



AIDGC Australasian Institute of Dangerous Goods Consultants

WHAT'S HAPPENING?

October 2019

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Huge explosion in Chinese Chemical Factory

Four people have been killed after a huge explosion ripped through a chemical factory in southern China.

Another six people were said to be injured in the massive blast in the city of Yulin, Guangxi Province.

An initial investigation showed that a reaction kettle in the plant used for the synthesis of formaldehyde and phenol exploded. Up to five tonnes of the toxic substances were involved.

The incident took place in an industrial park in the city's Luchuan County. The plant is part of Guangxi Lanke New Material Company. The explosion did not spark a fire, according to the local fire brigade which dispatched eight fire engines and 38 firefighters to the scene.

Yulin is situated in southern China, near Vietnam.



[VIDEO 1](#)



[VIDEO 2](#)

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Malaya – Collapse of Storage Rack = HAZMAT incident

A rubber glove factory's decision to use an unsuitable storage rack proved costly when it broke and caused chemicals to spill in an incident at the Meru Industrial Park.

Selangor Fire and Rescue Department assistant director Hafisham Mohd Noor said his department was alerted to the incident and deployed a fire engine from the Kapar Fire Station and a Shah Alam Hazardous Materials Unit (Hazmat) team to the scene.

"Upon arrival, we found that a three-storey industrial storage rack had collapsed, causing the chemical containers placed on each shelf to crush a storage barrel containing 1,500 litres of sodium hydroxide on the ground floor. The load caused the barrel to burst and spill the chemical.

"An inspection found that the rack was unsuitable for that purpose and the excess amount of chemicals stored on each shelf caused its failure to bear the load," he told reporters when met at the scene last night.

Initial inspections also found that the factory had kept the chemicals in the wrong order as it was not separated according to the type as recommended.

"We have taken early steps by spraying sand and making a sand wall to stop the chemical from spreading outside the factory or into the drainage system.

"The Hazmat team with the help of the factory is also trying to remove the chemicals to a safer place and carry out cleaning-up operations. It will take some time but so far the situation is under control" he said. Source: The Sun Daily

China to finalise Law on New and Existing Substances

China's Ministry of Ecology and Environment (MEE) is working at "full speed" on the draft Regulation for new and existing substances, Heng Li, associate at law firm Mayer Brown, told Chemical Watch's Regulatory Summit in Brussels. And she warned that the revisions to MEP Order 7, the law on new substance registration, could be "suddenly adopted" shortly after the consultation ends on 31 October.

The draft Regulation on the Evaluation and Control of Chemical Substances (Erac), will affect any company handling chemicals in China. It focuses on environmental risk assessment and control and applies to any 'chemical substance', with no distinction between new and existing substances.



[**Chemical Watch**](#)



US Refinery Blast released 5,000 pounds of Deadly Chemical

Philadelphia dodged several potential catastrophes during a dramatic June 21 refinery blast, which released about 5,239 pounds of a deadly chemical and launched pieces of shrapnel as large as a truck hurtling across the 1,300-acre refinery complex, according to federal findings.

The disaster at the Philadelphia Energy Solutions complex began with the early morning failure of an elbow section of pipe that had corroded to half the thickness of a credit card, according to investigators for the U.S. Chemical Safety and Hazard Investigation Board (CSB).

In a matter of minutes, the fire triggered three successive explosions, the largest of which blew a fuel tank into massive projectiles, including one weighing 19 tons that travelled 2,100 feet and landed on the opposite bank of the Schuylkill River.

The failure of a section of pipe was similar to a 2012 accident at a Chevron refinery in Richmond, Calif., after which the CSB recommended that refinery operators inspect all components of the piping systems. That was not done at PES, said Kristen Kulinowski, the CSB's interim executive.

The agency's report is the first to confirm the release of toxic hydrofluoric acid, a material used as a catalyst in the alkylation unit that was destroyed in the blast.



[US CSB Animation](#)



[US CSB Factual Update on PES Incident](#)

While the CSB's investigation is still ongoing, the factual update notes important details of the incident collected through interviewing witnesses, gathering evidence and ultimately, piecing together the events that led to the explosion:

- The piping was susceptible to corrosion from the hydrofluoric acid that was in the process fluid. The elbow that ruptured corroded faster than the rest of the piping in this part of the process.
- While pipe thickness in this section of the unit was periodically measured to monitor corrosion rates, the thickness of the elbow that failed had not been monitored for corrosion. The piece of piping that failed had a high nickel and copper content. Various industry publications have found that carbon steel with a higher percentage of nickel and copper corrodes at a faster rate than carbon steel with a lower percentage when used in a process with hydrofluoric acid.
- A secondary event at the PES refinery occurred when the V-1 Treater Feed Surge Drum ruptured, which launched a fragment of the vessel weighing 38,000 pounds across the Schuylkill River. Two other large fragments landed within the PES Refinery.



[Video shows Acid Leak inside Refinery before explosion](#)



Anhydrous Ammonia and US Brewery

Respondent is required to prepare and implement a risk management program to detect and prevent or minimize accidental releases of such substances.

Source: OSHA



Chile: ENAP to be charged over Toxic Fumes

Chilean prosecutors will press charges against six executives of state energy company ENAP in relation to noxious fumes that caused hundreds to seek hospital treatment in 2018.

The highest profile incident took place in August of last year in the industrial port city of Quintero, where a strong smell in the air caused local residents to complain of nausea, headaches and vomiting.

Chilean prosecutors in late 2018 investigated a potential link between the noxious fumes and ENAP's transfer of Iranian crude oil between the ports of Talcahuano and Quintero.



Selected Published Incidents Involving US Cold Storage Facilities

Published 2011, but still interesting and relevant – shows the impact poor safety has on business performance.

Gas Leak ignites In Seattle

Three Puget Sound Energy workers were hurt after a gas leak ignited as they attempted to secure the line.

Seattle Police closed roads in the area and fire crews cleared several buildings along three blocks south of North 103rd Street. Firefighters estimate a total of 20 people were evacuated from a small apartment building, a few townhouses and several homes in the area.

Seattle Fire said allowing the gas to burn out was the safest way to end the hazard, but firefighters sprayed nearby vehicles and buildings to prevent flames from spreading.

According to PSE, a third party contractor using an excavator hit a two-inch gas line, causing a rupture. While crews were responding, the gas ignited for an unknown reason. PSE says the contractor followed the rules and called 811, but it was not immediately clear if there was an issue with the gas line location markings or the contractor's following of the marks.

Three injured workers have non-life threatening injuries and are being treated for burns.

Source: patch.com



Image: Seattle Fire Department

US Child died in Grease Trap

A Rochester, New York coffee shop where a 3-year-old boy died this summer after falling into a grease trap has been fined nearly \$8,700 by Fed-OSHA.

This incident happened when the child, who was with his mother at work, stepped on the loose lid of the restaurant's grease trap, which flipped back closed so it appeared undisturbed.

Employees discovered the child in the tank about nine minutes later but efforts to resuscitate him were unsuccessful.

Source: Rochester Democrat and Chronicle

Gasoline used as Paint Thinner

The explosion that destroyed a Brooklyn home undergoing renovations and left three people hospitalized was sparked by gasoline that a worker was using as a paint thinner.

The worker told police and FDNY fire marshals that he was pouring the gasoline in the basement of the home when the explosion happened and a small fire started.

The man was also using gas to clean up paint, a source said.

"The cause of Monday's fire at 820 Friel Place in Brooklyn was accidental, caused by improper use of gasoline," an FDNY spokesman said in a statement.

The two-story home was vacant when the explosion rocked the entire block.

Three men working on the home suffered burns to their hands, legs and faces, and were taken to area hospitals with minor injuries. A fourth victim was treated at the scene.

The destroyed home was deemed unsafe and is set to be demolished.

Source: Mydailynews

Explosion on Offshore Supply Ship

An explosion on an offshore platform supply ship injured two people in the Gulf of Mexico. The blast started a fire on the *Isla Ciari* which was moored at the Akal C-8 platform, just offshore from Ciudad del Carmen in the south of Mexico.

The two injured crew members, one of whom is in a critical condition, were airlifted to hospital. The fire was extinguished a few hours after the initial blast and the ship, which had begun to drift after the explosion, was towed to a nearby port.

The cause of the explosion remains unknown, however the *Tribuna de Campeche*, a Mexican news site, said that the blast originated from the engine room before a fire spread to other parts of the supply ship. The supply ship belongs to the Mexican Maritime Transportation Company (Grupo TMM).



Image: Jesse Ward for New York Daily News



The Akal C platforms - Image: Wikimedia



Image: Lance Cpl. Shawn Valosin/U.S. Marine Corps



PFAS Analysis – C&EN White Paper

Per- and Polyfluorinated Alkyl Substances (PFAS) are a group of anthropogenic chemicals that are highly stable and resistant to degradation. These chemicals are manufactured and used in many consumer and industrial products. As these PFAS compounds are persistent, toxic and potentially harmful to humans, the leaching and presence of PFAS in our environment have raised serious concerns globally.

This white paper summarizes the state-of-the-art analytical methods for monitoring PFAS and demonstrates the use, speed and performance of Ultra-fast Mass Spectrometry (UFMS™) for PFAS analysis in environmental waters. The described method consists of a simple methanol dilution, followed by a direct injection to LC-MS/MS, for rapid, reliable and highly sensitive quantitation of PFAS in environmental waters.



[Ultrafast LC-MS/MS Analysis of PFAS in Environmental Samples](#)

Warning for Tank Container Operators

The MSC Flaminia fire and trial should serve as a warning to tank container operators of their potential exposure in the event of an accident involving hazardous cargoes, and that they must take responsibility for the cargoes being carried, a TT Club seminar has been told.

Lawyer Peter Skoufalos, addressing the ‘Managing Risk for Tank Containers’ seminar held in London, said tank container operators transporting hazardous cargoes should be aware of the type of exposure they face “even in this niche market”.

He pointed out that phase two of the post-Flaminia trial determined that the shipper of the DVB (divinylbenzene), which exploded as the result of runaway auto-polymerisation, and the NVOCC/tank container operator bore sole responsibility for the incident, which claimed the lives of three crew members and generated an initial \$100m in cargo claims. This might actually be a ‘small claim’ in the context of today’s operations and size of vessels, he said.



[Seatrade Maritime News](#)



[What NOT to do when Cutting Open Drums](#)



Image: Daily Sabah

Chemical Factory Fire in Istanbul

A chemicals factory in Istanbul's Tuzla district was engulfed in flames, as firefighters struggled nearly two hours to contain the flames from spreading to adjacent facilities.

In the course of the fire, a tank exploded, spraying shrapnel in the surrounding area and into the forest.

Two firefighters were injured by the explosion. One was taken to the hospital and the other received sufficient treatment at the scene.

Istanbul Metropolitan Municipality Firefighting Division head Ali Karahan said the fire was taken under control after 48 fire engines and 138 personnel took part in efforts to extinguish it.

Small explosions took place in the factory and one fire engine caught fire due to one of the explosions.

Cars parked in the factory's parking lot also burnt.

Source: Daily Sabah

A PKK terror organisation-linked group has claimed responsibility for a fire at a polyurethane chemical factory in Turkey's largest city, Istanbul.

Calling itself "The United Revolutionary Movement of Peoples," the group said it had carried out the sabotage at the factory.

In the statement it published on a pro-PKK website, the group said that it had targeted the factory because it was producing chemicals, military camouflages and many other things that supported the Turkish government and the army.

US Warehouse Workers burnt in Chemical Incident

Savannah Fire Rescue, along with Garden City Fire and Chatham County EMS, responded to a chemical accident that left two warehouse workers burnt.

The accident happened at a Coastal Logistics Group warehouse located at 986 A Bourne Avenue.

Officials say two workers were transferring a dry powder substance, called Voxtar-M40, into a container when a flash fire broke out. Both workers were injured.

Voxtar-M40 is a non-toxic product that is added to other products to reduce their carbon footprint.

It is a fine, dry powder that has a high surface area volume ratio, like sugar dust, and can burn instantly when exposed to the energy from a spark, causing a small explosion.

Firefighters determined that all safety and handling standards were being followed.

Source: WSAV3



Turbine installation at the Raggividda wind farms in the northern county of Finnmark in Norway. Photo credit Bjarne Riesto.



"Green" Ammonia's Future as a Marine Fuel

Ammonia, the same pungent solution used in fertilizers and cleaning agents, may one day be the key to transporting renewable energy around the world. There are currently a number of government and corporate projects assessing the feasibility of converting excess renewable energy from sources like wind, solar, tidal and nuclear into ammonia and then back into usable energy.

In its purist form, ammonia or NH_3 is composed of one nitrogen and three hydrogen atoms making it an ideal candidate to chemically bind excess renewable energy. Like several other chemical compounds, ammonia can be transported by chemical tanker in liquid form to end-users. Based on its near ambient liquefaction point, it may be more appealing to transport ammonia over longer distances than hydrogen. Once unloaded, ammonia can be converted back into usable energy and heat with fuel cells, gas turbines, or combustion engines.

Transporting Ammonia

Similar to other products used in the petro-chemical industry, ammonia has been transported by vessels for decades. Liquefied Petroleum Gas (LPG) carriers appear to be the most popular method of transporting bulk ammonia over long distances. These vessels maintain their cargo in liquid form by using either fully-refrigerated, semi-refrigerated, or fully pressurized tanks.



Charges dropped in NSW Baby gassing Case

Charges against a NSW local health authority have been dropped after two newborn babies were given a toxic gas, instead of oxygen. One died from the catastrophic mix up, and another was left with brain damage.

John Ghanem was days old when nitrous oxide, commonly known as happy gas, was connected to the oxygen outlet and given to him at Bankstown-Lidcombe hospital in 2016. Baby John died in hospital. Another newborn baby, Amelia Khan, fell victim to the same mix up and was left with brain damage.

Safe Work NSW had lodged criminal proceedings against South West Sydney Local Health District, BOC Gas, the supplier, gas installer Christopher Turner and two other parties allegedly involved in the case.



Image: The Australian



Sluggish Control System - A Warning Sign

October 2019 CCPS Process Safety Beacon



The Dangers of Combustible Dust in the Workplace and how to combat it

Workplace hazards can be harmful to staff, work equipment and company buildings and assets. To tackle and prevent chemical workspace hazards, such as combustible dust explosions, the employer and supplier directives have been put in place for employers to take on the responsibility of ensuring workplace safety of their staff and protecting them from atmosphere explosives. These directives, known as the ATEX directives, were established by the EU because combustible dust can be made from a number of materials, including chemicals, metal, grain and wood. These materials could become extremely dangerous when reduced to either a fine powder or even particles that mix with the surrounding air to create a hazardous environment.

This could lead to the unfortunate event of a fire or explosions.



[of this information piece from Ben Mainwaring, SpaceVac International](#)

Arizona Chemical Fire

The fire ignited at the Coolidge Avenue facility when the plant was operational, Coolidge Police Department Sgt. Shanna Martinez told the *Arizona Republic*.

About 300 houses in the community were evacuated during the incident, the official said, because of a “heavy” chemical cloud that was generated by the fire.

Source: Powder&Bulk Solids

Private investment firm Aterian Investment Partners purchased Bright International this August. The company is the largest manufacturer of hair bleach products in the U.S. and also produces shaving depilatory powders, liquid developer, and hair colour.

Propane Flash fire at U.S. Pepsi

One person was injured after a flash fire from a propane tank at Pepsi MidAmerica in Marion, Illinois.

According to the Marion Fire Department, a man was filling up a tank of propane at the business when a flash fire broke out.

The man was injured and taken to a local hospital for treatment.

The building was not damaged.

Source: KFVS12

The Importance of Chemical Storage Ventilation – U.K. White Paper



Hazardous chemicals are an unavoidable part of day to day maintenance, manufacturing, cleaning, sterilisation, testing and operating applications. The storage of these chemicals involves a number of considerations. Find out what you need for the safe ventilation of corrosive chemicals.

Many industries require a number of potentially hazardous chemicals in day to day maintenance, manufacturing, cleaning, sterilisation, testing and operating applications. The safe storage of these chemicals involves a number of considerations in terms of temperature, ignition control, ventilation and segregation.

The ventilation of chemical storage areas is of paramount importance to ensure clean air and a safe working factory environment.

Ventilation is needed for chemicals and their containers as they have the potential to release dangerous quantities of vapours or gases that are damaging, flammable, corrosive, irritating or toxic. These vapours quickly accumulate and present a considerable hazard if left unventilated.

Well ventilated storage is particularly key for those substances classed as fuming or highly volatile. It is recommended that such ventilation be by air extraction from the storage room or cupboard to an external exhaust at a safe distance from any openings (windows or doors) back into the building.

The fume extraction system needs to be suitable for handling air that is potentially corrosive, given the nature of the chemical vapours to be carried from the storage area.

In such chemical fume extraction systems, it is best practice to site the fan at the end of the ductwork system. The reasoning behind this is to keep the ductwork under negative pressure which means, in the event of a leak, the system would draw in clean air rather than blowing out fumes into the building. This would limit any damage caused by the leak before it was identified.

In order to accurately specify a fan, there are two key pieces of information required; the airflow rate and the system resistance. Airflow rate is based on the number of air changes per hour needed in the storage area. From the airflow rate, the size the ductwork is determined and so the system resistance is calculated. There may be a requirement to control the fan with a sensor to switch the fan on and off. This can be achieved with the use of an inverter. The sensor sends a signal to the inverter, which in turn controls the power source to the fan. Source: www.axair-fans.co.uk

Chevron fined \$2.7m for Multiple Leaks

US regulators fined Chevron \$2.7 million on October 2 for illegally allowing uncontrolled oil spills at the Cymric Oil Field in Kern County, California. The spills occurred between May and July earlier this year when around 32,000 barrels of oil and water were released covering almost an acre of dry stream bed.

The US Department of Conservation's Division of Oil, Gas and Geothermal Resources (DOGGR) said that Chevron allowed four spills to occur where steam had been injected into the ground in order to extract oil. Acting Oil and Gas Supervisor Jason Marshall said that the spills caused a significant threat to both human health and the local environment.

Chevron has been working closely with regulators during the clean-up process which is now almost complete, according to the oil major. The fine consists of \$900,000 for failing to prevent surface expressions of oil and a further \$1,832,991 for not complying with transport requirements for oil. The surface expressions are thought to be the result of Chevron's cyclic steam operations where steam is injected into an oil production well in order to dislodge viscous oil beneath the surface. Surface expressions have been outlawed since April 2019 under regulations brought in by the DOGGR. The regulations also prohibit the transportation of oil and water through open unlined channels and ditches. Source: Desert Sun

Action against N.S.W. Mine Contractor

A contractor at the Mount Arthur coal mine near Muswellbrook has committed to spending nearly \$500,000 in undertakings after a worker was injured in a fire.

The worker received burns to his head and upper body when a fire started while he was refuelling a diesel-powered tyre handler vehicle. Due to a series of failings, diesel fuel leaked and caught fire.

Following regulatory action, the NSW Resources Regulator has accepted an enforceable undertaking from tyre contractor Otraco International Pty Ltd after the incident on 10 August 2017.

NSW Resources Regulator Acting Chief Investigator Andrew Tull said the company will pay at least \$458,219 including the funding and delivery of safety and community projects at a minimum cost of \$385,570.

Source: NSW Government Resources and Geoscience



Captured on Dashcam



New US Pipeline Safety Rules



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

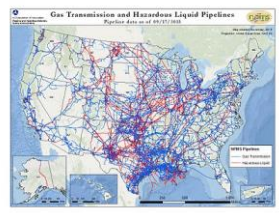


Image: WIKIWAND

The US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) has adopted three new rules that will strengthen the safety of more than 500,000 miles of onshore gas transmission and hazardous liquid pipelines throughout the US.

A PHMSA statement said the new rules, applicable from October 1, 2019, will enhance its authority to issue an emergency order to address unsafe safety conditions or hazards that pose an imminent threat to pipeline safety.

US pipelines deliver trillions of cubic feet of natural gas and hundreds of billions of ton/miles of liquid petroleum products each year. The gas transmission and hazardous liquid pipeline safety rules will modernise federal pipeline safety standards by expanding risk-based integrity management requirements, enhancing procedures to protect infrastructure from extreme weather events, and requiring greater oversight of pipelines beyond current safety requirements.

The final rules address significant Congressional mandates from the Pipeline Safety Act of 2011 and recommendations from the National Transportation Safety Board.

The Gas Transmission Rule requires operators of gas transmission pipelines constructed before 1970 to determine the material strength of their lines by reconfirming the Maximum Allowable Operating Pressure (MAOP). In addition, the rule updates reporting and records retention standards for gas transmission pipelines.

The Hazardous Liquid Rule encourages operators to make better use of all available data to understand pipeline safety threats and extends leak detection requirements to all non-gathering hazardous liquid pipelines. In addition, the rule requires operators to inspect affected pipelines following an extreme weather event or natural disaster so they may address any resulting damage.

The Enhanced Emergency Order Procedures final rule adopts the provisions of a 2016 interim final rule (IFR) which established temporary emergency order procedures in accordance with a provision of the "Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016" (PIPES Act). An emergency order may impose emergency restrictions, prohibitions, or other safety measures on owners and operators of gas or hazardous liquid pipeline facilities.

Federal regulators are expected in the near future to release their proposals for pipeline shut-off valves and rupture detection equipment. A separate proposal due sometime next year would extend safety regulations to so-called gathering pipelines that transport natural gas from drilling locations.

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UK Sewage Works releases 'toxic gas'

People living near a sewage treatment plant were warned to keep their windows closed after a chemical gas cloud escaped from the facility.

The incident happened at the Minehead Sewage Treatment Works in Somerset, which is near a popular Butlin's holiday park.

Rail services in the area were also suspended to protect passengers from toxic fumes.

A spokesperson for DSFRS told [The Mirror](#): 'We were called to Minehead Sewage Treatment Works in Dunster following a chemical reaction. 'There are reports of a chemical cloud in the area.

Avoiding Combustible Dust Mistakes

Combustible dust, which is a mixture of fine solid particles that are liable to catch fire or explode upon ignition when dispersed in the air, is a hazard common to many industries. Woodworking facilities, chemical manufacturing, food production, grain elevators and any facility that manufactures or processes sugar, flour and metal are workplaces where combustible dusts are present.

While well-intentioned companies try their best to manage explosive dusts in their facilities, many make mistakes that render their hazard-mitigation ineffective — even costly.

In 2018, there were 194 dust fires and explosions resulting in one fatality and 39 injuries in North America, compared to 145 dust fires and explosions resulting in six fatalities and 52 injuries in the previous year, according to Jason Reason, director of combustible dust services with SEAM Group in Indianapolis.

While conducting a dust-hazard analysis (DHA), implementing controls and documenting the effectiveness of the preventive measures taken is a good process to follow, "there are a lot of mistakes that occur," says Reason, who spoke at Safety 2019 in New Orleans on June 10. "Most of the time, it is possible to avoid these mistakes."



[Some common combustible-dust mistakes](#)



[Evacuations from Sydney Ikea Store](#)

Hundreds of staff and customers were evacuated from Marsden Park Ikea store after gas fumes caused chaos.

Eight people were treated by NSW Ambulance after being affected by the fumes, with a total of 300 staff and customers evacuated.

A truck parked in a loading area had released fumes into the store's warehouse. Source: 9News

Grenfell Cladding disaster.....



U.K. Government promises to go beyond Hackitt Recommendations

Government plans to implement all recommendations made in the post-Grenfell [review of building regulations and fire safety](#) have been cautiously welcomed.

Despite Brexit's capacity to drown out other issues, Monday's Queen's Speech revealed plans to go beyond the 53 recommendations issued by Dame Judith Hackitt, who chaired the review.

"A new safety framework for high-rise residential buildings" reflects a focus on multi-storey buildings since the 24-storey Grenfell Tower fire that killed 72 people.

The Ministry of Housing, Communities and Local Government will oversee the introduction of a new building safety regulator. First mooted in June, such a regulator was deemed unnecessary in Dame Judith's original report. Housing secretary Robert Jenrick tweeted that the new regulator would have "powers to enforce criminal sanctions".

Another measure omitted from Hackitt's recommendations – a ban on the use of combustible cladding on buildings [higher than 18m](#) – has already been enacted.

Standards Australia publishes Guidance on Aluminium Cladding Products

Standards Australia recently published technical specifications which detail minimum requirements for the marking of aluminium composite panel (ACPs) to enable their identification throughout the life of the product.

In early 2018, the Building Ministers Forum asked Standards Australia to develop a permanent labelling system of ACP products.

The document SA TS 5344:2019, *Permanent labelling for aluminium composite panel (ACP) products* is available on the [Standards Australia website](#)



NICNAS Chemical Gazette

October 2019



“boiling hot oil and water”

Captain Chad Pierce was called to help after lightning started a fire at a tank complex, south of China, Jefferson County. He received second-degree burns after falling into waist-deep boiling oil and water. Whilst Pierce was looking for hot spots after the fire was extinguished, he fell into a ditch.

Source: 12NewsNow

Chemical Leak in Irish Capital

A number of workers were hospitalised after a chemical leak in west Dublin.

Firefighters and paramedics were called to the scene of the incident involving hazardous material in Blanchardstown. Specialist 'HazMat' teams from Dublin Fire Brigade also came to the scene.

The incident occurred at an industrial estate in Ballycoolin where a chemical was found to have leaked from containers.

Source: newstalk.com



Brazil Refinery Fire

A fire broke out at Petrobras' Revap refinery, located in the state of Sao Paulo. The facility has a processing capacity of 252,000 barrels per day, or about 14% of Brazil's total refining capacity.

According to Rafael Prado, the head of the local union, there was a leak from a tank at Revap and teams are investigating whether there was a relation between the leak and the fire.

Petrobras reported that the fire occurred in tanks holding products used to make asphalt and fuel oil. Source: Fire Direct



Safety and Health at Work - EU-OSHA

Some groups of workers are more at risk than others when exposed to dangerous substances. This can happen because these workers are inexperienced, uninformed or physically more vulnerable. Other reasons include frequent change of jobs, or working in sectors where awareness is low, or because of greater or different physiological sensitivity.

EU-OSHA's new info sheet on vulnerable workers and dangerous substances can help. It explains employers' responsibilities, highlights which groups of workers are particularly vulnerable, such as young workers, migrants or pregnant workers - and explains how to take account of their needs through risk assessment and prevention measures.



osha.europa.eu

Top 5 OSHA Violations for US Chemical Manufacturers in 2019



Image courtesy of Pixabay

Respiratory Protection was the most-cited OSHA standard in the chemical manufacturing industry.

Officials with the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) conducted 195 inspections of chemical manufacturing facilities from October 2018 to September 2019, issuing 759 citations and fines totalling \$2.6 million, according to data recently posted on the agency's website.

The variety of standards violated in 2019 reflects the myriad complexities inherent in chemical manufacturing, from materials to equipment. Here are the five most-cited OSHA standards this year.

1.) Respiratory Protection – 1910.134

American chemical manufacturers received 106 citations for violating the standard on respiratory protection, [1910.134](#), during the period. The standard requires that employers to prevent atmospheric contamination through the use of engineering control measures like enclosures or respirators. Companies cited for respiratory protection violations were fined \$140,106.

2.) The Control of Hazardous Energy (Lockout/Tagout) – 1910.147

The standard [1910.147](#) mandates that employers create a program and procedures to install appropriate lockout/tagout mechanisms or energy isolating devices, and take other measures to prevent the unexpected start-up, release of stored energy, or energization of equipment to protect workers from injury. Chemical firms were cited 90 times and fined \$411,641 for this standard from October 2018 to this September.

3.) Hazard Communication – 1910.1200

Under OSHA Standard [1910.1200](#), producers and importers of chemicals must classify the hazards of chemicals they handle and provide information about them to workers through a hazard communication program, labelling, training, safety data sheets, and other methods. 84 citations were issued for this standard, resulting in fines of \$141,975.

4.) Process Safety Management of Highly Hazardous Chemicals – 1910.119

OSHA issued 81 citations and \$682,636 in fines for violations of this standard from late 2018 to September. Aiming to prevent a catastrophic release of toxic, reactive, flammable, or explosive chemicals, [1910.119](#) stipulates that companies using processed covered by the standard conduct a process hazard analysis and develop safe work practices and training to control the hazards identified.

A 'gentle reminder' to AIDGC Consulting Members that it is a requirement of Membership to maintain your professional competencies.

***AIDGC BY-LAW 2:
Professional Competency***

5.) General Requirements for All Machines – 1910.212

Standard **1910.212** requires the use of machine guarding to protect workers from hazards associated with point of operation, ingoing nip points, rotating parts, flying chips, and sparks. Chemical manufacturing firms received 37 citations for this standard during the period and were fined \$234,841.

To view OSHA's full list of standards cited during the year, [click here](#).



Qld Resources Sector could get new Health and Safety Body

Queensland's resources sector could get a dedicated, independent health and safety body if a new **Bill** is successful. The Bill, introduced by Queensland Mines Minister Dr Anthony Lynham, 4 September, would see a newly formed statutory body take over the Department of Natural Resources, Mines and Energy's health and safety functions — freeing the department to focus on growing mining and exploration projects and the resources sector as a whole.

Under the legislation, the proposed body, 'Resources Safety and Health Queensland', would absorb Queensland's mines, explosives and petroleum and gas inspectors, the Redbank Safety in Mine Testing Station and the coalmine workers' health scheme which covers mine dust lung diseases, such as black lung.

It would report directly to the Minister, instead of through a department, and be subject to monitoring and review by an independent commissioner for mining and quarrying, petroleum and gas and explosives.



Oil Tanker fire/explosion in Iran

An Iranian oil tanker cruising 60 miles off the coast of Saudi Arabia was rocked by a pair of missiles, briefly causing an oil leak and more broadly threatening to further inflame fraught regional tensions between the two heavyweight Muslim nations.

Iranian state television reported the explosions damaged two storerooms aboard the oil tanker – which is owned by the National Iranian Oil Company – and caused an oil leak into the Red Sea near the Saudi port city of Jeddah.

The leak was later plugged, IRNA reported.



Image: Scott Anderson



Image: NCE/Gregory Myers



Bubble Wrap and Peanut fire in Indiana

More than 20 fire departments provided mutual aid with as many as five aerial trucks on scene fighting the fire at the facility, which produces bubble wrap and packing peanuts, both highly flammable. Because of the polystyrene that was burning, the fumes from the fire were considered toxic, and an alert was made to Kentland residents to keep their windows shut.

The building was considered a total loss.

"A fire like that is almost impossible to fight because it spreads so quickly," said Kentland Fire Chief Matt Wittenborn. "We threw more than 500,000 gallons of water at that fire. We were depleting the town's water supply so we had to start getting our water from the stone quarry."

Wittenborn added that 15 employees were inside the facility at the time of the fire but they all made it out safely, and no injuries have been reported. Source: newsbug.info

US Agricultural Chemical Warehouse on fire

Flames leaped out of the former Langford Distribution agricultural chemical warehouse causing a large fire and hazardous materials response, Waco fire Deputy Chief R.M. Bergerson said.

Nearly 40 firefighters battled the blaze after smoke was seen in the area. Fire officials were concerned about the possible existence of pesticides in the building as well as the safety of the nearby 17th Street viaduct.

Using 10 fire vehicles, firefighters were able to get the fire under control at the 17,000-square-foot frame building and protect nearby buildings.

The contents of the building remain unknown but historically, the building was a supply warehouse for a retailer that sold pesticides. Waco Fire Marshal Kevin Vranich said fire marshals inspected the building this year and insecticides were inside the building then. Flames were seen shooting into the air as seven fire engines and three fire trucks were used to spray water on the building. Witnesses said they saw and heard explosions coming from the building.

Source: Waco Tribune

Brazilian Navy Investigates 30 Ships From 10 Countries

The Brazilian Navy announced that it is investigating 30 vessels from ten different countries as possible suspects of the spill of more than 100 tons of oil that since last month reached more than 140 beaches in the northeast of Brazil. Source: Maritime Herald



NSW Resources Regulator: Position Paper: Preventing Fires on Mobile Plant

EU Titanium Dioxide Classification

The European Commission has adopted the 14th adaptation to technical progress (ATP) of the CLP Regulation. It includes the controversial classification of inhalable powder forms of titanium dioxide as a category 2 carcinogen.

The European Parliament and Council of Ministers now have two months to object. The CLP amendments in Annex VI will be published if no objections are raised, and the harmonised classifications apply 18 months later.

The Commission adopted the delegated Regulation containing the ATP on 4 October, despite a litany of criticisms from both within the EU and globally over titanium dioxide's classification.



[Chemical Watch](#)



[Gasoline USTs Explode in Kentucky](#)

Leaking Filter caused deadly explosion

The fatal explosion in April at specialty chemicals firm KMCO's plant in Crosby, US, [that killed one worker and injured at least 30 more](#) was triggered by a vapour cloud of isobutylene formed after a cast iron filtration strainer failed.

That is the conclusion of [a report from the US Chemical Safety and Hazard Investigation Board](#) (CSB).

The y-strainer on the suction piping to the isobutylene charge pump had a hole that was around 15cm across at its widest point.

Eventually, the vapour cloud ignited, causing the deadly explosion.

"major" ammonia leak at Coca-Cola plant

Nashville Firefighters and HAZMAT crews were able to contain what crews called a "major" ammonia leak at the Coca-Cola plant in Berry Hill.

Crews on the scene confirmed that they evacuated employees at the plant, but no one was injured from the exposure.

The leak was bad enough for crews to have to shut down roads in a 1-square-mile radius around the plant at 407 Craighead Street.

It's not yet known what caused the leak.

Source and Image: Fox17



Oil leak at New Orleans Refinery

More than 50,000 gallons of crude oil leaked from the Phillips 66 Alliance Refinery in Belle Chasse, about 25 miles south of New Orleans, authorities said.

The leak, discovered Oct. 2, was contained and underwent clean-up. Much of the oil seeped into the refinery's stormwater system.

The Louisiana Oil Spill Coordinator's Office said that nearly all the oil was recovered. None of the oil escaped the refinery site, and no injuries were reported, state oil-spill responders said.

Source: nola.com



Explosion reported on Iranian oil tanker near coast of Saudi Arabia

Iran has claimed that one of its oil tankers has been hit with two explosions while sailing near the coast of Saudi Arabia in the Red Sea.

The ship, belonging to the National Iranian Tanker Company (NITC), was around 60 miles (97km) from the Saudi port of Jeddah when it was reported to have been hit with the explosions on the morning of October 11.



Image: IRIB News



28 – 29 November 2019 - Melbourne Marriott Hotel, Australia

Day 1: Thursday, 28 November 2019

- **Complying to Latest Updates on Australian Dangerous Goods Code Edition 7.7**
- **International Maritime Dangerous Goods Code and IATA Hazardous Goods Code Updates**
- **How IoTs Wearables Are Revolutionizing Workplace Safety in Hazardous Environments**
- **Lesson Learnt from Hazardous Safety Incidents: Valmont Coatings' Campbellfield Factory Fire**
- **New Electronic Tracking System in Tracking Illegal Storage of Hazardous Materials**
- **Innovations in Handling Explosives and Countermeasure to Unexpected Incidents Infectious Substances Storage and Transport**

Day 2: Friday, 29 November 2019

- **Best Practices and Innovations on Transport of Explosive and Flammable Goods**
- **Most Promising Technologies and Innovations in Hazardous Chemicals Detection Sensors, Pressure Gauges and Cargo Monitoring**
- **Interactive Panel Discussion on Risk Assessment Method for Dangerous Goods in Australasian Tunnels**
- **Use of Robots and AI in Controlling Hazardous Environments**
- **Insights on how BP is Keeping Its Engineers Safe in Hazardous Work by Using Immersive Virtual Reality (VR) Training**
- **Case Study on how ExxonMobil taps on Augmented Reality to Enhance Safety in its Gas Fields and LNG Plants**

PRE-FORUM SITE TOURS - 27 November 2019

- **Latest Electronic Tracking System For Dangerous Goods And Hazardous Substances Waste Management**
- **Exploring Advanced Warehousing in Handling Dangerous Goods and Hazardous Materials**

Full details, brochure and registration:



[DANGEROUS GOODS AND HAZARDOUS SUBSTANCES FORUM](#)



The Nuts and Bolts of enforcement under the Heavy Vehicle National Law

The Heavy Vehicle National Law (HVNL) is an intricate statute that contains a wide range of mechanisms to address the contraventions of its terms.

This article by Rebecca Numeitolu, HOLDING REDLICH, walks you through the nuts and bolts of the nine enforcement mechanisms that may be used in response to HVNL offences.

Q & A on Surfactants

Coatings World interviewed key surfactant manufacturers who spoke about the trends and issues effecting the paint and coatings market. Included in this Q&A are Ingrid Meier, head of applied research and technology (decorating coatings and inks) and Maria Nargiello, head of applied research and technology (industrial and automotive coatings), Evonik Coating Additives; Fabiana Marra, global business head for coatings, Oxiten; Robert Ruckle, global marketing and sales manager, Siltech Corp.; and Brad McPhee business manager, Performance Additives, Troy Corporation.

Coatings World: What do you think are the primary issues (environmental, economic, raw material cost, etc.) facing the surfactants market today?

Evonik: One of the key issues facing the market for surfactants used in coatings today is the need to keep pace with changing environmental regulations. When new regulations appear or existing regulations are revised, new EH&S data may need to be generated for certain products. Depending upon the results obtained, the hazards of the surfactant may change, and this, in turn, may require surfactant manufacturers and formulators to change their Safety Data Sheets (SDS).



Coatings World



Tanker Crash: Massive semi fire in Kansas City

The semi was reportedly carrying over 8,000 pounds of gasoline.



Ethanol Fire at Californian Facility



Fire re-ignites at NuStar Energy Facility

The fire at the NuStar Energy facility in Crockett, near San Francisco Bay, ignited two large ethanol tanks and spread to the vegetation on a nearby hillside, firefighters said.

The ATF and other state and local agencies served a search warrant on the NuStar Energy plant in Crockett, a day after a huge fire at the storage tank facility.

The search warrant is not necessarily connected to any criminal probe, but rather to immediately secure possible evidence of how the explosion and fire occurred just in case the company does not immediately cooperate with investigators.

"This issuance of a search warrant is a common practice...the company is being completely cooperative," said Steve Hill with the Contra Costa Fire Department.

That evidence could include computer servers that have video of the event immediately before and during the explosion and fire that consumed two tanks that contained about 250,000 gallons of ethanol, just 1 percent of their capacity.

In the meantime, the chairman of the Contra Costa Board of Supervisors, John Gioia, is calling on his county to introduce legislation to include NuStar and other stand-alone facilities like it in Contra Costa's existing "Industrial Safety Ordinance."

"This facility does not have the same time of robust regulation that a refinery or chemical plant does," explained Gioia, who called Contra Costa's ordinance one of the strictest in the country. "We do not have industrial accidents like this."

Firefighters kept foam on the secondary containers that are holding the ethanol that did not burn.

"We kept that foam blanket to those secondary containment structures to ensure the oxygen did not get to that ethanol," said Steve Hill, a spokesperson for Contra Costa Fire.



CHOPPER VIDEO



VIDEO – 6 min +

As firefighters descended on the volatile blaze engulfing two giant tanks at a fuel-storage facility in Crockett, they reached the front gate and found it locked. And once they made it inside the facility with its 24 storage tanks, they discovered an abandoned operation: NuStar Energy's handful of workers fled the scene and the emergency fire suppression system was not activated, Contra Costa County Supervisor John Gioia told The Chronicle



Image: ABC7 San Francisco



Image: SFGate



Fuel Tanker Explodes in Nigeria

- A petroleum tanker lost control & rammed into the wall of the Toronto hospital in Upper Iweka, Anambra State, exploding & killing a woman & her baby, it also burnt down several shops.
- Its product spilled over into the gutter and affected many shops and houses....



<https://www.thisdaylive.com/index.php/2019/10/16/two-persons-killed-as-petrol-tanker-explodes-in-anambra/>



South Korea - Oil Tankers on fire

The 25,881-ton oil tanker caught fire following an explosion when it was in a berth at Yeompo Quay in Ulsan, 400 kilometers southeast of Seoul.

A total of 25 people, all foreign nationals, were aboard the ship, but were all rescued.

The fire quickly spread to another cargo ship next to it with 21 crew members onboard, but they were also all saved.

Twelve sailors — three foreign nationals and nine South Koreans — and six rescue workers were injured, mostly from burns and smoke inhalation.

Source: Korean Times

Ulsan ban on Dangerous Goods Cargo continues at Several Terminals

The authorities are prioritising safety at Ulsan bridge after the dramatic explosion of a chemical tanker in the area.

The measure is effective for several terminals located under the Ulsan bridge, including Terminal 9, where the Stolt-Nielsen chemical tanker Stolt Greenland exploded and caught fire.

Source: Lloyds List



US - OSHA - Regional Emphasis Program for Fertilizer Grade Ammonium Nitrate (FGAN) and Agricultural Anhydrous Ammonia Facilities

The intent of this Regional Emphasis Program is to encourage employers to take steps to address hazards, evaluate facilities to determine if the employer complies with all relevant OSHA requirements, and help employers to correct hazards, thereby reducing potential worker injuries, illnesses, and deaths.



U.S. Ethylene Oxide leaks

- **A medical supply sterilizing facility east of Atlanta that is under scrutiny for toxic emissions had an 8-day leak of ethylene oxide, a cancer-causing substance.**
- **A July incident at a second metro Atlanta sterilizing plant, run by Sterigenics – which has had several unreported releases of the chemical in the past 5 years.**



Read further.....



Georgia Lawmakers grill Key Players in Toxic Air Debacle

Lawmakers from the Cobb and Fulton County Legislative Delegations called a rare joint meeting to get an update from key players in Georgia's ongoing toxic air debacle.

At the heart of the months-long controversy is ethylene oxide – a highly flammable chemical used to sterilize medical equipment – that is known to cause cancer. Currently, there are 6-8 facilities that use the dangerous gas in the state of Georgia, including Sterigenics, located in unincorporated Cobb County.



Fire on a Tuna Boat in Colima, Mexico – 1200 evacuated from dockside

More than 1,200 people were evacuated from the different companies and docks that make up the port of Manzanillo, Colima, due to the fire that occurred in a tuna vessel installing in one of the terminals, about to set sail.

The fire broke out when a group of workers welded some of the parts as maintenance works.

The fire caused the mobilization of emergency equipment at the port of Manzanillo to mitigate the flames of the ship known as “María Verónica”.

However, the fire reached the fuel tanks, so the flames expanded - uncontrollably generating a strong fire.

Source: Maritime Herald





US: Plant Manager testifies against Boss

The former manager of a Wibaux, Montana, oil processing plant that exploded in 2012, injuring three workers, avoided federal prison after testifying against his boss.

Mark Hurst, 44, of Edmonton, Alberta, Canada, was sentenced in U.S. District Court in Billings, to two years' probation and a \$5,000 fine for federal Clean Air Act-negligent endangerment, according to U.S. Attorney Kurt Alme.

Hurst provided evidence to prosecutors to help convict Peter Margiotta, then-president of plant owner Custom Carbon Processing, on Sept. 27 of charges related to the explosion.

Prosecutors said Margiotta ignored warnings from Hurst that the plant was constructed unsafely with improper ventilation and bad wiring.

Hurst also warned Margiotta that the use of natural gas condensate, or drip gas, to thin oil for processing was making conditions ripe for an explosion.

On Dec. 29, 2012, the plant accepted a delivery of natural gas condensate. Vapours filled the building during offloading and ignited, injuring three workers and causing extensive damage to the plant and truck and trailer making the delivery.

A fire burned for five days as firefighters in Wibaux worked to determine the fuel source.



Fatal Fuel Truck crash in Honduras

A tanker truck carrying fuel crashed into a residential area and exploded, setting fire to at least 10 houses in the Honduran capital of Tegucigalpa.

The driver of the vehicle, Carlos Eleodoro Reyes, 54, was killed in the accident in the capital's outlying Germania district.

Nine others reportedly suffered first- and second-degree burns, but are in stable condition.

A furniture factory and 16 vehicles were damaged or destroyed by the fire, according to a preliminary police report.

Authorities believe Reyes drove his vehicle off the road on purpose, after realizing his brakes were not working. The tanker was full and exploded on impact.

Jose Manuel Zelaya, the local fire chief, said the fire spread for some 7,000 square meters around the crash site.

It took firefighters two hours to control the blaze.

Source: NNN-XINHUA





Another leak at Geelong Refinery

Emergency services have been called to Geelong's oil refinery at least 12 times in 2019, again rushing to a leak at the Corio plant on October 14.

The CFA was called to the Viva Refinery responding to a reported leak in a crude oil production line.

A spokesman for Viva Energy confirmed "Viva Energy can advise that the minor alarm has sounded at the Geelong Refinery due to a small leak," the spokesman said.

"As per procedure, the CFA are on site. Work is underway to isolate the leak"

The latest leak comes after an eventful year for the refinery, including explosions, raining chemicals and foul smelling odours wafting from the site.

In May, Viva Energy's general manager Thys Heyns confirmed a "combustion event" temporarily shut down operations at the refinery — with a build-up of excess gas causing a metal pipe to combust. In March, droplets of a "black grease-like" chemical showered nearby properties, with testing done by Viva Energy finding a chemical used to refine petrol had been released into the air from its flare stack. In June a foul-smelling chemical odour wafted from the refinery, leaving nearby residents reporting dizziness, headaches and nausea. Viva Energy confirmed the strong stink came from the maintenance to sulphur recovery units at the plant.



[Herald Sun](#)



[US Auto Parts Distributor – Batteries](#)

An auto parts distributor in Norcross, Georgia, is facing fines from federal officials for several safety violations, said the U.S. Department of Labor's Occupational Safety and Health Administration.

Parts Authority has been accused of, among other things, not securing materials stacked in a storage area and allowing lead to accumulate in various places in a battery recharging area.

Federal officials also said employees were exposed to eye and skin burns while working with corrosive chemicals and cleaning up acid spills from damaged batteries, and that the company did not provide facilities where employees could wash off chemicals that spilled on their bodies.

The company was fined \$108,356 by OSHA because of various violations.



Image: Google Street View



Image: Virendra Saklani/Gulf News

Gas Cylinder explosion on Dubai Farm

Two men went on trial at the Dubai Court of First Instance after they were accused of causing an explosion of gas cylinders while they were illegally filling the cylinders with liquid gas on a Dubai farm.

Dubai Police were alerted about the explosion in a room inside the farm at Al Aweer area. The owner of the farm told officers that she had rented the room to the 37-year-old Afghani defendant. "There was a gas cylinder explosion inside the farm. The defendant was arrested at Hor Al Anz area with the second suspect who has burns and injuries on his hands and legs. They confessed that they were filling the gas cylinder when one of the cylinders caught fire," an Emirati policeman said in records.

The defendants from Afghanistan confessed that they had brought the gas cylinders from Ajman and transferring the gas to other cylinders with Dubai labels. They confessed that gas cylinder exploded in the process although they managed to escape. The fire soon spread to the farm. A forensic report revealed that the gas leak in the room caused the fire.

The two defendants were charged with endangering the lives of others by causing a fire on the farm, forging labels of gas cylinders, illegally possessing 112 gas cylinders and transporting flammable materials in a minibus. Source: gulfnews.com



Indonesia Offshore Oil leak to be plugged soon

Indonesia's state oil and gas company PT Pertamina said that it had stopped an underwater leak from an oil well off West Java and would permanently plug the well.

This comes after more than two months of spillages from the YYA-1 well in Pertamina's Offshore North West Java (ONWJ) block, which started on July 12 and was declared an emergency three days later. An environmental group quoted by Reuters said the spill has affected at least 13 villages and threatened the livelihoods and health of thousands of people.

More than 42,000 barrels of oil have been recovered offshore since the spill, Taufik Adityawarman, a Pertamina official said, as well as 5.7 million bags of mixed sand and oil from beaches.

According to the *Jakarta Post*, Pertamina upstream director Dharmawan Samsu said that the company spent up to \$10 million to drill a relief well and suppress the flow with heavy liquids.

The oil spill was caused by a gas well kick – the release of gas caused by low pressure in a wellbore – on July 12 that worsened two days later. The incident occurred beneath the Offshore North West Java (ONWJ) platform, located 2 kilometres north of Karawang.



Image: reuters.com

WORKSAFE NZ – Hazardous Substances



[Help with converting GHS classifications](#)

These tables show the correlation between: • the United Nations (UN) Globally Harmonized System (GHS, revision 5, 2013) of classification of chemicals, and • the hazard classification system specified under the New Zealand Hazardous Substances and New Organisms (HSNO) Act 1996 in the Hazardous Substances (Classification) Notice 2017.



[New Fact Sheet on Hydrogen Sulphide](#)

This fact sheet describes the risk posed by high concentrations of hydrogen sulphide, especially in businesses operating or located near geothermal bores.

Hydrogen sulphide (H_2S) is a toxic gas which occurs in a variety of natural and industrial settings. This fact sheet may be especially relevant to construction or road works where there is excavation, or to businesses with geothermal pools open to the public.





Self-discharging CO2 – Case Study 11 – **Marine Accident Investigation Branch** **Safety Digest – U.K.**

The CO2 discharge alarm on a ro-ro passenger ferry alerted the engineers to a potential release of CO2 gas from the engine room's fixed fire extinguishing system.

When an engineer approached the CO2 room he heard a loud hissing noise. On opening the door, he found that one of the cylinder outlets had frosted up around the junction of the flexible outlet hose and the main gas manifold, and a white cloud was forming in the space.

The main control valve to the engine room remained closed and no gas had been released into the engine room.

The service supplier who maintained the CO2 system was informed and arrived on board when the vessel came alongside. Donning a breathing apparatus, he entered the CO2 room and disconnected the flexible outlet hoses from all 26 cylinders.

All the cylinders were subsequently landed ashore and weighed. It was established that all but the two master cylinders had discharged either partially or completely.

The investigation of this incident established the following:

- The main manifold had been pressurized, most probably as a result of a leaking discharge valve on one of the cylinders.
- When the pressure in the main manifold rose above 4.5 bar the release mechanism was activated, causing the entire system (except for the two master cylinders) to discharge).
- The main manifold pressure alarm, which should have alerted the crew at a very early stage to the leakage into the manifold, was damaged and did not function as intended.
- The manifold was not fitted with any vent valves that would release any minor gas leakage into the manifold before it led to a build-up of pressure, although these were available from the cylinder valve manufacturer.
- It was common practice for service suppliers to overhaul the cylinder valves, despite the manufacturer's instructions requiring all cylinder valves to be returned to them for refurbishment.
- During servicing the service supplier would typically apply service air from the ship's compressed air reservoirs to the manifold instead of using dry air or nitrogen as recommended.

Source: Marine Accident Investigation Branch, UK Government



Dodgy Operators Storing Dangerous Goods On Notice

Victorians are being asked to keep a look out for dodgy operators storing or handling dangerous goods in a way that might put the community at risk.

An Andrews Labor Government awareness campaign has been launched urging members of the public to call WorkSafe if they suspect dangerous goods – such as drums or containers of flammable liquids – are being stored, handled or disposed of in a way which might be unsafe.

The campaign comes after legislation was introduced creating tough new penalties for the illegal storage and handling of dangerous goods, which could see individuals face up to 10 years in jail and body corporates fined more than \$6.4 million for the most serious offences.

Members of the public are being asked to speak up if they see something that they think doesn't look, sound or smell right.

The six-week campaign features print, digital, radio, social media and outdoor advertising targeting high risk locations.

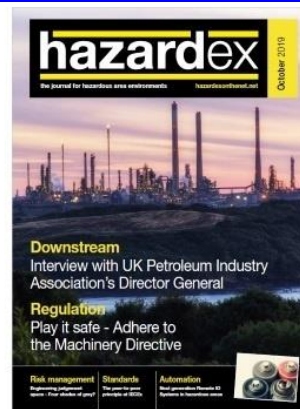
The message will be translated into 10 different languages to raise awareness among the high number of migrant workers employed in the storage and handling of dangerous goods as they are particularly vulnerable to working in unsafe conditions.

Transport drivers and more than 25,000 workplaces associated with the storage and handling of dangerous goods are also targeted, to make sure they report unsafe practices and to increase their awareness of their obligations under the Dangerous Goods Act.

Media Release, Victorian Minister for Workplace Safety



Hazardex October 2019





*Celsa Steel Works, Cardiff -
Image: Jeremy Segrott /
Flickr*

UK Steel Co. fined for fatal 2015 explosion

Celsa Steel has been fined £1.8 million after an explosion at its Cardiff plant killed two workers in November 2015. The company pleaded guilty to failing to make suitable and sufficient assessment of risks under the Health and Safety at Work Act.

The explosion was the result of a safety mechanism failing to shut down an oil heater and preventing it from getting too hot and exploding. Peter O'Brien, 51, from Llanishen, Cardiff and Mark Sim, 41, of Caldicot, Monmouthshire, were most likely unaware that oil levels in the tank had fallen below the minimum safety level because the oil heater remained on when it would have turned off but for an electrical failure.

Workers who heard the explosion at the plant in Splott, Cardiff were unable to help the pair as smoke and flames prevented access to the cellar where the blast occurred. The explosion also injured five other workers, one seriously.

In court, Judge Neil Bidder said that Celsa had failed to ensure that the machinery was safe and that the risk of explosion could and should have been recognised.

According to the *BBC*, the factory's health and safety manager said that some employees had "little or no training" on risk assessments, and Celsa had not put in place steps to make sure workers carried them out.

Source: HSE

Spanish-owned Celsa has been ordered to pay the £1.8 million fine within six months, as well as £145,771.85 in costs and a £120 victim surcharge.

IMDG Code

The IMDG Code, 2018 Edition (inc. Amendment 39-18) comes into force on 1 January 2020 for two years and may be applied voluntarily as from 1 January 2019.

The IMDG Code, 2016 Edition Amendment 38-16 came into force on 1 January 2018 for two years. A number of changes to IMDG Code Amendment 39-18 will be published in an Errata before the end of 2019.





New Requirements for N.Z. Ships

From 1 January 2020, New Zealand flagged ships visiting foreign ports of states party to MARPOL *Annex VI – Prevention of Air Pollution from Ships* will need to comply with two new requirements:

1. Stricter limits for sulphur in fuel oil used on board.
2. Ships over 5000 GT must be able to provide appropriate evidence of submitting fuel consumption data to the International Maritime Organization.

Ammonia and Diesel fire on Norwegian Trawler

A moored Russian trawler in Norway was capsized in an attempt to stop the ship from exploding after a fire aboard the vessel burnt for two days.

The fire caused the ship to dramatically list onto one side, with acrid black smoke pouring into the skyline as firefighters attempted to cool the ammonia tank.

The 200,000 litres of diesel oil stored on the ship's fuel tanker is believed to have been mostly depleted by the flames.

Around 100 people were evacuated from the area around the Bukhta Naezdnik in the port of Breivika, near Tromso amid concerns a tank of ammonia on board would ignite.

The hazardous chemical is capable of causing skin burns and critical lung damage - risking damage to local residents as well as the surrounding environment.

It is not yet known what caused the fire, which reportedly spread from the back of the ships to a store of fishing nets.

Two of the vessel's 29 crew members were treated for smoke inhalation, according to local reports.

"The fire is near the ammonia tank but it hasn't exploded," Oeystein Solstad, head of the region's fire and rescue department told local media during the operation to quell the inferno.

"We believe that the valves have worked properly and that much has gone out of the tank. "We don't therefore think that there is a great danger of explosion right now, but we keep the tank cool all the time." Source: independent.co.uk



Restaurant Gas explosion in East China

Nine people died and 10 were injured as a gas explosion ripped apart a restaurant in east China's Jiangsu Province.

The gas explosion happened at a street snack bar amongst a row of three-story shops in Xishan District in the city of Wuxi. Source: shine.cn





Grease Trap death at US Airport

The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) has officially cited Liquid Environmental Solutions of Texas LLC for workplace safety hazards after an employee died at the Austin-Bergstrom International Airport in April. The company now faces \$301,188 in fines. The man died from asphyxiation while inside a manhole that lacked enough oxygen and a means to escape. OSHA determined that the company, which provides vacuum trucks to empty the airport's grease traps, lacked proper procedures, training and equipment for accessing the permit-required confined space.



Charges finally laid after explosion at Canadian Refinery

Three charges have been laid against Irving companies in connection with last year's explosion at a Saint John refinery. WorkSafeNB says one charge under the Occupational Health and Safety Act was laid against Irving Oil Limited and two charges were laid against the employer, Irving Oil Refining GP. The charges were laid on Oct. 1.

As many as 3,000 workers were at the refinery during Thanksgiving weekend last year when the explosion shook the historic port city.

Saint John residents described feeling an explosion at about 10:15 a.m. local time at Irving's refinery on the city's east side. A malfunction in the refinery's diesel-treating unit, where sulphur is removed from diesel fuel, is believed to have been the cause of the explosion.

The Irving Oil refinery employs about 1,400 people and is the largest in Canada. It produces more than 320,000 barrels of finished energy products every day, with more than half going the northeastern U.S.

Low-Intensity blast at Indian Railway Junction

An abandoned basket was found inside an empty compartment of the Vijayawada-Vasco Amaravati express train and a tea vendor sustained injuries when he pressed it out of curiosity.

The explosive material is suspected to be a mild intensity inflammable chemical.

Source: Times of India





Oil Spill in Cook Island Harbour

A leak from the Pacific Energy pipeline has been established as the source of a big oil spill in Avatiu harbour.

Ports Authority general manager Nooroa Tou said the spill was a hazard, and they had positioned oil spill booms to confine the leakage. The Ports crew also used skimmer equipment machinery to suck up the leaking residue into drums.

Shipments of gasoline, automotive diesel oil and oil from ships are moved via a pipeline from Avatiu harbour to Pacific Energy.

The company's country manager Mark Vaikai said, they were pressure-testing the 2km pipeline in an attempt to discover where the leak had started.

The type of oil spillage could not be identified; more testing was required before this could be determined.

Samples had been taken from the site and were currently undergoing testing in the company's laboratory.

Source: Cook Island News



Confined Space fatality in Alabama

An employee asphyxiated when he lost air supply while working in a confined space. OSHA cited Turner Specialty Services LLC – an industrial contractor – for failing to ensure personnel outside the permit-required confined space were capable of providing effective rescue.

OSHA also cited the contractor for allowing an employee to enter the permit-required confined space with insufficient lighting equipment, and for assigning members of the rescue team other duties that prevented them from responding to an emergency event.

OSHA cited Turner Specialty Services LLC and Hunt Refining Co. – a petroleum refiner –for failing to ensure that the confined space entry permits identified all hazards of the space, and document that all the steps required to ensure the employee's safety in a confined space were completed. OSHA also cited Hunt Refining Co. for failing to ensure, through periodic evaluations, that Turner Specialty Services fulfilled their obligations as specified in the Process Safety Management standard.

Source: https://www.workerscompensation.com/news_read.php?id=33843



[Kurdish Fighters reveal horror 'white phosphorus' burns from Turkish airstrikes](#)

CO Poisoning at US Meatpacking Facility

A meatpacking facility in Mason, Cincinnati, was evacuated and six people were hospitalized on reports of possible carbon monoxide in the building.

Six workers were transported to the hospital for illness related to carbon monoxide poisoning. Authorities said patients were nauseous and vomiting.

The facility is currently shut down, and the Occupational Safety and Health Administration is inside with management, according to the fire department. Mason Fire also said it responded to the same call yesterday, and at least one worker was taken to hospital at that time.

Source: WCPO

Oil Pipeline bombed in Columbia

An oil pipeline carrying crude across the Andes has been bombed, resulting in a fire and spillage into the local river.

The Transandino pipeline was damaged in a bomb attack that happened in Orito municipality in Putumayo Department in Southern Colombia.

According to the oil and gas giant Ecopetrol, which operates the pipeline, it was the 19th such incident this year alone.

Source: rt.com

Although Ecopetrol did not name the group responsible for the attack, the leftist National Liberation Army (ELN) rebels, considered a terrorist organization by the United States and the European Union, regularly bomb oil infrastructure.

Fuel Depot fire in Ghana

At least 15 bulk road vehicles (BRVs), otherwise known as fuel tankers, loaded with petroleum products were burnt when fire engulfed a fuel storage depot at Kpone in the Greater Accra Region. Two other BRVs at the nearby Tanker Yard of Goodness Energy, an oil marketing company, were partially affected by the fire.

Firefighters could not immediately determine the cause of the blaze, but the Chamber of Petroleum Consumers said it suspected foul play. Some eyewitnesses too gave an indication that the fire might have been caused by an attempt to transfer fuel from one tanker to another.

Source: Daily Graphic





Hidden in plain sight... if left unmaintained, combustion systems can be catastrophic



Boilers, dryers, process ovens, thermal oxidizers or other fuel-fired industrial equipment are essential to manufacturing productivity. Regulating the flow and pressure of fuel delivery to this equipment requires a multi-component, highly-engineered device called a “valve safety train” that also helps to keep fuel out of the combustion chamber when equipment is cycled or shut off, and ensures emergency shutdowns take place if a problem occurs.

Owing to the presence of hazardous vapours and gases, a valve safety train that is not regularly inspected or maintained is a proverbial “ticking time bomb” on a factory floor.

Over the past decade, valve train explosions have killed or severely injured dozens of people who happen to be in the wrong place at the wrong time. Unfortunately, it is only after a tragic event that organizations realize how potentially dangerous fuel delivery systems can be.

Valve safety train systems typically handle natural gas, but can also transport propane, landfill, methane, sewer gas, oil, air, nitrogen, or other types of bio-gas products. Regardless of the type of fuel handled, the maintenance, cleaning and repair of valve safety trains is mission critical to employee safety, equipment longevity, fuel efficiency, and process control.

US Woman dies in Portable Toilet explosion

St. Johns County Sheriff’s spokesman Chuck Mulligan said that Denise Victoria McQuaig lived down the street from the portable toilet, which was outside of a home under construction.

Mulligan says the cause of the explosion is still under investigation. He says the bomb squad x-rayed the melted plastic to see if anything was inside.

A neighbour called 911 Saturday morning after hearing a loud bang. The Florida Times-Union reports the portable toilet was in flames when firefighters arrived. Once they put out the fire, they found McQuaig’s body.

“The portalet blew up so I mean there’s nothing left, at all,” one neighbour said.

Another said investigators had to put on hazmat suits as they worked on the scene.

Sheriff’s office spokesman Chuck Mulligan says in 32 years of law enforcement work he has never heard of such a fire before.

Source: Fox 35



Image: Tribune

3 Die cleaning Oil Tank in Punjab Refinery

Three labourers, who entered an empty crude oil tank to clean it in an industrial unit at the Focal Point near Alamgarh bypass, lost their lives.

A team from the Military Station was finally called to help carry out the rescue operation. Three senior sewage experts prominently assisted in bringing out the trapped trio.

A preliminary investigation indicated that the labourers fell unconscious due to suffocation and poisonous gas.

The unit owners reportedly delayed informing the administration perhaps to escape legal action and continued making efforts for a few hours to take them out, sources said.

Upon getting information, SDM Poonam Singh, SP Manjit Singh, DSP (Rural) Sandeep Singh and other cops reached the site. Officials from the Market Committee, the Food and Supplies Department besides the Fire Brigade and the Health Department were called to the Focal Point. Finally, help from the Military Station was sought. Army men were able to bring out four labourers from the tank in the evening. Police officials are reportedly questioning Amrik Singh and Gurdev Singh, owners of the refinery.

Crude oil, better known as 'kala tel' or black oil, is collected in drums and transported through pickup vans from workshops and automobile service stations in the subdivision and is refined for re-use, a preliminary inquiry indicated. The authorities are examining the credentials of the unit besides considering requests to compensate the affected families.

Source: The Tribune



Large Scale controlled Releases of Chlorine to demonstrate its Properties

This is a 28-minute video that uses footage from the Department of Homeland Security's Jack Rabbit release trials to demonstrate chlorine's dispersion properties. The video covers the following topics:

- Introduction
- Dispersion
- Pressure Differentials, Phase Changes, and Thermal Considerations
- Density
- Different Atmospheric/Land Conditions



NSW Police image from scene

3 Parties fined in NSW Police/EPA Investigation

A driver, transport company and recycling facility have been penalised by NSW authorities after a dangerous goods violation, while an adhesives company is also on notice, the state's police force reports.

NSW Police reports Hawkesbury Highway Patrol detected a Victorian-registered B-double travelling in an area it was not authorised to travel in Mulgrave (Windsor).

"An inspection of the combination established it was carrying dangerous goods consisting of 24.4 tonnes of used lead acid batteries and 1,080 litres of flammable liquid adhesives," it continues.

"Issues were identified relevant to the vehicle and load, which were rectified before the vehicle could continue.

"As a result of an investigation with the assistance of the NSW Environment Protection Authority, Police issued penalty notices to a number of parties involved in the transport of the dangerous goods." The Victorian-based transport company was penalised \$10,000 for failing to ensure dangerous goods are transported safely.

A Wollongong-based industrial recycling facility was issued a \$4,000 penalty notice for the offence of 'employ[ing] a person for task without appropriate supervision'.

Meanwhile, the driver of the heavy vehicle received about \$2,000 worth of fines, including:

- Drive without compliant emergency information holder - \$260
- Drive dangerous goods inappropriately placarded - \$400
- Drive class 2 heavy vehicle not in accordance with authorisation - \$674
- Not keep work diary as required - \$674

NSW police also notes a Victorian-based adhesives company is also working with police and the EPA to implement changes to its dangerous goods procedures to ensure compliance.

"NSW Police and the NSW Environment Protection Authority will continue to monitor the involved companies and take action where appropriate," it says.

Source: ATN



[Raw video shows Pennsylvania firefighters battling a fire that spread to multiple homes after a natural gas explosion](#)



Chevron fined \$2.7m for multiple leaks in California

US regulators fined Chevron \$2.7 million on October 2 for illegally allowing uncontrolled oil spills at the Cymric Oil Field in Kern County, California. The spills occurred between May and July earlier this year when around 32,000 barrels of oil and water were released covering almost an acre of dry stream bed.



Bahama Hurricane Oil spill now 5m Gallons

Dorian's winds blew the lids off several storage tanks at the facility.

The oil has spread 7 miles inland.

Some 250 workers are involved in the cleanup.

New numbers released by an oil company in the Bahamas show that an estimated 5 million gallons of oil spilt from a Grand Bahama Island storage facility damaged during Hurricane Dorian. Equinor, the Norwegian company that owns the facility, revealed the numbers in a press release Wednesday. The company had previously said about 1.5 million gallons of oil had been recovered in cleanup efforts at the site, but had not released an estimate of the overall scope of the spill. Dorian's 185 mph winds blew the lids off six crude oil storage tanks at the Equinor facility.

Source: <https://weather.com/news/news/2019-10-09-oil-spill-bahamas-equinor-dorian>



Chemical blast at Indian Factory

Three women workers were severely injured in a chemical explosion at Vajra Matrix Abrasives and Tools factory at Rampur on the outskirts of Warangal.

Apart from the three injured workers, two others were present in the factory when the explosion occurred. They escaped unhurt. When police got to the spot, Priyanka was critically injured and Swaroopa had suffered serious injuries to her right leg and eye. Rajitha was crying for help, meanwhile. The blast occurred at 10.50 am, said police. Later, Kazipet ACP K Narsinga Rao and other officials visited the explosion site.

Speaking to Express, Dharmasagar Inspector MDS Baba said that the chemical in the abrasives caused the blast and the subsequent fire. The police are yet to ascertain the cause of the explosion. "We will confirm the cause by sending the chemical substance to the FSL. Cases have been registered under Sections 337, 338, 286 of the IPC and we have begun investigating into the incident," said Baba. Source: The New India Express



Image: LEILA
MACOR/AFP/Getty Image





A blast at a chemical plant in Jiangsu province killed 78 people. Photo: Reuters

China plans a crack-down on Chemical Safety

China will step up efforts to end the illegal dumping of hazardous chemical waste over the next six years, raising its monitoring and treatment capacity and blacklisting violators, the environment ministry said.

China's chemical sector came under heavy scrutiny this year after a factory explosion in the province of Jiangsu killed 78 people.

The blast triggered a nationwide safety crackdown as well as a plan to relocate 80 per cent of producers of toxic chemicals away from residential areas.

All regions must create a comprehensive hazardous chemical monitoring system by the end of 2025 and ensure they have sufficient treatment capacity, the ecology and environment ministry said in its notice. Hazardous waste treatment will also be one of the criteria in a new corporate environmental credit system that will lead to public blacklisting and denial of financing for firms that violate rules, it added.

Local authorities will also have to draw up plans to build integrated waste disposal facilities and set up funding mechanisms for transfers of hazardous waste.

To improve waste management, local governments will also be encouraged to set up more integrated "industrial bases" in sectors such as petrochemicals and non-ferrous metals.

The ministry will also encourage the use of cement kilns or blast furnaces at steel plants to dispose of hazardous chemical waste. The Yangtze River Delta, including the commercial hub of Shanghai and the neighbouring provinces of Jiangsu and Zhejiang, will be forced to adopt the measures by the end of next year, the ministry said.

Regions along the length of the Yangtze, together with the economic areas of Beijing-Tianjin-Hebei and the Pearl River Delta, will have to comply with the new rules by 2022.

The current safety crackdown on the chemical sector is already expected to force hundreds of smaller, private players out of the market, leading to consolidation. The campaign should drive more efficient production practices and help modernise the huge but fragmented chemical industry, S&P Global Ratings said in a report.

Source: South China Morning Post



China prepares for next round of nationwide inspections in 'war on pollution'

Teams of inspectors waiting for green light to begin two years of investigations, environment vice-minister says. Focus will be on state-owned enterprises and government ministries



*A crane lifts one of the drums out of bushland.
Photo: NSW Fire and Rescue*



Photo: NSW Fire and Rescue



Photo: NSW Fire and Rescue

Hazardous Chemicals dumped NSW South Coast

A two-day operation saw around 1000 litres of illegally-dumped hazardous waste safely removed from bush land, eight kilometres north west of Wyndham.

A concerned passer-by alerted Bega Valley Shire Council to the scene of five 200 litre gallon drums containing hazardous waste that were laying in a steep ravine at the foot of Mount Darragh.

NSW Fire and Rescue Eden spokesperson Zlatko Nemec said it was a lengthy operation including strategic planning and a large capacity crane being called in to carefully retrieve the potentially dangerous toxic waste, which lay out of reach from the Mount Darragh roadside. "The safest way to remove the drums was to lift them out of the bush avoiding the risk of rupture," Mr Nemec said.

Once retrieved the drums were transported under NSW Fire and Rescue escort to a Bega Valley Shire containment area.

Bega Valley Shire Council confirmed the specific contents of the drums have not been conclusively determined and the matter is under investigation.

Source: Eden Magnet

Chemical Drums dumped in Victorian Bush

Drums of "extremely toxic" chemical waste have been dumped in bushland near a popular Melbourne walking track, requiring complex and lengthy clean-up operations.

Authorities were first made aware of dumped chemicals and they found nine drums rolled down a gully just off Mount Dandenong Tourist Road near Upper Ferntree Gully.

A Facebook post from the Upper Ferntree Gully CFA crew said it quickly became apparent when they found the drums that they were likely to contain "extremely toxic substances".

"A large HAZMAT operation ensued which lasted nearly seven hours," they said.

More drums were found at another two sites.

Source: The Age

Jeff Simpson's Hazmat and Environment Notes

July to September 2019 - Now available on



Members' Only pages of AIDGC Website



*Marlene Faltemier Photo:
Booking photo*

Santa Clara Waste Water and its parent company are to pay nearly \$2.65 million in outstanding restitution to victims affected by a 2014 explosion and 2015 nondisclosure of hazardous chemicals.

The outstanding balance owed does not include the \$950,000 in restitution already collected and distributed to victims to date, bringing the total of court-ordered restitution to nearly 3.6 million.



Continuing story..... Californian Waste Water explosion

A judge has imposed a two-year jail sentence on Santa Clara Waste Water Co.'s former human resources manager but stayed that custody time as long as she follows probation terms.

Marlene Faltemier was given the order for her role in the 2014, explosion at the company's wastewater facility near Santa Paula. Faltemier was one of several defendants, including the company and its parent organization Green Compass Environmental Solutions, to be indicted in the chemical blast.

The blast was caused by sodium chlorite reacting with other chemicals after being sucked up into the tank of a vacuum truck. The sodium chlorite on the ground dried and ignited in the explosion and was inhaled by those at the scene.

Numerous first responders and employees were injured, and 18 of them were named in the litigation.

Prosecutors alleged the company knew of hazardous chemicals on site and failed to disclose that information, leading to the victims' injuries.

Some of the charges Faltemier pleaded guilty to stemmed from a subsequent investigation into the facility's storage of Petromax. The chemical was not disclosed to state regulators as required under the law. Faltemier and a few others were indicted in the Petromax case.

Source: VC Star



Dangerous Chemicals still remain in rubble of burnt Victorian Warehouse



Image: ABC News, Jack Kerr

A massive stockpile of highly toxic chemicals has been discovered inside the rubble of a West Footscray warehouse more than a year after it burnt down during one of Melbourne's worst industrial fires. Regulators are scrambling to contain the risk to public safety and potential environmental damage from up to 10 million litres of toxic waste contained in steel drums and other containers that survived the blaze in August 2018.

The EPA estimates there are 7 to 10 million litres of chemicals still inside the burnt-out and partially collapsed warehouse on Somerville Road, part of 7 to 15 million cubic metres of contaminated soil and building debris that must be remediated.

However, the discovery - nearly 14 months after the fire - raises serious concerns about the EPA's handling of the investigation and its decision to wait more than a year to conduct a survey of the site wreckage.

The revelation that a sizeable stockpile of liquid chemicals were not incinerated in the blaze has led authorities to now post 24-hour guards at the property and revise emergency plans in the event contamination spreads to nearby properties and waterways.

The EPA's failure to detect the massive supply of chemicals left behind after the West Footscray fire is the latest in a series of significant failings in investigating and stopping the syndicate behind the massive dumping operation.

In 2016, the agency [failed to investigate intelligence](#) provided by Victoria Police that identified White was amassing chemicals in two factories in Epping.

The EPA also [belatedly discovered](#) that one Campbellfield property controlled by White it had deemed as safe in early 2019 was later found to contain up to 1.6 million litres of chemicals hidden under bales of plastic.

The revelation that a sizeable stockpile of liquid chemicals were not incinerated in the blaze has led authorities to now post 24-hour guards at the property and revise emergency plans in the event contamination spreads to nearby properties and waterways.

Source: The Age



Mumbai: Chemical Leak sparks blast on Train

Three passengers, including a teenager who was carrying a chemical kit meant for an air-conditioner, suffered burns on a train after the chemical leaked and caused a minor blast.

Source: The Times of India

AICIS – Frequently asked Questions

Australia's Industrial Chemical Introduction Scheme (AICIS) will come into effect on 1 July 2020. To help those affected prepare for the new legislation, Australia's current national chemicals agency, Nicnas, published answers to their most



frequently asked questions about the new regulation.

It is important for businesses operating in or with Australia to understand the impact of the new Industrial Chemicals Bill and the changes it may bring to their operations, logistics and compliance strategies.

NSW Regulatory Update: New Safety requirement for Electric, Hybrid and Hydrogen Vehicles

A new safety initiative has been introduced to help Emergency Services staff and first responders protect themselves and the public in the event of an incident.

All electric, hybrid and hydrogen vehicles manufactured or modified after 1 January 2019 are now legally required to have a small identifying label fixed to the front and rear number plates. This includes light vehicles, and vehicles over 4.5 tonnes.

The registered operators of all affected vehicles will soon receive a letter from Transport for NSW, along with the mandatory, self-adhesive labels and instructions on how to affix them to their vehicle.

The labels will allow vehicles to be quickly identified as having an electric or hydrogen component, so that specific procedures can be followed in the event of a crash, to make it safer for all present.

The new safety regulation came into effect on 1 September 2019 and fines may apply for failing to display the labels from 1 January 2020.

The labels are required following an update to the Australian Light Vehicle Standards and Schedule 2 of the Road Transport (Vehicle Registration) Regulation 2017. Vehicles in NSW over 4.5 tonnes must also display the labels from 1 September 2019 under 108A and 108B of Schedule 2 of the Heavy Vehicle (Vehicle Standards) National Regulation (NSW).

More information : www.rms.nsw.gov.au/roads/registration/plates-labels.html



Australian Emergency Response Guidebook 2018

The AU Emergency Response Guide (AERG) based on the Canutec Guide has been brought into a single AU electronic document.

Source: National Transport Commission



Indian Shipyard deaths

Two workers reportedly died after inhaling toxic gas in a shipyard at Kumira of Sitakunda upazila.

Shamim Sheikh, officer-in-charge of Sitakunda Police Station, said the accident took place at OWW Trading and Shipbreaking.

The duo fell into a gas tank while working on an old ship and fell sick.

Source: UNB

New Safety Standards

DR AS/NZS 60079.10.1 Supp 1:2019

Explosive atmospheres - Classification of areas - Explosive gas atmospheres - Commentary - Supplement to AS/NZS 60079.10.1:20XX (adoption of IEC 60079-10-1:20XX (ED. 3.0, MOD)) Standards Australia.

A more comprehensive coverage of updated Standards is available on Jeff Simpson's Hazmat and Environment Notes, available on the Members' Only pages of the AIDGC Website



Explosion and fire near Austrian Airport

At least five people were injured in an explosion at a garbage disposal facility near the Linz airport.

Two people sustained serious burn injuries and were airlifted via helicopter to two hospitals, while three others were slightly injured in the blast, police said.

Images from the scene showed a thick column of smoke rising from the site.

The cause of the explosion was not immediately clear. A police spokesperson said there were no indications that the blast was caused by a terrorist attack.

Over 250 firefighters battled the blaze, which spread to two warehouses and was difficult to put out, reported Austrian public broadcaster ORF.

Over 20 employees at the plant were in the area when the explosion took place, according to ORF. The majority of the workers were able to evacuate safely.

Source: dw.com





Emergency personnel on plane. Image: Katie Phillips



Image: Getty



Fonterra's Edendale Plant near Invercargill. Source: Fonterra



Plane diverted after Chemical Spill in Cabin

An American Airlines flight from London to Philadelphia landed in Ireland after cleaning chemicals leaked in the aircraft cabin. "American Airlines flight 729 from London Heathrow to Philadelphia diverted to Dublin due to an odour caused by a spilled cleaning solution in the galley," an American Airlines spokesperson said in a statement. Source: CNN

Chemical Fire at N.Z. Factory

One person has been hospitalised and multiple people have been treated following a chemical-related fire at Fonterra's Whangarei factory.

Fire and Emergency New Zealand (FENZ) spokesperson and shift manager Craig Dally said the fire was caused by an electric pump motor.

Three fire crews initially responded to the incident, seven attending the scene in total.

Dally said a small fire was extinguished before the arrival of Fire and Emergency crews.

"Several unidentified chemicals were involved," he said.

"The fire was possibly caused by an electric pump motor."

Second Hazmat Incident at two different Fonterra Plants
Firefighters attended a chlorine leak at Fonterra's Edendale plant in Southland, just eight-and-a-half hours after crew in Whangarei were called to a chemical spill and fire at a different Fonterra plant.

Fire and Emergency New Zealand told 1 NEWS they were called to the Edendale incident just before 4am. Three fire crews wearing hazmat gear attended.

Fonterra told 1 NEWS there was chlorine gas detected in a small shed.



Accidental Mixing Video

This video is designed to increase awareness about the risks of accidentally mixing sodium hypochlorite with other incompatible materials.

Topics include: Basic Properties of Sodium Hypochlorite; Sodium Hypochlorite Reactions and Unintended Consequences; Two Case Studies (Atchison, Kansas and Kitchener, Ontario); Common Contributing Factors; and Safeguards for Drivers, Customers, and Suppliers; and additional resources.



Chemical Spill at NSW Sewerage Plant

Lithgow's hazardous materials team was called to a chemical spill at Wallerawang Sewerage Plant.

Wallerawang Fire and Rescue NSW was alerted to the spill, which was believed to be caustic soda, as part of a general emergency response.

Deputy captain Luke Curran said patches of dead grass and puddles of chemicals were found in a dirt drain at the site. Absorbents were used to mop up the spill, which had pooled in the drain. It was then covered in sand. Source: Lithgow Mercury



'explosive' Gas Level at Narooma Flat Pumping Station

About 100 people were evacuated from Narooma Easts Caravan Park after an "explosive" gas level was found in the sewer system.

The Batemans Bay Fire and Rescue Hazmat were at the scene and a NSW Ambulance crew was on standby.

Eurobodalla Shire Council workers were doing a routine check of the pumping station at Narooma Flat when they detected an "explosive" gas level in the sewer system, a spokesman said.

"We have found fuel which has potentially been dumped in the sewer system, so we called triple-zero to get the Hazmat crews here and now it is in their hands," the spokesman said. Source: Illawarra Mercury

Bag explodes on Tarmac at Chicago Airport

A bag in the process of being loaded onto a Volaris flight exploded when luggage was being moved from the conveyer towards the aircraft at Chicago Midway Airport.

The Chicago bomb squad was in attendance, along with numerous other agencies. No injuries were reported and the aircraft was undamaged.

Police believe it may have been a mobile phone or battery charger that caused the blast. Source: Simple Flying



Image: Tomas Del Coro via Flickr

While the precise culprit of the Midway explosion remains to be confirmed, if it does turn out to be a lithium-ion battery, the owner could be in a bit of trouble. As the bag was being loaded, it suggests it was headed for the cargo hold of the plane, in breach of the FAA rules. However, some portion of blame has to be levelled at the TSA also, who should surely have picked up the device during security checks.

Thankfully nobody was injured and the incident was dealt with swiftly and efficiently. However, had it taken place mid-flight, in a pressurized environment surrounded by other bags, it could have been a very different story.



*Shipbreaker in Mask.
Image: photo: Adam Cohn
via Flickr CC*

Worker exposure to Toxic Chemicals a 'crisis', says UN Human Rights Council

Governments have a "duty" to prevent workers from unsafe exposure to hazardous substances and businesses a "corresponding responsibility", according to a non-binding resolution, adopted by the UN's Human Rights Council meeting.

The resolution describes occupational exposure to toxic substances as a "global crisis" and "condemns the violations and abuses of the rights of workers in all parts of the world through unsafe exposure to toxic and hazardous substances."

It calls on governments and companies to implement 15 principles, previously proposed by a UN expert, in order to strengthen protections in many countries.



[Chemical Watch](#)



[ITUC opinion](#)



[A vicious form of exploitation – UN expert](#)



[Dirt Bike explodes on Major Sydney Road](#)

A 13-year-old boy has been seriously burnt when his dirt bike's fuel engine exploded while driving across a major Sydney road.

Emergency services were called to Camden Valley Way following reports of a collision between a motorbike and a small hatchback, where they found the bike

The boy was placed in an induced coma by paramedics on the side of the road before being airlifted to The Children's Hospital at Westmead.

The boy suffered severe burns to his face, arms and legs when the bike caught alight, and also has a broken leg and suspected internal injuries.

"His fuel tank on his bike exploded. Some bystanders were saying that he potentially got hit but we didn't see the car or hear a car," Adrian Goris, who witnessed the incident, told 9NEWS.

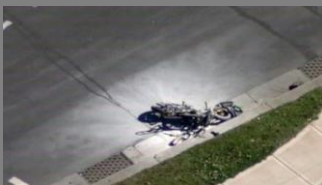


Image: Nine



New Zealand plans to phase out PFAS in Firefighting Foams

New Zealand's EPA is consulting on plans to phase out the use of perfluoroalkyl and polyfluoroalkyl substances (PFASs) in firefighting foam.

The EPA considers that "these types of foams can be phased out as there are fluorine-free alternatives to PFAS firefighting foams now available that are already being used worldwide," it said.

Firefighting foams are regulated under New Zealand's Fire Fighting Chemicals Group Standard 2017. The proposed amendments are being treated as an application under the Hazardous Substances and New Organisms Act.

They would phase out legacy fluorotelomer C8 aqueous film forming foams (AFFFs) as well as "modern" fluorotelomer C6 foams.

The EPA proposes a raft of changes to the group standard - to read more click on link above.



Corrosive Chemical spill in Auckland

Firefighters were called to a toxic chemical spill at an industrial site in south Auckland.

A Fire and Emergency New Zealand (FENZ) spokesman told *Stuff* emergency services were alerted to the spill at the Verissimo Drive.

The spill involved a mix of sulphuric acid and hydrogen fluoride, which was toxic and corrosive. At least 100 litres of the liquid had spilt.

Seven fire crews, including two specialist hazmat units, were called to the Mangere property.



*Image: Marion Van Dijk,
STUFF*



Texas - Exposure to Hazardous Chemical

Eighteen people are recovering after being exposed to a hazardous chemical in Fort Worth.

The incident occurred at a refrigerated warehouse on the east side of downtown.

Fire crews said hazardous materials inside the building caught fire, but it's still unclear what those materials were at this time. Firefighters knocked out the flames shortly after crews arrived.



How the Law of Unintended Consequences complicates Occupational Health and Safety Compliance

The introduction of OHS-related legislation can sometimes lead to an overreaction on the part of some organisations, which inadvertently results in unnecessarily complex or rigid procedures – potentially increasing risks rather than decreasing them.

If OHS-related legislation contains “scary” elements (such as industrial manslaughter), this is often an understandable flurry of activity to ensure that organisation are compliant and “protected” from the results of unforeseen events, said David Bentley, Leadership Specialist, Coach and Founder of consulting firm Just Leadership.

While the current model WHS laws are fairly “common sense friendly”, Bentley observed that there are more than a few historical examples of an overreaction to compliance fears and when the reaction is “too, well ... reactive, it can result in a rush to introduce more complex or rigid procedures,” he said.

“This common approach says that ‘if we restrict the actions of the workers by adding more steps, things won’t go wrong.’ “Unfortunately, this is where the ‘two-minute procedure that takes seven minutes to complete’ smacks head-on into the ‘real world’.”

The unintended consequence is that complexity often increases risk rather than decreasing it, said Bentley, who recently spoke at the Tasmanian Safety Symposium & Trade Show 2019.



Former Executive of NSW Chemical Company to stand Trial

When he was asked to pour large amounts of iodine from one container into another at the Sydney chemical company where he worked, Paul Flavell pushed back, worried about where it would end up.

As a warehouse employee of Cyndan Chemicals, Mr Flavell knew the company never used iodine to make anything in its factory. He also knew the chemical was often used in the manufacture of drugs.

"I asked ... why? It didn't seem right, it didn't seem lawful," Mr Flavell told a Sydney court last week.

The former Cyndan Chemicals employee was one of multiple witnesses to appear at Central Local Court, where the company's former director Michael Snounou was committed to stand trial.

Mr Snounou will stand trial for 32 offences, including importing hypophosphorous acid and gamma-butyrolactone (GBL) and possessing iodine, all suspected of being used in the manufacture of methylamphetamine, or ice.

He is yet to enter a plea to any of the charges.

Precursor chemicals can be legally imported in line with strict regulations however authorities are increasingly observing legitimate precursors being re-purposed to manufacture drugs like ice and ecstasy.

Mr Snounou's arrest came four years after a lab explosion and fire at the Cyndan Chemicals factory premises in Warriewood in 2014.

The court heard the fire at the factory marked a change in operations for some members of staff.

Mr Flavell gave evidence that iodine was among chemicals Cyndan "were not using in the factory to make anything," and that "after the fire it was my job" to repackage iodine into unmarked drums.

When he asked why he was told "do your job, or else you won't get a job."

Mr Flavell said this direction came from his immediate boss Caan Phillips, a current director of Chemlux Pty Ltd, trading as Cyndan Chemicals, and a witness during the committal hearing.



Cyndan is an Australian manufacturer of industrial chemical solutions. Its marketing arm extends into a variety of industries including Food and Beverage, Automotive & Transport, Pesticides, Construction, Technology, Agriculture, Health Care, Cleaning etc. Established in 1978, Cyndan was originally known for its innovations in solutions to industrial problems and is now renowned for its rapid and integrated growth in specialty coatings worldwide. It has grown into one of the world's most successful chemical solutions providers with over 100 employees operating from many locations around the globe.

Source: LinkedIn



Website: <https://cyndan.com.au/>

Epoxy exposure at Siemens US Facility

Five employees at Siemens were taken to Peterborough Regional Health Centre for treatment after a pipe burst, releasing a chemical compound, at the Technology Drive factory in the industrial park in the southeast end of Peterborough.

Peterborough Paramedics Deputy Chief Chris Barry tells Global News Peterborough that paramedics assessed eight people and transported five of them to Peterborough Regional Health Centre.

Siemens' Peterborough Milltronics Process Instruments facility specializes in designing and manufacturing measurement instruments for the process industries.

Epoxy is a resin often used in the manufacturing of plastics, paints, coatings and other products.



Replacement Flame Retardants present Serious Risks, caution Scientists

New flame retardants escaping from our TVs, other electrical and electronic products, and children's car seats are just as toxic as the flame retardants they're intended to replace, according to a peer-reviewed study published today in *Environmental Science & Technology Letters*. The authors found that the replacement chemicals, called organophosphate flame retardants, have been associated with lower IQ in children, reproductive problems, and other serious health harms.



CHRISTOF STACHE, The Associated Press file photo





MF Ytterøyningen. Photo courtesy Corvus Energy

Fire/Gas Explosion on Norwegian Ferry

Norwegian authorities are [warning](#) shipowners and operators about the dangers associated with lithium-ion battery systems after a fire and subsequent gas explosion on board a diesel-electric ferry in Norway.

The small fire was reported October 10 in the battery room of the Norled passenger ferry MF Ytterøyningen. The ferry returned to harbour under its own power where passengers and crew were evacuated to land.

Overnight, however, a serious gas explosion rocked the battery room causing significant damage.

Norwegian broadcasting company NRK [reported](#) that twelve firefighters were taken to the hospital for exposure to hazardous gases associated with the batteries.

“The Norwegian Maritime Authority recommends that all shipowners with vessels that have battery installations, carry out a new risk assessment of the dangers connected to possible accumulations of explosive gases during unwanted incidents in the battery systems,” the Norwegian Maritime Authority said in statement.

Alternatively, British Columbia-based, Corvus Energy, which supplied the ferry’s battery system, has [issued recommendations](#) to operators not to sail without communication between the shipboard energy management system and the battery packs, as well as what to do in case of a gas release or “thermal runaway situation.

Thermal runaway occurs when lithium-ion cell temperatures exceed the thermal runaway threshold, resulting in the sudden release of flammable, toxic gases and excessive heat that could result in an explosion.

The Norwegian Maritime Authority says the exact sequence of events in the Ytterøyningen fire has not been established, but it will issue a Safety Message update when additional facts, information and causal connections are made.

All of this has major implications for Norwegian ferry operators who are increasingly turning to hybrid diesel-electric or fully-electric power for vessels operating in environmentally sensitive fjords and coastal areas.

The Ytterøyningen was delivered in 2006 and is equipped with a Corvus Orca Energy storage system (ESS) with 1989 kWh capacity.

The Norwegian Maritime Authority circular addressing the hazards [can be found here](#). Source: gCaptain

GHS or Dangerous Goods Label?

Many people are confused about the difference between GHS and dangerous goods labels and do not understand when and where to place these labels.

This article offers a detailed comparison

BUT MAY NOT APPLY IN AUSTRALIA

Comparison of GHS and dangerous goods labels



[View here...](#)

AIDGC Consultant Richard Greenwood has recommended the following fact sheet from Safework NSW with the proviso that on page 5, the GHS environment pictogram is used twice instead of the TDG EHS marking.

Richard also added that Placarding of Stores must use the relevant Dangerous Goods Label.



GHS What you need to know

Richard may be contacted here:



[RG Chemical Safety](#)

37th meeting of the United Nations Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (UNSCGHS)

This meeting of the Sub-Committee marked the start of a new biennium, and as such, proposals to revise the recently published 8th Revised Edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) are in their early stages of development and will be considered for adoption at sessions later in the biennium.

Key changes to the GHS agreed upon at this meeting include:

An amendment to the presentation of flammable gas hazard category 1A in Annex 3.

Please note that new revisions of the GHS are not automatically adopted in Australia. The 3rd revised edition of the GHS is referenced in the model Work Health and Safety laws. We are progressing work to adopt the 7th revised edition in Australia, and have recently published a [Consultation Summary](#) on the proposed implementation.



Crops harvesting banned after French Chemical Plant Fire

The huge blaze erupted in a storage facility owned by Lubrizol, a manufacturer of industrial lubricants and fuel additives.

The soot spewed out by the blaze over some agricultural areas was “liable to present a public health risk that requires us to take immediate measures on a precautionary basis”, the regional administration said.

It added in decrees published that in the absence of food safety guarantees from producers, anything likely to have been exposed to contamination would have to be destroyed.

Around 100 districts in the area surrounding Rouen are expected to have been affected.

Source: France 24

Head of chemical firm to face French Senate

The American head of a chemicals company whose plant in northern France was ravaged by a huge fire last month, spewing a noxious black cloud for miles around, will face two parliamentary commissions seeking answers on the site's security.

Eric Schnur, the chief executive of Lubrizol, will appear before Senate and National Assembly commissions as the company begins the delicate task of removing around 160 damaged barrels of chemicals from the site.

Source: The Local

In total, officials said 5,253 tonnes of chemicals burnt at the site, and an additional 4,250 tonnes at a neighbouring storage facility.



US Nuclear Fuel Facility Incident

Three employees at the Westinghouse nuclear fuel facility southeast of Columbia were sent to the hospital following maintenance work on hydrofluoric acid process equipment.

The employees had reported "an unusual taste in their mouths," according to an Oct. 16 U.S. Nuclear Regulatory Commission report.

The three workers spent the night at the hospital, according to the report, but only one was medically treated.

That triggered a S.C. Occupational Safety and Health Administration, or OSHA, notification. Source: Aiken Standard

3 months ago..... a waste drum at a nuclear fuel factory caught fire and, according to a federal safety report.

In a report filed with the Nuclear Regulatory Commission, Westinghouse said the drum exploded after workers at the plant filled it with uranium-contaminated filters, rags, mops and some paper. The container held just over 70 grams of uranium, which is used in nuclear power plants to create a chain reaction that generates electricity.

Westinghouse said a chemical reaction caused the material to heat up, building pressure in the drum. The container blew off its lid, paper inside caught fire, and some of the contaminated material showered the surrounding area, according to the report.

A spokesman for the Nuclear Regulatory Commission said the fire essentially put itself out.

Westinghouse is studying what caused the drum to explode. The company plans to set new rules to keep the wrong materials from mixing, and it will let containers of nuclear material vent to keep pressure from building inside.

Source: The Post and Courier



Quebec Auto Parts Company fined

An automotive parts supplier based in Quebec, Les Entrepôts A.B. inc., was recently fined a total of \$564,000 after pleading guilty, on October 4, to three counts of contravening the Canadian Environmental Protection Act, 1999 and the Volatile Organic Compound (VOC) Concentration Limits for [Automotive Refinishing Products Regulations](#), which are part of the Act.

An investigation by Environment and Climate Change Canada (ECCC) enforcement officers revealed that the company had imported, offered for sale, and sold automotive refinishing products that contained volatile organic compounds in excess of the allowable limit. The company also failed to comply with an environmental protection compliance order issued by an enforcement officer, under the Canadian Environmental Protection Act, 1999.

The company received two fines of \$125,000 for importing and selling the products, respectively, totalling \$250,000, and a fine of \$150,000 for failing to comply with an environmental protection compliance order. In addition to the fines on the three counts, the company received an additional \$164,000 fine for financial gains. This amount represents the profits generated by the sale of non-compliant automotive refinishing products. The total fines will be directed to the Environmental Damages Fund.

In addition, the judge ordered the confiscation and destruction of the automotive refinishing products seized at the company's expense, as well as the publication of an article in Le Carrossier magazine (Autosphere.ca) within six months. The article must contain the facts of the offence and the details of the sentence.



Accidentally added 'Yellow Death' Chemical to a Cocktail

The bar's owner said confusing a bottle of Foam-Brite for sour mix was just an honest mistake.

Long Island Tea is usually a combination of vodka, gin, rum and triple sec and Foam-Brite Condenser Coil Cleaner is a cleaning product for use in heating and cooling systems.



Contributions are always welcome – more than welcome!



Email [Robyn Hogan](#) with anything you think is interesting, informative, useful, funny.....

My thanks this month to Jeff Simpson and Don Johnson.