



## **WHAT'S HAPPENING?**

**May 2014**



*Photo by Jay Bradish*

**AIDGC 2014  
Conference  
September 19  
"Hazardous  
Areas"**



*Photo11: NEWS CENTER*

### **Explosion, Fire at International Wax Plant**

**An industrial fire badly damaged the facility at International Wax Inc. in Pennsylvania, U.S.A. - an explosion may have started the blaze. "It looked like a miniature Hiroshima," an eyewitness said, describing the cloud that may have been caused by the explosion and fire.**

**Reports indicated the fire ignited wax in a filter room at the plant. International Wax, also known as Petrowax, is a wax processing plant which spans 575 acres in Farmers Valley. It was originally a petroleum crude oil refinery facility, opening in 1923. The plant's principal operation is to remove oil from wax, and it processes waxy feed stocks into finished waxes, according to the U.S. Environmental Protection Agency.**

**Wax produced at the plant is used in waterproof cups and paper plates as well as the manufacture of automobile tires and candles, the EPA states.**

**Source: Amanda Nichols and Fran De Lancey/Special to the Olean Times Herald**

### **Firefighter Injured in Chemical Explosion**

**A firefighter was taken to the hospital following an explosion in Maine, U.S.A., at the Kennebunk Sewer District's wastewater treatment plant.**

**Plant manager, Michael Bolduc says the fire department had been called to the scene when a chemical delivery of calcium nitrate was mixed into the wrong tank, mixing the chemical with chlorine. A firefighter was testing the PH levels of the mixture. Bolduc says oxygen somehow got into that mixture during the test, causing what he calls a minor explosion, and the firefighter, who was standing on a ladder at the time, to fall back. In the meantime, a hazmat team spent most of the day cleaning up the mess. Bolduc says no chemicals were released to the outside during the event, and work at the treatment facility continued throughout the day.**

**Source: WCSH6**



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It is with real  
regret that we  
advise that fees  
will be increased  
by 10% this  
financial year  
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When AIDGC  
first started  
the fee was  
\$495 for  
Members and  
the Board has  
managed to  
maintain this up  
until this year.

## **Fire in Plastics Plant Storage Room**

**A smoky fire in a storage room for plastic rolls brought a dozen or more fire companies including hazmat teams to Genpak's plant and triggered the evacuation of a nearby child care facility and shopping centre.**

**Middletown (Hudson Valley, U.S.A.) fire Chief Tom Amodio said there was heavy smoke from at least two burning rolls of plastic pouring out when the first firefighters arrived. Genpak makes plastic containers for fast-food businesses like McDonald's.**

**At least 12 to 15 fire companies responded to the scene. Amodio said firefighters also took precautions because of the possible toxic nature of the fire. All firefighters wore airpacks before entering the building, and went through a decontamination process when they came out. "It could have got out of control," Amodio said. "Thank God I had hazmat (teams) here right away."**

**Amodio said the cause of the fire was under investigation. An Orange County fire investigation unit was on the scene but had to wait for clearance to enter the building.**

**Several fire trucks equipped with foam were called to the scene after water initially appeared to be ineffective in dousing the blaze, including companies from the Air National Guard at Stewart Airport, New Windsor, Greenville and Rockland County. The building's sprinkler system not only kept the fire from spreading, but also kept the building from overheating, Amodio said.**

**Source: John De Santo, Times Herald-Record**

## **Chemical Leak at Intel Plant in Arizona**

**A chemical leak at Intel Corp's manufacturing complex in Arizona has been contained and two workers were taken to hospital for observation, a spokesman for the chipmaker said on Monday.**

**During a tool installation in a basement at the sprawling plant southeast of Phoenix a tube was severed, leading to a spill of around 100 gallons (379 liters) of ammonium hydroxide, said Intel spokesman Chuck Mulloy.**

**Ten workers near the spill reported to the facility's medical station and two of those people were sent to hospital for observation. The spill was in a confined area and no chemicals have been exposed to the public. He said a construction crew working inside one of the buildings accidentally cut into a pipe. "During the construction process, a pipe was cut that feeds ammonium into a room in the basement," he said. "The leak was immediately isolated."**

**Last June, a gas leak at the plant sickened 43 people, including 11 who were taken to a local hospital.**

**Source: Reuters**

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## **Ghana Pipeline Explosion and Inferno**

**The Tema Oil Refinery (TOR) says it lost 300 metric tons of Naphtha from the inferno that gutted its pipelines and the loss is estimated at 280 000 dollars.**

**Naphtha is a highly combustible liquid made from distilling petroleum. It looks like gasoline and is used to dilute heavy oil to help move through pipelines, to make high octane gas and even to clean metal.**

**It is believed that there was a pipeline leak and Mr. Emmanuel Armah Kofi Buah, Minister of Energy and Petroleum, said at a press conference that the Ministry had mandated the Safety and Maintenance Unit of TOR to conduct integrity test and hardness test to determine whether the pipelines that got burnt should be replaced or repaired. He said a committee had also been established comprising the Ghana National Fire Service (GNFS), National Petroleum Authority (NPA), National Association of Disaster Management (NADMO), TOR, Ministry of Energy and Petroleum and National Security to ascertain the real cause of the fire and make recommendations to prevent future occurrence of such incidents.**

**Source: Vibe Ghana**

## **Tanker Fire Erupts at Steel Plant**

**Mr. Brent Dominy, deputy fire chief of Middletown, Florida, said that a fire at AK Steel is believed to have started with lubricating oil in a storage tanker. There were no injuries. The flames and thick black plumes of smoke that could be seen coming AK Steel earlier have disappeared. Witnesses said the smoke and flames could be seen from several blocks away.**

**Source – Daytondailynews.com**

## **U.S.A. Gas Plant Fire Finally Out**

**A fire at a western Wyoming natural gas processing plant has finally burnt out after five days.**

**The fire had been burning since an explosion at the facility near the small community of Opal. No one was hurt in the explosion and fire, which prompted the evacuation of the town's 95 residents for a day. Williams Partners spokesman George Angerbauer says investigators are trying to determine what caused the explosion. He says it remains unknown when the plant will be operational, but he noted that the incident involved only one of four processing facilities at the site.**

**The plant processes gas produced from western Wyoming and northern Utah wells.**

**Source: AAP**



*If you have any articles, relevant information or ideas that might be useful or of interest to Members they would be much appreciated!  
Please forward to:  
[robhogan@tpg.com.au](mailto:robhogan@tpg.com.au)*

*My thanks this month  
- Don Johnston.*

## **Gas Plant Explosion Injures 4 in Nigeria**

Four men were injured and two vehicles and a motorcycle burnt in a gas explosion that occurred in Ibadan. The incident, which occurred at Hephzibah Petroleum Limited, a gas refilling plant at Orita-Challenge, Ibadan, happened some minutes after a tanker had offloaded gas from its mobile tanker to stationary tanker within the company premises.

The fire, which engulfed part of the premises, extended beyond the company's premises and caught a bike rider and a passenger. The other victims were a commercial driver and passenger.

According to witnesses, they had perceived a gas smell in the area, probably due to a leakage.

Source: Nigerian Tribune

## **Chemical Tank Break at Utah Dairy Plant**

Crews are cleaning up after a chemical tank burst at a northern Utah dairy plant. Logan City Fire Marshal Craig Humphreys said a container of hydrogen peroxide ruptured Monday at Shreiber Foods Dairy Facility.

About 200 employees were evacuated Monday morning. No injuries were reported in the burst and the chemical did not leak out of the building.

Workers at the facility routinely use hydrogen peroxide to clean equipment.

Humphreys says there is no threat to surrounding neighborhoods.

Source: The Associated Press

## **Fire at Chemical Plant in Ohio**

Haverhill Chemicals released the following statement about the fire at its plant in Scioto County:

*A preliminary assessment of the fire at Haverhill Chemicals indicates a phenol pump and bearings failed. The bearing failure caused the seals on the pump to release a small amount of phenol. The heat caused by the bearing failure resulted in the isolated fire, which was quickly extinguished by the on-site emergency response team.*

*There were no injuries. There was no impact offsite.*

Source: WSAZ3

Watch Video: [Chemical Plant Fire](#)

## **NICNAS**

**Chemical Gazette – May 2014** [Download the pdf.](#) **ALSO**  
[Release of the Final DMEC PEC Report](#)



*Corrigan Fire Department responds to fire at Georgia-Pacific plant*

## **Explosion Caused Georgia-Pacific Plant Fire**

The Corrigan Fire Department responded to a fire at the Georgia-Pacific plant in Corrigan and according to the Corrigan Fire Department, the fire was caused by a large explosion. The Livingston Fire Department reports that a dust explosion occurred outside the main plant in the sawdust/shavings collector system. They say nine people were hurt in the explosion. Four people were flown to Houston hospitals in critical condition, five others were taken by ambulance to a Lufkin hospital with non life threatening injuries.

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## **Refinery Releases Sulfur Dioxide**

Environmental officials say nearly 150 pounds of sulfur dioxide and fuel have been released into the air at the Delaware City Refinery. The Department of Natural Resources and Environmental Control said that the release happened due to a failed control valve. The release comes just about a week after the refinery released nearly 200 pounds of sulfur dioxide into the air. The Department of Natural Resources and Environmental Control had said the earlier release was caused by a mechanical problem that was corrected.

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## **Light Crude Tanks Fire in NW China**

A fire is under control after an explosion on three light crude tanks in Yan'an City, northwest China's Shaanxi Province, said rescuers. The incident burnt three people at the refinery plant of Shaanxi Yanchang Petroleum Group.

There was heavy smoke and a pungent smell at the site. No crude has been found leaking directly from the tanks while some water with a little crude went into the nearby Huluhu River. No excessive petroleum material has been monitored in the nearby region. Rescuers were conducting cooling measures on the tanks and set up seven intercept dams at upper reaches of the nearby Huluhu River and Luohe River reaches to prevent pollution risks.

Local government authorities have relocated 300 residents.

Source: [CRJEnglish.com](#)



Photos: [xinhuanet.com](#)



**White Powder from Refinery was Neutral Chemical** Watch Video: [Malfunction at Oil Refinery](#)

**Russian car  
explodes on  
highway**

**A homemade gas-  
powered Russian  
car exploded as it  
drove slowly along  
a gridlocked  
highway with the  
unexpected blast  
recorded by a  
dashcam only  
metres away.**

**Witnesses said the  
explosion sent  
debris — which  
included a spare  
tyre — up to 10  
metres in the air,  
*The Express*  
reported.**

**The unexpected  
explosion saw the  
driver and  
passenger from the  
white hatchback  
fleeing for their  
lives as the car's  
boot smouldered in  
a cloud of black  
smoke.**

**Source: [Express.co.uk](http://www.express.co.uk)**

## **Chemical Plant Explosion Kills Employee**

**The unidentified Sierra Chemical employee was testing a 550-gallon tank when it exploded. "Very rare," said Sgt. Mike McCreary. "I talked to one gentleman on site who has been here for 16 years, and he said he's never seen one of these tanks do that, so, pretty rare." The tank held compressed air and the worker was checking it for leaks.**

**No chemicals or fire were involved in the explosion, and no other employees were injured.**

**Source: [mynews4.com](http://mynews4.com)**

## **Fire at Mexican Fertilizer Plant**

**Authorities in the western Mexican state of Michoacan evacuated more than 500 people after a fire broke out inside a sulfur-ash dump at a fertilizer plant, generating a massive toxic cloud.**

**Emergency management officials in Michoacan said the ash dump covers 700 square meters (7,524 sq. ft.) and that the toxic cloud resulting from the fire had spread to Petacalco in neighboring Guerrero state.**

**While 74 of the 77 Lazaro Cardenas residents admitted to hospitals suffering from the effects of the cloud were quickly treated and released, three remain hospitalized.**

**Merchants closed their shops early as firefighters and paramedics evacuated 236 children from a daycare center and took 320 other people to a temporary shelter.**

**Military personnel joined municipal firefighters and safety teams from nearby plants to subdue the blaze at the Fertinal factory. Once the flames were out, authorities deployed earth-moving equipment to remove the ash.**

**Fertinal, Mexico's leading producer of agricultural fertilizers, has been accused of dumping chemical residues into the Pacific, resulting in dead fish and skin infections among fishermen and beachgoers. Officials have not investigated the allegation.**

**Source: EFE**

## **Virginia: Hot Air Balloon Explosion**

**The balloon hit a power line and caught fire. The pilot attempted to control the fire and the balloon. At some point, two people either fell or leaped from the gondola. There was an explosion. More fire. And then the basket and balloon went off in separate directions. One person still missing.**

**Read more: <http://www.smh.com.au/world/virginia-hotair-balloon-crash-devastates-university-of-richmond-basketball-team-20140511-zr9cn.html#ixzz31UB6bD1C>**



## **Victoria: National Harmonisation of Work Health and Safety Laws**

**The Victorian Government has confirmed that Victoria will not adopt the national model workplace health and safety laws in their current form.**

**The Government supports the principle of national harmonisation and continues to work towards best practice legislation.**

**WorkSafe continues to enforce Victoria's existing occupational health and safety laws and regulations.**

**This means that Victoria's workplaces need to refer to Victoria's codes and guidance materials for information about how to comply with Victoria's occupational health and safety laws.**

**Victorian codes and guidance materials are specifically designed to inform duty holders as to how they can comply with Victorian occupational health and safety legislation. National Workplace Health and Safety codes and guidance materials have no legal status in Victoria. They are designed to support the national model laws and are not designed to support Victorian occupational health and safety laws.**

**For more information about Victoria's OHS compliance framework, [CLICK HERE](#)**

## **Chemical Storage Fire at Recycling Plant**

**About 100 firefighters tackled a huge blaze at a building used for storing chemicals on the edge of a city centre in England.**

**The fire at Tradpak Recycling spread to two other buildings but crews managed to save four other businesses on the industrial estate, officers said.**

**Area manager Ian Dunkley, from West Yorkshire Fire & Rescue, told Sky News: "It's been a really big job." "We've had approximately 100 firefighters on scene - 15 firefighting appliances, two aerial platforms, a high volume pumps and various support appliances."**

**Mr. Dunkley said: "When the initial crews arrived the fire was well developed and there was a series of large explosions where LPG cylinders were involved in the fire." "Unfortunately two premises have succumbed to the fire but we've managed to save four surrounding companies and their premises, which is a really good effort by the firefighters in the initial stages."**

**Mr. Dunkley said a fire investigation team was on site but it was too early to say what caused the blaze. The smoke from the fire was not toxic. However, as a precaution, they advised people near the site to keep doors and windows shut while the smoke cleared.**

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## **Tasmania: The Fine Art of Chemical Safety**

Getting chemical safety right in any workplace requires research, perhaps re-organising the physical space and training staff; in other words, changing how things are usually done.

Now imagine you are a visual arts school, encompassing a range of mediums: printmaking, ceramics, painting, photography and more. Consider the huge range of chemicals that dozens of different students (who change each year) need to create their individual art and then clean up after themselves.

This was the situation facing the Arts Department at TasTAFE Devonport. What started with a simple safety assessment led to an overhaul of what chemicals are used by staff and students, how those chemicals are stored and labelled, and how students learn about using them safely.

The process began last year, when Workplace Learning Leader Cathryn Ackroyd, armed with the Department of Education's risk assessment templates and checklists, began an assessment of the art studios.

Cathryn found herself working with WorkSafe Tasmania inspector Darron Langerak. 'At first we were hesitant about involving an inspector, but we found it was a very positive experience,' admitted Cathryn. 'Darron confirmed there were serious safety and health problems that needed to be addressed. He then helped us take the next step — from those checklists we developed a risk management plan, covering 98 points of action, to turn things around.'

Darron conveyed his findings to the TAFE's management; a WHS consultant was then employed to work with staff to make the various studios safer for staff and students.

But it was staff such as Printmaking teacher Bill Flowers and Ceramics and Glass teacher Marilyn Raw who stepped up to the enormous challenge of improving safety, and have been the force behind many of the changes.

'We've used what printmakers have used for over 500 years — waxes, acids, turps, bitumen and resins. All fairly toxic,' explained Bill. Investigating what alternatives would be possible, Bill extensively researched low-toxic screen printing inks.

In printmaking, the solvents used to clean up afterwards are also hazardous. 'We use different solvents now to clean up,' said Bill. Some are fairly straightforward: products like floor cleaner and, incredibly, soy sauce, are used to clean printing plates. Others, like copper sulphate, still need to be handled and disposed of carefully, but are a marked improvement on the acids that were previously used. Read the full article: [WORKPLACE ISSUES TASMANIA](#)



Photo:  
kevtafiresystems.com

## **Tesoro Anacortes Refinery: USCSB Report**

The U.S. Chemical Safety Board has approved a detailed and comprehensive investigation report with critical safety recommendations concerning the tragic heat exchanger explosion and fire that took seven lives at the Tesoro refinery in Anacortes in April 2010. Key issues:

- Inherently Safer Design
- Tesoro Process Safety Culture
- Control of Non-Routine Work
- Mechanical Integrity Industry Standard Deficiencies
- Regulatory Oversight of Petroleum Refineries

[READ THE FULL REPORT](#)

## **U.S.A. - New Farm Bill Supports the Renewable Chemicals Industry**

After nearly four years of debate, President Obama has signed the Agricultural Act of 2014 (i.e., the farm bill) into law. In his remarks, the president highlighted the positive impacts the farm bill will have on the U.S. agriculture industry, the jobs sector and rural economies. For the first time, the farm bill will offer strong support for the emerging renewable chemicals market here in the U.S. Renewable chemicals are those that use sustainable biomass as feedstocks for production, in place of traditional petrochemical inputs.

Read more: <http://thehill.com/opinion/op-ed/204598-new-farm-bill-supports-the-renewable-chemicals-industry#ixzz30y8UuSTR>

## **Man Killed in Meth Explosion**

A nanny and part-time restaurant cleaner who allegedly ran a secret meth lab from her suburban home has been charged with murder after the drug factory exploded, killing a man inside. Lin has been charged with 17 criminal offences, including manufacturing a large commercial quantity of an illegal drug. Police allegedly found chemicals, tubing, portable gas cylinders and a large container of white crystalline substance residue, which were allegedly used to make drugs. Police also allegedly found about 7kg of methylamphetamine, worth up to \$1.75 million, a loaded Smith and Wesson revolver, a Tech 9 sub-machine gun and thousands in cash. They also found a loaded Norinco pistol inside a car registered to Lin, police claim.

Source: Brendan Hills, Sunday Telegraph



The crime scene at Quarry Road, Ryde: Picture: Bill Hearne Source



Crews from Maroubra, Matraville and Mascot worked on a major oil spill on July 12, 2013 when a tank leaked 2000 litres of flammable petrol per minute at a Caltex terminal at Port Botany. Pictures: Daniel Shaw Source: Supplied



Max Metzker, Russell Vance, Stephen McFadyen, Kevin Blissett and Brendan Ebejer have been awarded for their work in a major petrol spill last year. Picture: John Appleyard Source: News Limited

## Whale Carcass Explodes

<http://www.youtube.com/watch?v=7X0hq0u9g9q4>

## “Catastrophic, No Other Word to Describe It”

*That was the first thought Fire and Rescue NSW Maroubra Station officer Maxwell Metzker had when he arrived at a petrol leak at the Caltex terminal near Port Botany last year.*

Presenting the Awards Commissioner Mullins said the first-arriving crews and senior officers on the scene at Banksmeadow were under considerable pressure, faced with the extremely volatile situation of a significant fuel spill, a large amount of fuel vapour and an unknown number of ignition sources. “There was a real possibility of an explosion if the leaking valve was not shut off. The rate at which the fuel was escaping from the tank, about 2000 litres per minute, meant there was only a small window of opportunity in which to act,” Commissioner Mullins said.

“Station Officer Morasso volunteered to wade knee-deep through a banded area containing 130,000 litres of unleaded petrol, putting his own personal safety at risk to successfully shut off the leak.

“He displayed tremendous courage and his actions helped enable the safe conclusion of this emergency. His actions exemplify the highest traditions of FRNSW which is why I am proud to bestow our greatest honour upon him.”

Commissioner Mullins said the other award recipients should also be commended.

“Under trying conditions, firefighters and senior officers managed to source and apply a foam blanket to the fuel leaking out of the storage tank amid very real concerns of a potential vapour explosion,” he said.

If it wasn’t for the quick thinking, courage and outstanding performance of all the crews and officers, this incident could have been a major disaster for all concerned.”

Source: Fire and Rescue NSW Media Release

## U.S. EPA Forum on Fuel Corrosiveness

The EPA requested that NACE include a session on the hot issue of corrosion in fuel storage tanks at the 2014 Corrosion Conference & Expo last March. Recently the EPA has identified corrosion problems with ethanol and low-sulfur diesel (ULSD). The forum planned for Corrosion 2014 will focus on corrosiveness of both biofuels and conventional fuels, and will include presentations by EPA, the Steel Tank Institute (STI), and industry representatives.

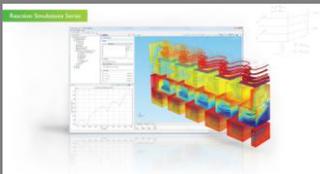
Topics include overview of fuel corrosiveness issues; ethanol SCC issues; ULSD, corrosion issues; and atmospheric storage corrosion issues in ethanol tanks. The Forum includes a discussion session and is chaired by Donald Drake, ExxonMobil. Source: TankTalk

[For Further Information Contact NACE](#)



(Brennan Linsley / ASSOCIATED PRESS) A worker adjusts hoses during a hydraulic fracturing operation at an Encana Corp. gas well, near Mead, Colo.

The first experimental use of hydraulic fracturing was in 1947, and more than 1 million U.S. oil and gas wells have been fracked since, according to the American Petroleum Institute. The National Petroleum Council estimates that up to 80 percent of natural gas wells drilled in the next decade will require hydraulic fracturing.



## **Baker Hughes in Houston to Reveal all Hydraulic Fracturing Chemicals**

**Baker Hughes says it's ready to divulge all the chemicals it uses in hydraulic fracturing, revelations that other big industry players have limited by asserting the potions they use to get at trapped oil and gas are trade secrets.**

**In a statement recently posted on its website, the Houston-based oil field services firm says it "believes it is possible to disclose 100 percent of the chemical ingredients we use in hydraulic fracturing fluids without compromising our formulations — a balance that increases public trust while encouraging commercial innovation."**

**Baker Hughes included a disclaimer: It would reveal its chemical data "where accepted by our customers and relevant governmental authorities." The company said it will take several months for it to negotiate with its suppliers before it can release its data.**

**The release of Baker Hughes' data would come as activist investors and environmental groups press oil companies to disclose the chemicals they use in the modern technique of blasting a mix of water, chemicals and proppants sometimes two miles under the earth's surface to crack open shale oil and gas reservoirs.**

**Baker Hughes says its new data format will calm those concerns, as it will include in its newly formatted reports a complete analysis of its fluid mixtures, down to tiny trace elements of ammonium hydroxide. Source: FuelFix**

## **Chemical Reaction Engineering Simulations**

**Simulations in chemical reaction engineering are used for different reasons during the investigation and development of a reaction process or system. In the initial stages, they are used to dissect and understand the process or system.**

**By setting up a model and studying the results from the simulations, engineers and scientists achieve the understanding and intuition required for further innovation.**

**Once a process is well understood, modeling and simulations are used to optimize and control the process' variables and parameters. These 'virtual' experiments are run to adapt the process to different operating conditions.**

**Another possible use for modeling is to simulate scenarios that may be difficult to investigate experimentally.**

**One such example of this is to improve safety, such as when an uncontrolled release of chemicals occurs during an accident. Simulations are used to develop precautions for preventing or containing the impact from these hypothetical accidents.**

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## **Transport Canada: Shipping Infectious Substances**

[READ THEIR "TRANSPORTING DANGEROUS GOODS BULLETIN"](#)

## **Airborne Measurements in Colorado Confirm Leaks from Oil and Gas Operations**

During two days of intensive airborne measurements, oil and gas operations in Colorado's Front Range leaked nearly three times as much methane, a greenhouse gas, as predicted based on inventory estimates, and seven times as much benzene, a regulated air toxic. Emissions of other chemicals that contribute to summertime ozone pollution were about twice as high as estimates, according to the new paper, accepted for publication in the American Geophysical Union's Journal of Geophysical Research: Atmospheres.

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**AS 3745-2010/Amdt 1-2014**

**Planning for emergencies in facilities**

[SAI GLOBAL INFSTORE](#)

## **Wisconsin Workers Injured by Acid Mixture**

Following injuries to seven workers at Cooper Power Systems LLC, including chemical burns to the skin and irritation to their respiratory tracts requiring urgent medical treatment, OSHA cited the company for six violations, including two willful violations. The workers were injured after exposure to an acid mixture while cleaning a spill that occurred at the facility on Oct. 30, 2013. The company was cited for failing to provide workers with required protective equipment to prevent exposure and failure to provide required training in hazardous material clean-up procedures. The citations carry proposed penalties of \$166,000.

Approximately 15-20 gallons of phosphoric/sulfuric acid were released from an over pressurized hose at the facility which manufactures electrical power delivery products. Cooper Power Systems was also cited for four serious safety violations including failing to develop an emergency response plan; provide decontamination and first aid treatment for responders; and provide respiratory and personal protective equipment for use during cleanup. [To view the citations visit:](#)





## **Two Dust Explosion Incidents in Scotland**

**Two recent explosion incidents in Scotland have one again highlighted the importance of explosion safety across a range of industries.**

- **A serious explosion at James Jones & Sons in Forres left seven men injured, including three firefighters. The initial incident was followed by a second, larger explosion, which injured the firefighters attempting to control the scene. The explosion is thought to have originated from a wood dust storage silo on the site.**
- **This incident followed another serious explosion in Edinburgh Napier's Merchiston campus which forced hundreds of students to be evacuated earlier this month. Once again, a small fire (caused by overheating woodwork equipment) caused the initial incident, which then led to a larger explosion. The second explosion was caused by a buildup of sawdust and debris from the initial fire being lodged in the extraction system. Burning sawdust caused thick smoke logging in the building, which presented a challenge to firefighters on the scene.**

**Both of these incidents highlight a lack of education and awareness around the issue of dust explosions.**

**Source: ATEX Explosion Hazards**

## **Asbestos Tragedy Continues**

### **Asbestos-related Disease Indicators 2014**

**This is the third Safe Work Australia report on Asbestos-related Disease Indicators.**

**In this report, mesothelioma and asbestosis have been used to indicate the extent of asbestos-caused disease in Australia.**

**The report uses data from the Australian Institute of Health and Welfare, New South Wales Dust Diseases Board, National Data Set for Compensation-based Statistics, and the Australian Bureau of Statistics.**

**Mesothelioma has claimed hundreds more lives, according to the latest Asbestos-Related Disease Indicators reports.**

**Visit the Safe Work Australia Site to Read the Reports:**

**<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/asbestos-related-disease-indicators-2014>**

## Chemical Reaction Caused Explosion

Officials at N.H. Ball Bearings, a New Hampshire manufacturing plant, have determined that a chemical reaction caused an explosion there in February, but haven't said who is responsible for the blast, or why it happened. (See *What's Happening*, February 2014).

Gary Yomantas, president and chief executive officer said "We have determined that a chemical reaction occurred when nitric acid from a non-production process was transferred to a 55 gallon drum containing an acidic waste mixture. The acids in question are commonly used in industry for surface treatment and testing of metals," Yomantas did not go into any detail about the makeup of the acidic waste mixture, why it was in the drum, or if this transfer is a routine process at N.H. Ball Bearings.

N.H. Ball Bearings makes precision bearings and complex bearing assemblies for the aerospace, defence, medical, dental and high-technology markets.

Nitric acid, which is commonly used in industrial processes, is highly corrosive. It is a non-combustible liquid, but it increases the flammability of combustible materials, according to the Centers for Disease Control and Prevention.

Both the N.H. Fire Marshal's Office and OSHA are investigating.

Source: [www.sentinel-source.com](http://www.sentinel-source.com)

## Blaze in East China Extinguished

Thick smoke billows over a factory in Longcheng village, Suzhou city, Anhui province following an explosion, caused by the leaking of 5.6 tons of industrial chemicals, May 7. [Photo/icpress.cn]

Source: China Daily (unable to find any more information)

## Explosion, Fire Oil Recycling and Refining

Fire and HAZMAT crews battled a fire at a commercial building in Englewood, Denver. The fire was reported after multiple explosions were heard coming from a building operated by Safety-Kleen.

According to the company's website, Safety-Kleen provides waste management, used oil recycling and re-refining.

Source: [www.denverpost.com](http://www.denverpost.com)

## Florida Gaol Gas Blast

A gas explosion at a Florida jail has left up to 150 inmates and corrections officers hurt. The blast triggered the partial collapse of Escambia County jail's booking facility building. Around 600 inmates were in the building when the explosion happened.

Source: [www.news.sky.com](http://www.news.sky.com)





## **Explosions at Air Liquide Facility Ontario**

**A small fire broke out when a worker was filling a tank.**

**“Because of the nature of propane, that led to a larger fire” with several other tanks involved, Fire Chief Andy MacDonald said.**

**“Our major concern became cooling the 30,000 gallon tank so it wouldn’t become involved, allowing the propane to burn off in a controlled burn, keeping the tank cool so it wouldn’t rupture,” MacDonald explained.**

**“These tanks, when they explode, can become airborne. And they’re quite heavy and, if they do become airborne, they still contain propane. So we’re very, very cautious to make sure nothing else in the area catches on fire.”**

**Source: [www.thestar.com](http://www.thestar.com)**

## **Fire at Chemical Plant in New Jersey**

**Fire crews battled a fire at the warehouse of ResinTech chemical plant. Witnesses say they heard several explosions and then the flames erupted.**

**The roof collapsed into the warehouse, making it difficult for firefighters to get water on the source of the flames. Also, solar panels cover the rooftop and they are electrified, making it even more complicated for crews.**

**According to the company’s website, ResinTech Inc. is an “acknowledged leader in ion exchange, manufactures a broad range of ion exchange resins for water and waste water treatment, including deionization, softening, metals removal, product purification, resource recovery, and pollution control. In addition to its ion exchange resins, ResinTech supplies activated carbon and inorganic selective exchangers.” The fire is contained to the warehouse.**

**Public Information Officer William Dukes wants the public to know the water and the air in the area are safe. “There’s been a lot of questions from the public in regards to the concern about hazardous materials. The water runoff has been monitored from the beginning by the hazardous materials team and there are negative readings. The retention pond where all this water is captured does have some booming in it to make sure, but even at this point we have had no readings at all, nothing abnormal.”**

**Source: CBS**

## **Rotten Fish Turn into Exploding Missiles**

**[Pictures and Commentary](#)**



**[WATCH THE VIDEO](#)**



## **Ten Die of Suffocation: Chemical Waste**

At least 10 people died of suffocation and eight others fell unconscious while passing through a water channel which carries chemical waste from industries mainly from Chasma Sugar Mills-2 to the Indus River in Pakistan.

“Most of them died from suffocation as due to chemical wastes there was shortage of oxygen, and when these people were passing thorough this water channel they fell unconscious and subsequently died,” Dr Jehangir, a local who runs a clinic in the area said.

Most of these people used to cross this water channel in Paloon area of Ramak on a daily basis for household activities and farming. The water channel, usually crossed on foot by the locals, is less than two feet deep and mainly carries waste from the mill.

Source: [www.dawn.com](http://www.dawn.com)

## **Fire at Silo in South Lanarkshire**

Firefighters are continuing work to extinguish a fire at an industrial site in South Lanarkshire.

“Crews arrived within minutes and were faced with a fire in an industrial silo, which contained approximately 100 tonnes of material.

“Firefighters have been working throughout the morning to contain and extinguish the blaze using several main water jets, and they have made good progress removing material from the silo in half-tonne batches.

“A thermal imaging camera has been in use as our crews continuously monitor the temperature within the silo.”

Source: <http://www.firescotland.gov.uk/news-campaigns/news/2014/04/fire-at-silo-in-south-lanarkshire.aspx>



## **Process Safety Beacon: May**

### **Major Spills and Environmental Incidents**

- A fire in an agricultural chemical warehouse in Basel, Switzerland
- A plant explosion in Jilin, China
- Containment area dyke rupture in Tennessee, U.S.A.
- Release of thousands of pounds of 4-methyl-cyclohexanemethanol (MCHM) Charleston, W. Virginia

[CLICK HERE TO READ](#)

## **[A Darwin Man Accidentally Ignites Litres of Fuel with a Spark from his Power Drill](#)**



## **Explosion at US Nuclear Waste Site**

**Workers at the Hanford Nuclear Reservation in Washington state described a blast on the site two weeks ago. They described the explosion as a spark followed by flames that shot out of the pipe. The union representative said that if the pipe had broken, workers would have inhaled plutonium particles, with possibly fatal results. PFP managing contractor CH2M Hill provided the following statement to NBC Right Now: " while cutting a pipe, employees reported hearing a loud bang and seeing a small, orange-reddish flame emit from the end of the pipe. "The pipe being cut was sealed within a containment enclosure at the time. Employees did not observe any pressurization of the bag and no sign of damage. This incident follows reports of continuing chemical fume leaks from storage silos on the Hanford site.**

**The Tri-City Herald reported that Hanford contractor Washington River Protection Solutions has asked the Savannah River National Laboratory to provide analysis and recommendations following the leaks, which resulted in 17 workers receiving medical attention following apparent exposure to chemical vapours.**

**Hanford's 177 underground tanks hold 56 million gallons of radioactive and chemical waste left over from nuclear weapons production from World War II through the Cold War. So far, the clean up has cost some \$40 billion, and officials estimate it will cost \$115 billion more. Source: HazardEx**

## **White Paper Download from Newson Gale 'You don't have to be a rocket scientist to safeguard against the hazards of static electricity'.**

**For any person responsible for the safety of employees, colleagues, plant equipment and plant property, one of the most potentially confusing aspects of providing a safe operating environment is trying to determine if that site's manufacturing or handling processes have the potential to discharge static sparks into flammable or combustible atmospheres. This whitepaper demystifies static electricity and outlines what practical measures you can put in place to get control of this risk.**

**[CLICK HERE](#)**

## **Dashcam Captures Gas Station Explosion**

**State investigators at the scene blamed the accident on "improper conception" of the gas station and the fact that it did not meet current safety codes. [See the moment of the blast caught on film](#)**



## Explosion and Toxic Gas in Gold Mine

An explosion at a gold mine in the northwestern Colombian municipality of Buritica killed four miners and incapacitated a further 65 by toxic gas inhalation, according to Cesar Hernandez, the head of the country's DAPARD disaster-prevention agency. Some of the injured suffered carbon monoxide poisoning. Many are still buried underground in the illegal mine.

[READ THE FULL STORY](#)



## Texas Plywood Plant Blast

About 400 people work at the plant, which manufactures plywood and other flooring products.

The cause of the blast remains under investigation, but the Livingston Fire Department reported that a dust explosion occurred outside the main plant, in the sawdust/shavings collector system. Seven people were injured with three critical.

[Source and Read the Story](#)



A massive fire roars through a residential neighborhood in San Bruno, Calif. in September 2010  
AP Photo/Paul Sakuma

## Arraignment in Fatal Pipeline Blast

Pacific Gas and Electric Co. officials are set to face federal felony charges involving safety violations tied to a deadly 2010 natural gas pipeline explosion in the San Francisco Bay Area. An indictment filed earlier this month charges the utility with 12 felony violations of federal pipeline safety laws, which could carry a total possible fine of \$6 million, or more if the court decides it somehow benefited financially from the disaster.

Federal prosecutors allege that PG&E knowingly relied on erroneous and incomplete information when assessing the safety of the pipeline that eventually ruptured and sparked a fireball that destroyed 38 San Bruno homes. Source: FuelFix

## Refrigeration Company Stand Trial

A company has been committed to stand trial over the death of a young tradesman who died when his van blew up in a massive gas explosion. The employer, Cool Dynamics, has been charged over his death and has been committed to stand trial in the County Court. The company is facing charges of failing to provide a safe working environment, failing to provide training and failing to ensure persons were not exposed to risk. A two-day committal hearing this week heard a gas leak from one of six cylinders kept in Mr. Cosentino's work van may have caused the blast. A Worksafe report found there were two explosions, one in the body of the vehicle and one within the vehicle's cabinet. Source: Herald Sun



[W.A. ALERT -  
FLASHBACK  
ARRESTORS](#)

**ICAO AGREES TO  
PROHIBIT  
LITHIUM METAL  
BATTERIES ON  
PASSENGER  
FLIGHTS**

The DGP has agreed to adopt a prohibition of lithium metal batteries carried as cargo on passenger aircraft, but this does not include:

- those packed with or contained in equipment, or
- those carried by passengers in the cabin of the aircraft.

The report of the meeting will be available on the ICAO website

[http://www.icao.int/  
Pages/default.aspx](http://www.icao.int/Pages/default.aspx)

**Press Release from the US Chemical  
Safety Board: Chemical Safety Board  
Ongoing Investigation Emphasizes Lack  
of Protection for Communities at Risk  
from Ammonium Nitrate Storage  
Facilities; Finds Lack of Regulation at All  
Levels of Government**

The CSB has released preliminary findings into the April 17, 2013, West Fertilizer explosion and fire in West, Texas, which resulted in at least 14 fatalities, 226 injuries, and widespread community damage. Large quantities of ammonium nitrate (AN) fertilizer exploded after being heated by a fire at the storage and distribution facility. The CSB's investigation focuses on shortcomings in existing regulations, standards, and guidance at the federal, state and county level.

CSB Chairperson Rafael Moure-Eraso said, "The fire and explosion at West Fertilizer was preventable. It should never have occurred. It resulted from the failure of a company to take the necessary steps to avert a preventable fire and explosion and from the inability of federal, state and local regulatory agencies to identify a serious hazard and correct it."

The CSB's investigation found that at the state level, there is no fire code and in fact counties under a certain population are prohibited from having them. "Local authorities and specifically—local fire departments—need fire codes so they can hold industrial operators accountable for safe storage and handling of chemicals," said Dr. Moure-Eraso.

CSB Supervisory Investigator Johnnie Banks said "The CSB found at all levels of government a failure to adopt codes to keep populated areas away from hazardous facilities, not just in West, Texas. We found 1,351 facilities across the country that store ammonium nitrate. Farm communities are just starting to collect data on how close homes or schools are to AN storage, but there can be little doubt that West is not alone and that other communities should act to determine what hazards might exist in proximity."

The investigation notes other explosions have occurred, causing widespread devastation. A 2001 explosion in France caused 31 fatalities, 2500 injuries and widespread community damage. In the United States, a 1994 incident caused 4 fatalities and eighteen injuries.

## **Gas Explosion at Adelaide Service Station**

**A man escaped serious injury when the office he was working in was damaged by a loud explosion at the BP On The Run service station at Wayville.**

**Fire investigators were last night still trying to determine the cause of the blast, which occurred at 1.55pm and caused major damage to the walls and roof of an office at the rear of the building.**

**Source: [www.news.com.au](http://www.news.com.au)**

**More recently a July 2009 AN fire in Bryan, Texas, led to an evacuation of tens of thousands of residents. Fortunately no explosion occurred in the Bryan, Texas, incident which highlights the unpredictable nature of AN.**

**The CSB's investigation determined that lessons learned during emergency responses to AN incidents – in which firefighters perished — have not been effectively disseminated to firefighters and emergency responders in other communities where AN is stored and utilized.**

**The CSB has found that on April 17, 2013, West volunteer firefighters were not aware of the explosion hazard from the AN stored at West Fertilizer and were caught in harm's way when the blast occurred.**

**Investigators note that the National Fire Protection Association (NFPA) recommends that firefighters evacuate from AN fires of "massive and uncontrollable proportions." Federal DOT guidance contained in the Emergency Response Guidebook, which is widely used by firefighters, suggests fighting even large ammonium nitrate fertilizer fires by "flood[ing] the area with water from a distance." However, the investigation has found, the response guidance appears to be vague since terms such as "massive," "uncontrollable," "large," and "distance" are not clearly defined. Investigator Banks said, "All of these provisions should be reviewed and harmonized in light of the West disaster to ensure that firefighters are adequately protected and are not put into danger protecting property alone."**

### **U.K.HSE Standards for Storage of Ammonium Nitrate**

**The CSB has previously noted that while U.S. standards for ammonium nitrate have apparently remained static for decades, other countries have more rigorous standards covering both storage and citing of nearby buildings.**

**For example, the U.K.'s Health and Safety Executive states in guidance dating to 1996 that "ammonium nitrate should normally be stored in single story, dedicated, well-ventilated buildings that are constructed from materials that will not burn, such as concrete, bricks or steel." The U.K. guidance calls for storage bays "constructed of a material that does not burn, preferably concrete." At the county level, McLennan County's local emergency planning committee did not have an emergency response plan for West Fertilizer as it might have done under the federal Emergency Planning and Community Right to Know Act. The community clearly was not aware of the potential hazard at West Fertilizer. Chairperson Moure-Eraso commended recent action by the Fertilizer Institute in establishing an auditing and outreach program for**

fertilizer retailers called ResponsibleAg, and for disseminating with the Agricultural Retailers Association a document called “Safety and Security Guidelines for the Storage and Transportation of Fertilizer Grade Ammonium Nitrate at Fertilizer Retail Facilities.” It also contains recommendations for first responders in the event of a fire.

“We welcome this very positive step,” Dr. Moure-Eraso said, “We hope that the whole industry embraces these voluntary guidelines rather than being accepted only by the companies that choose to volunteer.”

The Chairperson called on states and counties across the country to take action in identifying hazards and requiring the safe storage and handling of ammonium nitrate. “Regulations need to be updated and new ones put in place. The state of Texas, McLennan County, OSHA and the EPA have work to do, because this hazard exists in hundreds of locations across the U.S. However, it is important to note that there is no substitute for an efficient regulatory system that ensures that all companies are operating to the same high standards. We cannot depend on voluntary compliance.” Source: USCSB

## **Marsh Releases Latest Edition of '100 Largest Losses'**

Marsh’s 23rd edition of The 100 Largest Losses explores the largest property-damage losses to impact the hydrocarbon extraction, transport, and processing industry, making it a valuable publication for risk professionals working across the energy sector.

Download your copy here: ['100 LARGEST LOSSES'](#)

## **Chemical Plant Explosion in China**

Two loud explosions sounded, issuing from the machine shop of a chemical plant that produces stearic acid in Rugao City. At least 5 were found dead and 12 hospitalized, reports said. Three people were missing. The final death toll has not been made public.

It mainly produces stearic acid, glycerin, palm wax.

Similar production safety accidents have been often reported in China’s chemical factories in recent years.

Last week, an explosion took place at a resin plant of Hengtong Chemical company in eastern China’s Shandong Province. A chlorine gas leak took place there in 2011, poisoning 125 people.

Last year, three people were killed in a chemical plant in Linxi City of Shandong Province, after several barrels of hydrogen peroxide exploded. Source: Epoch Times



## Refuge for Chemical Tanker after 100 Days Ordeal

*The chemical tanker Maritime Maisie, owned by Singapore-based MSI Ship Management, has been given refuge in South Korea after almost 100 days at sea following a severe collision and fire*

The Hong Kong-flagged tanker was carrying an estimated 30,000 tons of a hazardous cargo when it was involved in a collision with a pure car and truck carrier near the port of Busan, in December last year, subsequently catching fire.

The ship has since been held at sea by tugs, with the Japanese and South Korean governments unwilling to give it refuge due to the hazardous nature of its cargo and the severe damage to the hull, despite the risk of a wider environmental disaster if it breaks up and sinks.

Wijendra Peiris, team leader, Lloyd's Register's Ship Emergency Response Service (SERS), said: "This was quite an unusual situation and multiple teams in Lloyd's Register had to work together to resolve it. *Maritime Maisie* was a Hong Kong-flagged, Singapore-owned vessel carrying a hazardous cargo.

"After it was damaged in Korean waters, the vessel drifted into Japanese waters, its fire raging for well over a week. This, together with poor weather conditions, meant we had to make sure our calculations of the ship's condition and recommendations to the owners were as accurate as possible." The vessel was not safe enough for Lloyd's Register surveyors to get on board and properly assess the damage until March.

### International co-operation

Lloyd's Register's provided a breadth of services, also supporting the client with media activity. Now that the vessel has arrived in port, the classification society will be involved in overseeing the safe unloading of the cargo, cleaning of the ship and a full assessment of the vessel to see if it can be salvaged. Further assistance for the safe movement to a repair or recycling facility will also be required.

Iain Wilson, regional marine manager for Asia, Lloyd's Register, said: "This is an excellent example of marine employees across multiple countries and teams pulling together and offering fantastic levels of support to a key client. Individuals from SERS, Class and surveyors in Korea, Japan, Singapore and Hong Kong all played a part in helping this vessel get safely to port and should be proud of that achievement."

- See more at: <http://www.marineoffshoretechnology.net/health-safety-environment-news/refuge-chemical-tanker-after-100-day-ordeal#sthash.dd21VQXQ.dpuf>



Photo: marineinsight.com

[WATCH VIDEO](#)

## HONG KONG

A multilevel-marketing firm kept more than 1,500 litres of flammable aroma oils in an alleyway next to its Causeway Bay offices without a licence for the dangerous goods. The oils were allegedly found by a Fire Services Department officer who had received an unspecified complaint against Digital Crown Holdings (DCHL). The officer found 1,474 one-litre bottles and 132 quarter-litre bottles of fragrant oils - a total of 1,507 litres - in an alleyway near the offices.

In subsequent meetings with officers, the firm said the goods had already been sold and were awaiting collection, and so no longer belonged to the company, the court heard. The officer said government laboratory tests confirmed the oils contained an organic peroxide oxidising agent, which means they are categorised as dangerous goods.

Source: South China Morning Post

## Catalyst: April Edition now Available

### Some Industrial Accidents during the First Quarter 2014

- USA - Texas, Crews extinguish fire at pipeline facility in La Por**
- USA - Crews recover estimated 20,000 gallons after tanker car leaks ethanol in a Phoenix railroad yard.**
- Germany - Fire in Toluene Tank, Shell Rhineland Refinery Cologne.**
- Japan - Chemical plant explosion: 5 killed, 17 hurt.**
- Canada - Crude Oil train derails in New Brunswick.**
- US - Chemical Spill Creates Emergency in West Virginia.**
- Russia - Murmansk oil storage facilities on fire.**
- Canada - Tank spills 2220,000 gallons of asphalt oil in West Vancouver.**
- USA - New Albany biodiesel plant explosion under investigation.**
- Nigeria - Fuel tanker explodes, kills 2.**
- USA - Crews battle 11 tank battery fire.**
- China - 7 dead in Indian oil tanker blast in Zhejiang.**
- Russia - Rosneft Halts 340,000 bpd Ryazan Refinery After Fire.**
- Korea - Two Coast Guards Stem Oil Spill off Port of Busan.**
- Pakistan - Gas Pipeline Explodes, Kills Two.**
- China - Liquid Nitrogen Release Results in 4 Deaths.**
- India - Mumbai, Massive fire breaks out at warehouse of CEAT Tyres, 4 people injured.**
- Japan - Fire hits unit at Kawasaki refinery, injures six.**
- Russia - Nizhnekamsk Refinery to Halt Gasoline Output After Fire.**
- New Zealand - Christchurch Fire Service works to clear 1 million litres of leaked fuel.**
- US - Static electricity possibly behind Colorado oil and gas well explosion.**
- China - 31 killed in tanker explosion.**
- Argentina - Fire Extinguished at YPF Oil Depot 14 - 17 People Injured.**

## Caltex Issued with Second Clean-up Notice over Botany Bay Incident

Caltex Refineries complied with an initial clean-up notice issued on April 2 and, following EPA approval, engaged AECOM to undertake the assessment. The EPA has now issued a second clean-up notice to Caltex that requires them to implement the approved program. This work has now commenced.

Source: Convenience World