as the source of the smell. Officials from the military and US embassy in Nairobi also visited the scene.

Contingents of police were mobilised to control a huge crowd that surged to have a glimpse of the explosion

Prime Minister Raila Odinga also visited the scene and said the Government would seek ways of assisting the injured and those who lost property in the blast.

<http://www.standardmedia.co.ke/sports/InsidePage.php?id=2000036598&cid=4>

### **USA, ME, SEARSPORT**

**JUNE 7 2011.**

#### **WELDING EYED AS CAUSE OF SEARSPORT TANK FIRE**

#### **IRVING SPOKESWOMAN: COMPANY APPRECIATES WORK OF VOLUNTEER FIREFIGHTERS**

*Steve Fuller*

A day after upward of 70 firefighters spent more than seven hours at the scene of a fuel tank fire at Mack Point, an Irving Oil official said the fire may have been caused by welding work that was being done on top of the large tank.

Carolyn Van der Veen, an Irving spokeswoman, said Tuesday, June 7 that Irving Oil is conducting an "internal investigation" of the fire that happened a day earlier at the company's terminal in Searsport. The day of the fire, Van der Veen said the fire broke out in the tank while routine maintenance and upgrade work was being done Monday afternoon. Tuesday, she specifically mentioned that there was welding being done on top of that particular tank as part of that work.

## Tank and Petroleum Use Mishaps

The tank was empty at the time, she said, and the fire started in a rubber ring, or lip, around the top of the tank. The fire was contained inside the tank, she said, and none of the other tanks — there are approximately a dozen tanks at the Irving facility — were involved. The tank in question, according to Van der Veen, typically contains heating oil. She said the tank has a total capacity of 175,000 barrels, which equates to 7.35 million gallons (a barrel of oil is 42 gallons), but reiterated that the tank was empty when the fire broke out.

Van der Veen said officials do not yet have a dollar estimate of how much damage was done to the tank, and said the company will need to determine the exact extent of the damage before they know what needs to be done to repair the tank.

The Department of Environmental Protection responded to the scene, according to Van der Veen, to check on the air quality there. Van der Veen said she was unsure if any other agencies were involved.

The day after the fire, Van der Veen said the terminal was fully functioning again and back to "business as usual" as of that morning. She said the fire would not disrupt operations at the Searsport terminal. Van der Veen said company officials had spoken with some Searsport residents and local business owners following the fire, to explain to them what had happened and to try and answer questions about the fire.

"They were extremely appreciative to hear, firsthand from the company, what was being done," she said, describing the reactions from locals. She said Searsport is a "closeknit" town and "great little community," and she said the company wants to be a good neighbor to the people who live there.

Van der Veen had nothing but praise for the volunteer firefighters and others who responded to the scene. She said people were "very gracious in how they responded," and that the emergency responders from the community worked well with Irving employees and officials at the scene. "We are appreciative of everything the fire departments have done," she said. "We appreciate what the volunteer firefighters did."

Searsport Fire Chief Jim Dittmeier was in command of the firefighters' efforts at the scene Monday, and speaking Tuesday afternoon he said the fire presented a challenge for the approximately 70 firefighters from at least seven departments that responded to the fire. Firefighters and trucks from towns including Belfast, Bucksport, Frankfort, Northport, Prospect and Stockton Springs joined the Searsport Fire Department at the scene at the end of Station Avenue, where the oil company's large storage tanks are part of the Mack Point Marine Intermodal Cargo Terminal. Tanker trucks from the various departments helping to fight the fire were seen shuttling in and out of the gate at the end of Station Avenue, bringing water in to be pumped into the tank, then traveling back out to Main Street (Route 1) to be refilled from hydrants.

Dittmeier said the water supply at the scene was problematic, in that the hydrant system was not supplying enough water. That is why water had to be shuttled in by the tanker trucks from hydrants at other locations.

The logistics of overseeing such a large response were also a challenge, according to Dittmeier, but he said he called in the Waldo County IMAT — Incident Management Assistance Team — to help with those matters.

According to the IMAT's website, the group's goal is "to provide a trained team of incident command staff to augment the incident command structure formed for an emergency or disaster event." Dittmeier said for the Searsport fire, the IMAT kept track of personnel, dealt with financial issues and got food for firefighters. That allowed Dittmeier and others to focus on fighting the fire. Dittmeier said fire officials estimated that crews poured about 80,000 gallons of water on the fire, which firefighters first responded to around 4 p.m. Monday.

The fire chief said firefighters tried numerous approaches to extinguishing the fire, but in the end it just required "a lot of water and foam." Irving employees and Clean Harbors personnel provided some technical assistance to firefighters, Dittmeier said.

The fire was extinguished around 9 p.m. Monday, Dittmeier said, and firefighters remained on scene until around 11:30 that night. He said no firefighters were injured, and that no equipment was broken. Van der Veen said no one else was injured, either.

<http://waldo.villagesoup.com/news/story/welding-eyed-as-cause-of-searsport-tank-fire/407065>

### **USA, CT, FARMINGTON**

**JUNE 7 2011.**

#### **STUDENTS EVACUATED AFTER FUEL OIL OVERFLOWS**

*Ann Bryant*

About 40 gallons of fuel oil were cleaned up from a catch basin in the Mt. Blue Middle School courtyard Tuesday afternoon, said Glen Wall from the Department of Environmental Protection.

An alarm failed when an oil tank was overfilled and fuel flowed from an overflow pipe, he said.

Students at Mt. Blue Middle School were evacuated to the sports fields behind the school Tuesday at about

# Tank and Petroleum Use Mishaps

12:30 p.m. after Number 2 fuel oil gushed from a courtyard pipe as a local oil dealer made a delivery.

About 350 students, their teachers and school personnel left the building due to the odor from the courtyard located between the older and newer portions of the Middle Street school.

It's an odd system, Wall said. The fuel tank is filled from the front of the school, but the tank and vent are in the back. An electric alarm failed to alert the delivery person. The oil came out the vent, sprayed the side of the building, lawn and crushed rock, he said.

Members of Farmington Fire and Rescue responded and called for the town to bring loads of sand, but Chief Terry Bell didn't think it would be used.

A portion of the brick wall on one side of the school gym was covered in fuel from the overflow as a C.N. Brown truck delivered about 1,500 gallons of fuel to the school.

Most of the oil went into the tank, David Leavitt, director of support services, said at the scene.

A student at the school spotted the fuel gushing from a pipe and alerted school officials, Superintendent Michael Cormier said. They decided to keep the students at the school and send them home on the usual bus run which was only about an hour away, he said.

The Department of Environmental Protection was then alerted to the incident and Wall came from Augusta.

A crew from Environmental Projects Inc. (EPI Services) in Auburn came to clean up the fuel from the courtyard. The crushed rock will be removed and the area cleaned with detergent, Wall said.

Tony Couture of Precision Tanks Inc. from Jay was testing the alarm system to see why the alarm didn't work.

He expected the school would be open on Wednesday. If they keep the windows in the courtyard closed, the odor should be fine. It may take a few days to totally dissipate, he said.

<http://www.sunjournal.com/franklin/story/1042473>

## LEBANON, BEIRUT

**JUNE 8 2011.**

### **BLAST RAISES GAS STATION SAFETY CONCERNS**

*Patrick Galey*

The dust had barely settled on the ruined forecourt before the accusations began to fly.

Monday night's fuel explosion, which killed at least four and injured several more at a Beirut gas station, formed a timely reminder to lawmakers, security services and vehicle owners alike of the perilous state of Lebanon's petrol pumps: mainly illegal, frequently unsafe and criminally under-maintained.

At the root of the potentially – sometimes literally – explosive problem, as usual, lies a political struggle.

Caretaker Energy and Water Minister Gibran Bassil, whose ministry is tasked with issuing gas stations licenses to operate, said greater regulation was needed to avoid a repeat disaster.

"We called for strengthening measures against illegal gas stations and for them to increase safety measures. This was last discussed in Feb. 2010 but it has never been passed due to the level of hindrance within the [parliamentary] Energy Committee. This law would be the solution to the chaos surrounding gas stations in Lebanon," Bassil told The Daily Star.

But MP Mohammad Qabbani, head of said committee, begged to differ. He claimed he had asked security forces nine months ago what they needed in order to ensure that safety standards at gas stations were upheld. He said he never heard a reply.

"There are no inspections, no safety and no accountability. This is not good enough. Ministers do not give a damn about what happened," Qabbani said. "Usually licenses are a process that is handled by the interior and energy ministries. After that, nobody cares about [renewing] licenses."

He added that while the level of quality control for petroleum at Lebanon's pumps was reasonably robust, "there is no authority nearly capable of providing people who will supervise or check the safety of gas stations.

"No ministry has said that it could supervise the security and safety of these stations."

And so a systemic lack of regulation and law enforcement looms into view. The problem, so Bassil argued, is not solely political; of Lebanon's 3,250 gas stations, less than 45 percent own the paperwork required to operate.

The Wardieh station in Adlieh, site of Monday's deadly explosion, was legally owned and supposedly properly maintained.

One gas station owner, who declined to be named, said that in general, the country's petroleum distribution was safely managed.

"We have fire extinguishers, and encourage our workers not to smoke. Things are safe. Gasoline is not as flammable as you might think. A cigarette won't set it off. The only dangerous part of [running a station] is when the

## Tank and Petroleum Use Mishaps

gasoline is delivered,” he said. “That is when you get the dangerous vapors. But it happens under controlled conditions and is safe.”

Not everyone shared the owner’s confidence in gas station safety.

“What happened is like a warning alarm,” Bassil said. “This was actually an accident in a legal gas station. It is not yet clear if they were implementing proper safety measures, but the situation could be far worse in illegal stations.”

Qabbani added that given Lebanon’s density of what are in all probability poorly maintained stations, it was remarkable Monday’s accident had been so long coming.

“It is really strange that these accidents do not happen more often. This is something extremely dangerous and no country in the world would allow it,” he said. “We need inspections, both for car safety and for the safety and competence of gas stations’ [staff].”

Aside from the legal statuses of gas stations and their owners, there is also the issue of liability when accidents do take place.

The Wardieh gas station owner was killed Monday night, along with at least one Egyptian employee. Several other station workers were hospitalized.

Assad Mirza, head of the Insurance Companies Syndicate, said that in an incident such as Monday’s blast, the station owner is liable.

“It’s about compensation but this isn’t a fixed amount. It depends on who [the victims] were, and what sort of job they had,” he said, adding that the amount handed out for Lebanese victims was likely to be far greater than for Egyptians.

Mirza spoke of the wider problem of a lack of mandatory liability insurance, particular in perilous lines of work, such as gas station employment.

“Liability insurance should be for all businesses. Petrol stations are among the most dangerous places to work. The government should enforce liability insurance [in gas stations] and it should be for a large amount,” he said.

Qabbani warned that the political deadlock holding up sorely needed legislation and the administrative void at present barring any legal adjustments meant gas stations were likely to remain potential accident sites. More fundamentally, there is not currently the will to see the situation rectified, he argued.

“What happened yesterday is something we are obviously sorry about,” he said. “[But] in two or three days the dead will be buried, the injured will either recover or die and then everyone will forget about it.”

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## Tank and Petroleum Use Mishaps

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<http://www.dailystar.com.lb/News/Local-News/2011/Jun-08/Blast-raises-gas-station-safety-concerns.ashx#axzz1Ose4JDvN>

### USA, MS, GROTON

JUNE 9 2011.

#### BIOFUEL FIRE SPURS CLEANUP ORDER IN MASS

#### FOR LOCAL FIRE OFFICIALS, THE INCIDENT IS A REMINDER OF A NEW FRONTIER IN FIREFIGHTING: DEALING WITH BIOFUEL

*Hiroko Sato*

The smell of soot often indicates there has been a fire in a building.

In the case of last week's garage fire at Steve Sampson's Groton home, the telltale sign is the odor of grease that now wafts across his yard.

That's because the fire caused as much as 50 gallons of vegetable oil to leak, burn and possibly seep into the ground, according to the state Department of Environmental Protection. In other words, the kitchen grease that the homeowner had meant to use to power up his "green" vehicles ended up fueling the flames, said Groton Fire Chief Joseph Bosselait.

Fire officials do not know whether the oil played a part in starting the fire. But for them, the incident is a reminder of a new frontier in firefighting: dealing with biofuel.

"It's getting very common throughout the state," Bosselait said of conversions of diesel vehicles to make them run on vegetable oil.

Most fires involving biofuel stem from processing of kitchen oil into bio diesel, and not from the storing of the fuel, according to the state Fire Marshal's Office. There was no processing taking place on Sampson's property. Nonetheless, biofuel is a fire hazard that can leave a mess behind if it catches a fire.

Contractors retained by the DEP are cleaning up the ground at 444 Nashua Road after 50 gallons of vegetable

# Tank and Petroleum Use Mishaps

oil were released to the environment during a fire that broke out in the early-morning hours of June 2. According to Bosselait, a neighbor reported the fire at 2:36 a.m., and a patrol officer from the Pepperell Police Department rushed to the scene on the town border and woke up Sampson. As firefighters arrived, flames were visible from the back of the 3-car detached garage, where the roof eventually caved in.

No one was inside the garage and there were no injuries reported. There was also no damage to the house. It took 20 Groton firefighters and their counterparts from Pepperell and Dunstable about 90 minutes to put out the fire, according to Bosselait.

The Fire Marshal's Office was involved in the investigation of the fire, but could not pinpoint the cause with certainty, Bosselait said. But Bosselait said Sampson told him during the fire that there were vegetable-oil drums at the back of the garage and that it was for his vehicles that were converted to run on kitchen grease. Sampson indicated he owned two such vehicles, Bosselait said.

"It's obvious that there was oil because we had it all over the place," Bosselait said. "The amount, that's hard (to say)."

The amount was 50 gallons, Joseph Ferson, spokesman for the DEP, said yesterday. The quantity makes it a "reportable release," which triggers cleanup enforcement, according to Ferson. The DEP has retained Corporate Environmental Advisors, a company based out of West Boylston, to do the cleanup at Sampson's property. Sampson is responsible for all of the cleanup costs, Ferson said. An estimate was not immediately available, nor was a timetable for the cleanup.

Bio-diesel is usually a processed product that requires multiple chemicals to make, according to Jennifer Mieth, the public-information officer and manager of fire data and public education unit at the state Department of Fire Services. The oil released at Sampson's property was real vegetable oil and not processed, Mieth said.

Ferson said the CEA crews already completed vacuuming the oil and the water from the fire suppression, which became mixed with the oil. The workers have also excavated the soil to remove oil that leaked during the fire and testing the remaining soil. They will be sampling the private well, as well, Ferson added. Multiple Dumpster-type containers with tarps covering the content could be seen placed across the front yard yesterday.

Sampson declined to comment on the fire.

Bosselait said vehicle conversion has grown popular in recent years amid the soaring gasoline prices and the movement to cut back on fuel consumption. But these environmentally minded vehicle owners may not necessarily know the regulations to go with production and storing of biofuel. Having five gallons or more of gasoline requires a permit from a local Fire Department, and there is a similar rule for bio-diesel, Mieth said. Environmental officials were cleaning up and storing waste from 50 gallons of vegetable oil behind 444 Nashua Road in Groton yesterday after it was released to the environment during a garage fire there early Thursday. sun/hiroko sato Sun staff photos can be ordered by visiting our MyCapture site.  
<http://www.firerescue1.com/fire-attack/articles/1059464-Biofuel-fire-spurs-cleanup-order-in-Mass/>

## **USA, AZ, CHANDLER**

**JUNE 10 2011.**

### **EXPLOSION ROCKS INTEL'S ARIZONA FAB, 4 HOSPITALIZED CAUSE OF EXPLOSION IS UNKNOWN**

*Jason Mick*

An explosion on Tuesday rocked Intel Corp.'s Fab 22, a semiconductor manufacturing facility located near Chandler, Arizona.

The explosion comes just weeks after a tragic explosion at a Chinese plant owned by Hon Hai Precision Industry Co Ltd. (2317) subsidiary Foxconn. The Chinese plant was being used to manufacture Apple Inc.'s (AAPL) iPad 2 at the time, and has since reopened. The incident claimed three lives as fires and secondary explosions raged for some time after the incident.

By contrast the damage at the Intel fab was limited by high tech safety systems. Seven workers were in the room when the explosion occurred and six were outside of it. Fire controls kicked in, as designed, limiting the extent of the damage.

The employees were evacuated for precautionary purposes, but there was no major damage to the Fab or disruption of production. One worker was taken to the local Maricopa Medical Center with serious, but non-life threatening injuries. Two others were transported to local hospitals immediately after the incident with less serious injuries. And a fourth worker was hospitalized later in the day.

Workers inside the fab room wore protective face shields, aprons, and gloves. This stands in contrast to  
716, 717, 718, 719, 720, 721, 722, 723,724, 725, 726

# Tank and Petroleum Use Mishaps

workers at Chinese assembly plants that often have minimal protection.

The protective measures are important as the fab, like many, deals with toxic and/or flammable compounds, such as concentrated hydrochloric acid, sulfuric acid, hydrogen peroxide, and ammonium hydroxide.

Josh Walden, Intel's vice president and general manager for fab sort manufacturing, released a statement commenting, "We're trying to ascertain what happened. All we know is that there was no damage or release of chemicals to the community."

The room where the explosion occurred was a solvent treatment room. Intel uses chemical solvents, like the aforementioned chemicals, to carry out parts of its semiconductor manufacturing process. After use, these compounds are treated before being shipped to a toxic waste disposal facility. It is believed that the workers were just starting to treat a batch of solvents when the explosion occurred.

Firefighters arrived at the building at 2 p.m., with employees being cleared to return inside by 3:30 p.m.

Intel would not speculate on what the financial costs of the damage would be. However, based on Mr. Walden's comments, it appears that the damage was minimal and localized to the solvent treatment room, so this should not be a major setback for Intel.

<http://www.dailytech.com/Explosion+Rocks+Intels+Arizona+Fab+4+Hospitalized/article21844.htm>

## **USA, NE, OMAHA**

**JUNE 10 2011.**

### **'LAKE OF FIRE' AT PLANT**

*Bob Glissmann and Jason Kuiper*

A combination of hazards confronted Omaha firefighters who responded to an explosion and fire at a manufacturing plant on Wednesday.

The Nebraska Machine Products building was spewing black, acrid smoke as fire crews responded shortly after 10:30 a.m. A wastewater and oil evaporator inside the plant had exploded, and the smoke from the fire soon was visible for miles.

Three workers in the plant had been burned in the blast. When crews arrived at the building, 9370 N. 45th St., they were told that one worker still might be inside, said Assistant Fire Marshal Jim Gentile.

Firefighters entered the 36,000-square-foot structure and started searching as others knocked a hole in the roof to release heat and smoke. The crews inside pulled back after they learned that everyone had been accounted for, Gentile said.

It took nearly four hours to bring the four-alarm fire under control. About 70 firefighters, including command staff, responded.

The injured were taken to Creighton University Medical Center in serious condition, but later they had been upgraded to fair condition.

Company co-owner and president Ron Rosso said the most serious injury was to a worker who suffered smoke inhalation and fluid burns. The man was described by another employee as a forklift driver who had been about 10 feet from the explosion.

Rosso said he talked to the injured workers on the phone at midday, and they assured him they were OK, with singed hair the main damage.

Besides the oil-fueled fire and heat from both the flames and the outside conditions, fire officials also were concerned about the building's truss roof, Gentile said.

When such a roof is exposed to intense heat, he said, it starts to bend and deform. Then, when cool water is sprayed on the metal, the metal will contract, and the roof can buckle like a crushed aluminum can.

In April 1996, Omaha Fire Capt. John Goessling was killed when a truss roof on a Family Dollar store at 30th Street and Newport Avenue collapsed on him. Goessling was unable to escape before his air tank emptied.

Wednesday's four-alarm fire also forced the evacuation of nearby businesses.

Doug White, who works at Nebraska Engineering Co., said his plant was evacuated shortly after 11 a.m.

Shortly before that, some employees had been asked to move their vehicles because of the smoke pouring from the building next door.

Then, White said, he heard a loud explosion. Within minutes, firefighters arrived and power was disconnected to his plant.

Crews fought the fire from the outside, spraying foam and water into the structure for hours.

The 55 to 60 workers who had been inside the Nebraska Machine Products plant stood about 50 feet from the building's east entrance, upwind from the heavy smoke that blew to the south.

# Tank and Petroleum Use Mishaps

Many were concerned about how they would retrieve their vehicles, which were parked west of the plant, because their keys were in the building.

Earnest Crosslen was standing under a tree after exiting the building's east side, on the other end of the plant from where the blast occurred.

Crosslen, who had been about 75 to 100 feet from the evaporator, said, "It just blew up. I heard a boom. Then I saw a ball of fire."

Rex Tupper, a plant employee from Council Bluffs, said he was around a corner when he heard a "bang." Tupper looked toward the explosion. "I saw a lake of fire and just ran," he said.

A half-hour after the first fire call came in, the blaze intensified. The building's sheet-metal walls buckled and flames inside could be seen through gaps in the walls.

A third alarm was issued at 11:10 a.m. The fourth went out at noon as flames and fireballs jumped a parking lot to ignite barrels and chemicals stored about 25 to 30 yards west of the plant.

Isidoro Osorio thought he had moved his 2004 Ford Explorer out of harm's way after the fire broke out. But the flames that ignited the barrels spread to stacks of wood pallets and then to Osorio's and another worker's vehicle.

By 12:15 p.m., the 29-year-old's Explorer was a burned-out shell. Had Osorio not moved it, the recently purchased SUV would have been fine.

"It was my baby," Osorio said.

Matt Starr was much more fortunate. Starr, 60, was close to the evaporator when the explosion occurred. He said he heard a "whooshing" sound before flames shot into the air.

Starr, a 14-year employee who works in quality assurance, said he bolted toward a dock door on the building's west side. He said he could feel heat on the back of his arms and head as he ran.

He slipped suddenly as the blast pushed him forward. Those who saw him fall told him later that a wall of flames rushed over him as he headed outside.

He made it to safety, the hair on his head singed.

"I was pretty lucky," he said.

The fire finally was declared under control just before 2:15 p.m. One firefighter who became overheated was carted down the hill to a parked rescue squad for treatment.

Gentile said inspectors remained at the plant after fire crews left shortly after 5 p.m.

Rosso said a small fire at the plant shut down production for a few hours about 10 years ago. This fire, of course, was much worse, although firefighters were able to keep flames away from the office on the building's east end.

"It looks pretty grim," Rosso said, "but we did get everybody out."

Rosso said he already had received calls from customers and suppliers offering assistance and office and shop space.

The company, founded in 1966, manufactures machine parts.

<http://www.omaha.com/article/20110609/NEWS01/706099872/1123>

## USA, OH, DAYTON

JUNE 11 2011.

### MOM: 'ZACK WOULD BE DEAD' WITHOUT SUPERVISOR'S ACTIONS

### 21-YEAR OLD REMAINS IN INDUCED COMA WITH CAUSTIC SODA BURNS ON 60% OF HIS BODY

Tammy Hale knows her son is only alive after he fell into a tank filled with cleaning chemicals Tuesday because of the heroic actions of a co-worker.

Zack Hale, 21, is in an induced coma and on a ventilator at Miami Valley Hospital in Dayton, Ohio, with second- and third-degree chemical burns covering 60 percent of his body.

He fell into a tanker filled with caustic soda (sodium hydroxide) while working at Levi Holdings on the city's northwest side. Hospital officials Thursday afternoon said Hale remained in critical condition.

If not for Dan Redd, the tank cleaning supervisor at Levi Holdings, Tammy Hale says her son would have been stuck in the tank and died with no way to escape.

"Dan said he was out riding around on his golf cart from location to location like he does and he heard someone screaming and he knew it was Zack," Tammy Hale said Thursday. "He said Zack had fallen (into the tank) feet first and he had a hard time getting him out because the chemical was so slippery. But he pulled him out, stripped him and washed him off.

"If it wasn't for Dan, Zack would be dead right now. (Dan) is having a really hard time with this, but I called him last night and tried to convince him that what he did was really a great thing. He was pretty shook up."

716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726



## Tank and Petroleum Use Mishaps

Redd suffered burns on his hands and arms. He was treated and released Tuesday from Reid Hospital. He could not be reached for comment Thursday.

Zack Hale's job at Levi Holdings, 1655 Rich Road in Richmond, was to climb onto empty tankers, insert a hose into a man-hole sized opening and dispense cleaning agents.

Hale was found by Redd being burned alive by the chemicals, but no one witnessed what happened to cause Hale to end up in the tanker.

"The nurse (at Miami Valley) said it looked like there were marks on his back that made it look like he had to have slipped and fallen into the hole," Tammy Hale said. "But no one was there to witness it, so we still don't really know exactly what happened."

Hale was told by physicians at Miami Valley that the next 48 hours are pivotal for her son. Zack, a former Northeastern and Richmond high school student, suffered burns from the chest down, and surgery could be performed today that will allow doctors to see if his lungs were burned on the inside.

"They said if you breathe it in, it is like setting the inside of your lungs on fire -- it is that kind of burning," Tammy Hale said. "If there is a blessing in any of this, it is that his upper extremities were saved. If you look at him, it looks like he was just perfectly dipped into the tanker and pulled back out."

Tammy Hale said Thursday that her younger son, Chris, 19, has not been able to see his brother in the hospital because it is too emotionally difficult. Chris is in remission from Crohn's disease and Zack has been a great supporter of his brother during his illness.

"He drove us to the Mayo Clinic when Chris had to go for treatments -- they are very close," Hale said. "I know Chris is having a very hard time with this."

<http://www.pal-item.com/article/20110610/NEWS01/106100312/Mom-Zack-would-dead-without-supervisor-s-actions>

### **USA, NORTH CAROLINA, GREENSBORO**

**JUNE 14, 2010**

#### **LIGHTNING SPARKS MAJOR FIRE AT TANK FARM**

It took fire crews over six hours to contain a massive fire at the Colonial Pipelines fuel holding facility in Greensboro.

The fire started when lightning apparently hit one of the gasoline holding tanks just before 1 a.m. Sunday at the "Tank Farm" just off Interstate 40 at Gallimore Dairy Road.

Interstate 40 had to be shut down for nearly seven hours as crews battled the fire. All roads in the area are reopened.

David Douglas with Greensboro Fire tells WFMY News 2 the tank that was on fire contained about 20,000 barrels of gasoline, less than half of its 43,000 barrel capacity. There are about 42 gallons in one barrel, according to Douglas. He says the tanks adjacent to the one that burned contained about 3,000 barrels or 120,000 gallons of gas each.

Throughout the fire, Douglas said there was no threat of an explosion and that emergency workers wouldn't need to evacuate anyone because all surrounding businesses were closed.

For much of the morning, firefighters let the fire burn itself. Once the amount of fuel in the tank dwindled to about 10,000 barrels, firefighters used a foam chemical to attack the fire and knocked it down around 6:30 a.m. Firefighters sprayed water on the nearby tanks overnight to keep them from igniting.

Officials say two firefighters were treated on the scene for heat exhaustion. There were no other significant injuries.

Douglas says fire crews were being stretched to their maximum because of four other fires in Greensboro overnight. Two of those fires also appear to be weather-related, he says.

Greensboro Fire Chief Greg Grayson says fire crews had just trained on the Colonial Pipeline site two weeks ago and hold regular training exercises with the company.

Company leaders with Colonial Pipeline say they were able to shut down their operation and pump the gasoline out of the tank that was on fire.

"We are relieved that no one was injured during this emergency," Colonial CEO Tim Felt said. "And we deeply appreciate the Greensboro Fire Department for their quick and professional response. As we have come to learn during frequent drills at our Greensboro facility, they are outstanding."

Colonial officials say operations have resumed at the Greensboro tank farm. They say the incident is not expected to disrupt fuel supplies in the Greensboro area or elsewhere.

# Tank and Petroleum Use Mishaps

According to the company, the Colonial Pipeline delivers an average of 100 million gallons a day to markets across the Southern and Eastern U.S. Colonial transports refined petroleum products such as gasoline, diesel fuel, home heating oil, jet fuel and fuels for the U.S. military. Its pipeline system originates in the Houston area and ends at the New York harbor.

<http://www.digtriad.com/news/local/story.aspx?storyid=143663&catid=57>

## **USA, N.C, GREENSBORO**

**JUNE 13 2011.**

### **TANK FARM FIRE IGNITED BY LIGHTNING, ONE OF GREENSBORO'S BIGGEST IN 2010**

The night of June 13th, 2010 was hot, humid and stormy with a lot of lightning. For those who witnessed the lightning's sky show, the sharpness and intensity of it was a sure recipe for disaster.

And, it happened. It was the lightning strike heard and seen around the Triad. What happened after, turned into one the biggest, most intense fires in 2010.

Lightning had struck a gas tank at, of all places, the Greensboro Tank Farm.

Mother Nature delivered a bolt so powerful, the lightning protectors couldn't deflect the strike. And, so the fire calls began. Crews from Greensboro, High Point, and Guilford County were the first responders who made sure the tank farm fire stayed contained to one tank.

A tank holding about 20,000 gallons of pure gasoline was burning. Fire crews and foam trucks were called in from as far away as Charlotte and Spartanburg, SC.

Flames could be seen for miles. Onlookers stopped off of I-40 to watch and take pictures.

For years, residents in the Triad wondered what would happen if one of the gas tanks caught on fire.

The question has been answered. The firefighters in Greensboro, Guilford County and the surrounding areas are ready. They proved that, on June 13, 2010.

The firefighters had trained for the event and for them it was just another day at the office.

Two days after the fire WFMY News 2 spent time with some of the men who were on the frontline that night. We talked to some of the men, who spent more than hours getting the blaze under control.

"When we showed up it was our worst nightmare realized. We never thought we'd see anything like that. A lot of times when lightening strikes a tank farm it bounces around between the tanks and makes a light show and impresses a lot of people but there's nothing to it. And I was kinda hoping it was that. But as we were going to the call and more traffic came over the air about multiple calls, I started changing my mind thinking there was something to this.

<http://www.digtriad.com/news/local/article/179104/57/Lightning-Strike-Ignites-One-Of-Greensboros-Biggest-Fires-In-2010>

## **USA, FLA, MIAMI**

**JUNE 16 2011.**

### **WORKER RESCUED FROM TOP OF TANK AT MIA**

Miami-Dade Fire rescuers have brought a worker to the ground who had found himself stuck at the top of a fuel tank at Miami International Airport.

The worker was not injured when his mechanized scaffold became stuck, sometime after 5 p.m. Wednesday at the top of the giant fuel tank, about 30 to 35 feet above ground. Rescuers soon responded to the tank farm at MIA, just west of LeJeune Road to get him off the device.

As rescuers made their way to the top of the structure, the worker could be seen using his cellular phone as he waited in his perch for rescue crews to reach him.

Once at the top of the tank, rescuers put the worker in a harness. Meanwhile, other rescuers in a ladder truck met him at the top of the tank. Once they brought him into the end of the ladder, they lowered him down to safety.

<http://www.wsvn.com/news/articles/local/21004587424774/#ixzz1RXwSX2aP>

## **USA, OH, CALDWELL**

**JUNE 19 2011.**

### **OIL STORAGE TANK FIRE UNDER INVESTIGATION NO INJURIES, BUT PLENTY OF DAMAGE REPORTED.**

*Kevin Howell*

Caldwell and Belle Valley volunteer firefighters extinguished an oil tank storage fire Friday night.

716, 717, 718, 719, 720, 721, 722, 723,724, 725, 726

# Tank and Petroleum Use Mishaps

Emergency dispatchers said they got the first report of a burning tank at State Road 215 near Wolf Run State Park just after 5 p.m.

Firefighters put out the blaze with chemical foam. Nobody was hurt, but the tank was heavily damaged.

Dispatchers say there were electrical storms in the area at the time the fire started, but the cause of the fire is still under investigation.

<http://www.wtrf.com/story.cfm?func=viewstory&storyid=101726>

## AUSTRALIA, N.S.W, SYDNEY

**JUNE 20 2011.**

### TANK IN FATAL WINERY BLAST 'NOT LABELLED'

*stephen johnson*

Storage of flammable liquid at a NSW winery where two men died in an explosion lacked basic safety rules and warning signs, a former worker has told an inquest.

Colin Locock, who was a forklift driver at the Drayton family-owned winery, said he was not informed about the danger of the material and not given safety instructions.

Boilermaker Edgar Orgo, 59, and winery owner Trevor Drayton, 52, died in the explosion on January 17, 2008, and a third man survived with serious burns.

The liquid spiritus vini rectificatus, also known as SVR, or distilled spirits of wine, was stored in tanks at Drayton's Family Wines in the Hunter Valley.

The inquest, at Glebe Coroners Court in Sydney, heard on Monday that Mr Orgo had been welding a metal plate to tank 104 shortly before the explosion.

Mr Locock said he did not see any warning signs around tank 104, which had contained 9000 litres of SVR in the weeks before the explosion.

"Don't recall seeing SVR signs," he said.

Under questioning from barrister Kristina Stern, assisting deputy coroner Hugh Dillon, Mr Locock said he was unaware that ethanol vapour was flammable.

He also said he had not been instructed in safety procedures for handling the liquid, which is almost pure ethanol.

Asked if he knew that SVR was stored around the winery, Mr Locock replied, "No."

"Were you given instructions whether the machinery could be operated around tanks containing SVR?" Ms Stern asked.

"No," Mr Locock replied.

Rural Fire Service Superintendent Paul Jones, a structural fire investigator, said it was likely the fire started in the tank rather than around it.

"I would have to say it was tank 104, by the damage to the tank itself," he said.

"I can't determine whether the explosion happened, or the fire happened first."

But under questioning, he agreed with the proposition that welding on the metal container had caused the fire.

Police Detective Senior Constable Peter Muscio said the explosion happened before the fire started, in his opinion.

He agreed heat from an area around Mr Orgo had ignited the fire and rejected suggestions a leak had caused the blaze.

Assistant winemaker William Rikard-Bell was injured in the accident, with burns to 80 per cent of his body. He survived after diving into a nearby dam at the property in Pokolbin.

Members of the Drayton family were present at the Glebe Coroners Court for the inquest on Monday.

The hearing resumes on Tuesday.

<http://news.ninemsn.com.au/national/8263220/lax-safety-before-nsw-winery-blast-court>

## CANADA, CALGARY

**JUNE 23 2011.**

### FUEL SPILL ON ROOF OF HIGHRISE

The fire department was busy on Tuesday night cleaning up a diesel fuel spill that occurred on the roof of a downtown Calgary building.

They say that a company was installing a new generator and fuel was being transferred from one tank to 716, 717, 718, 719, 720, 721, 722, 723,724, 725, 726

# Tank and Petroleum Use Mishaps

another when a malfunction caused the diesel to spill onto the roof.

Initial reports say that hundreds of litres were released, but that number dropped to just under 50 litres when crews assessed the situation.

The fire department still had a challenge in cleaning up the mess. "We've drawn off as much of the product as we can with pumps. The roofing company will then remediate the roof," said Dist. Chief Larry Craig.

There were about 50 firefighters on scene for about two hours, Craig said, but that was a precaution to keep the residents of the building safe. "We're taking serious precautions for diesel fuel."

No one was injured in the incident as there was no one around when the spill occurred.

None of the fuel had seeped into the sewer system.

[http://calgary.ctv.ca/servlet/an/local/CTVNews/20110622/CGY\\_oil\\_spill\\_110622/20110622/?hub=CalgaryHome](http://calgary.ctv.ca/servlet/an/local/CTVNews/20110622/CGY_oil_spill_110622/20110622/?hub=CalgaryHome)

## USA, VERMONT, ESSEX JUNCTION

JUNE 20, 2011

### ESSEX JCT GAS LEAK MAY BE LARGER THAN THOUGHT

A gas leak that brought an Essex Junction shopping center to a standstill may have been much worse than first thought. It was discovered in May, but state officials say it may have been going on for months.

State officials say the Gulf Gas Station has likely been leaking gas since February and that records show a monthly inventory loss since then. The Agency of Natural Resources is now estimating 2,600 gallons may have leaked into the surrounding soil.

The property owner, Dave Simendinger, says the state is exaggerating. He puts the number closer to 50 gallons.

On May 24 business owners at the Post Office Square shopping plaza in Essex Junction smelled a strong odor of gasoline coming from the parking lot. Eight fire and rescue crews-- including a state hazmat team-- responded to the scene. More than 15 businesses were evacuated, but were allowed to open up shop the following day.

State officials, however, are not convinced it was a minor spill from a fuel delivery as the gas station owner alleges. Last week the Agency of Natural Resources got an emergency order from the state environmental court to stop Dave Simendinger's operations at the Gulf. He was ordered to drain his tanks and remove them and any contaminated soil from the ground within five business days. That work is starting Tuesday morning.

But Simendinger says he's being targeted. His tanks are 30-year-old single-walled, fiberglass tanks. He argues the state wants suppliers to switch to double-walled tanks.

The state says 2,600 gallons is a serious spill and it's critical they fix the source of the leak. Once the tanks come completely out of the ground Wednesday Simendinger and the state will have a better idea of how much gas has leaked.

Simendinger is complying with the order. And it is not clear if he could face any penalties.

<http://www.wcax.com/story/14943512/essex-jct-gas-leak-may-be-larger-than-thought>

## USA, VT ESSEX JUNCTION

JUNE 23 2011.

### DIGGING FOR A GASOLINE LEAK

"These tanks were all tested tight," Dave Simendinger said. "The pipes were tested tight."

But the court ordered Dave Simendinger to rip the 30-year-old, single-walled tanks out of the ground at his Gulf gas station in Essex Junction. The state is worried these huge fiberglass drums may have been leaking for months.

"I think they've got this agenda to get rid of single-walled tanks," Simendinger said.

"It's not about the tanks. The tanks were really just in the way of our ability to get at the contaminated soil and get it out as quickly as possible," said Sarah Bartlett of the Vermont Agency of Natural Resources.

The investigation comes after business owners at a neighboring shopping plaza reported smelling a strong odor of gasoline in late May. The gas had made its way down to the plaza's storm drains. Simendinger says it was a small spill from a fuel delivery, but the state thinks more is going on underground.

"The estimate of 2,600 gallons is a worst-case scenario. It's very difficult to measure," Bartlett said.

So the state must base its calculations on the owner's inventory records and 2600 gallons are unaccounted for. But Simendinger says the gas isn't missing. He blames the discrepancy on inaccurate calibration of his pumps, claiming over time the extra gallons went into customer gas tanks, not the ground. The state also allows fuel dealers to be short 130 gallons per tank plus 1 percent of their sales. So based on those numbers he puts the leak closer to 50 gallons.

"That's always been my question; where's the gas? They've drilled this site up like Swiss cheese and they have

## Tank and Petroleum Use Mishaps

not been able to find anything but dissolved gasoline in the groundwater," Simendinger said.

A sample of groundwater taken from right where the tanks were removed had a slight odor of gasoline, but if there was major spill you would see separation and all we could see is groundwater.

"Once it's out of the tanks and into the surrounding material-- the soil and the groundwater-- it's going to be very difficult to really ever know exactly how much it was," Bartlett said.

The state says much more testing will need to be done to get concrete answers. Simendinger's company, Wesco Oil, is paying for the tank removal. And the state is paying for the soil excavation and disposal out of the petroleum cleanup fund. The state would not comment on whether Simendinger could face any penalties.

<http://www.wcax.com/story/14959455/digging-for-a-gasoline-leak>