



WHAT'S HAPPENING?

January 2014



This is the Freedom Industries plant along the Elk River, just north of Charleston, where the "Crude MCHM" leak occurred

Photo: Lawrence Pierce, Saturday Gazette Mail

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

**HazMat 2014
Melbourne, May
2014
"Achieving a
Productive &
Resilient
Industry"**

Chemical Spill in West Virginia U.S.A.

Schools and restaurants closed, grocery stores sold out of bottled water, and state legislators who had just started their session cancelled the day's business after a chemical spill in the Elk River in Charleston shut down much of the city and surrounding counties. The federal government joined the state in declaring a disaster, and the West Virginia National Guard planned to distribute bottled drinking water to emergency services agencies in the nine affected counties.

Shortly after the spill a licorice-like smell enveloped parts of the city, and Governor, Earl Ray Tomblin, issued an order to customers of West Virginia American Water: Do not drink, bathe, cook or wash clothes with tap water.

The chemical, a foaming agent used in the coal preparation process, leaked from a tank at Freedom Industries (a manufacturer of chemicals for the mining, steel, and cement industries) and overran a containment area.

The tank that leaked holds at least 40,000 gallons, said Tom Aluise, a state Department of Environmental Protection spokesman. "We're confident that no more than 5,000 gallons escaped," he said. "A certain amount of that got into the river." Agency officials do not know how long the chemical had been leaking, Aluise said. There was a breach in a concrete wall that served as a containment area to prevent spills from leaving the storage site, he said.

According to a fact sheet from Fisher Scientific, the chemical is harmful if swallowed — and could be so if inhaled — and causes eye and skin irritation. Other symptoms include nausea, vomiting, dizziness, headaches, diarrhea, reddened skin, itching and rashes, according to a news release from the American Association of Poison Control Centers.

Source: Associated Press writers Brendan Farrington, Pam Ramsey and Jonathan Mattise contributed to this report.

Did Freedom Industries have to report the spill?

[Charlestown Gazette Blog](#)



The Elk River in Charleston, W.Va. A coal-processing chemical spill last week cut off water to more than 300,000 people. Tyler Evert/Associated Press

This incident has provoked a lot of discussion in the US. The chemical in question was "grandfathered" when the Toxic Substances Control Act was introduced in 1976 which seems to have allowed only a minimum of toxicological work to be done on it. It looks as if the chemical was stored within one of several 48,000 gallon storage tanks, within a brick-bunded area that apparently didn't do its job when the tank leaked, and since the tanks were located right next to a river and up-river from the intake of a water treatment plant, who's operators were unaware of the leak, it was allowed to contaminate the entire area of reticulation.

The above comment from Member, Tim Nightingale

According to reporting by Ken West, goto:

<http://www.wvgazette.com/News/201401100100> - the Virginia Department of Environmental Protection (WVDEP) investigators found that 2,000 to 5,000 gallons of Crude MCHM (more about that later) had leaked out of a hole in the storage tank. It pooled in the containment area (as it is supposed to do), but that containment also contained holes so that the material leaked out of the containment area as well and then flowed down hill to the Elk River and then into the national news. Ken Ward reports today that the U.S. Agency for Toxic Substances and Disease Registry (ASTDR), part of the U.S. Centres for Disease Control and Prevention (CDC) had determined a 'safe level' of MCHM in drinking water, 1 ppm. This is a calculated value not a tested value.

The above comment from Member, Peter Hunt

Further details available from

<http://chemical-facility-security-news.blogspot.com.au/>

This major chemical spill came in a state with a long and troubled history of regulating the coal and chemical companies that form the heart of its economy.

The Charleston Gazette-Mail reported that a team of experts from the United States Chemical Safety Board asked the state three years ago to create a new program to prevent accidents and releases in the Kanawha Valley, known as Chemical Valley.

That came after investigation of the August 2008 explosion and fire that killed two workers at the Bayer CropScience plant in Institute, W.Va. No program was produced, and another team from the same board is expected to arrive Monday to investigate this accident.

Angela Rosser, the executive director of West Virginia Rivers Coalition said "lawmakers have yet to explain why the storage facility was allowed to sit on the river and so close to a water treatment plant that is the largest in the state." Ms. Rosser and others noted that the site of the spill has not been subject to a state or federal inspection since 1991. West Virginia law does not require inspections for chemical storage facilities — only for production facilities. Source: New York Times



WorkSafe ACT
presents
information
sessions on the
harmonised work
health and safety
[WHS] laws for the
ACT.

This seminar will
include information
regarding the WHS
Act, the WHS
Regulation, Codes
of Practice and
penalties.

The cost of this
seminar is \$20 +
GST per person.
Tea/coffee and
biscuits will be
served.

February 7

[Register Online](#)



A resident captured this
image of the home
exploding on his mobile

IEC Publishes State of the Art Guidance for the Avoidance of Hazards Due to Static Electricity

This 168 page document is the first of two documents to be published by the IEC under the “60079-32” designation and is intended to aid the designers and users of process equipment minimise the risk of incendive electrostatic discharges within potentially explosive atmospheres. It covers a broad range of process scenarios that can lead to the generation of electrostatic charges, provides examples of what measures can be taken to reduce charge generation and accumulation and outlines how process equipment should be grounded and bonded.

To read more, please download the full article by clicking this link:
<http://www.newson-gale.co.uk/Documents/ettg/ng-uk-ettg-28.pdf>

NSW Police Fined over Officers' Exposure to Toxic Drug Exhibits

NSW Police has been fined \$350,000 plus court costs by the Industrial Court of NSW, for exposing officers to toxic drug exhibits during an audit at the Sydney Police Centre in March 2009. Three officers were performing a drug audit at the drug exhibit centre when they noticed a strong chemical smell in the air, and a burning sensation in their throat and nasal passages. Both Sergeant Hanna and Senior Constable McGrath became seriously ill after exposure to the drugs, which a WorkCover investigation found were improperly stored. Sergeant Hanna was left on life support in a critical condition, after his lungs shut down. WorkCover found some of the drug exhibits had been sitting there since 1996.

Source: ABCNews

Explosions Caused Fire at W.A. Home

Police believe two brothers were cooking amphetamines inside their mother's state housing home at South Lake. Residents of adjoining units were evacuated and it took firefighters 1.5 hours to extinguish the blaze at the Glenbawn Drive property. Specialised Organised Crime detectives and Arson Squad officers continued their investigation today, removing noxious, poisonous and volatile chemicals from the home. Police believe the chemicals were being used to manufacture drugs in the rear bedroom of the house.

It was the fifth clandestine drug lab busted by police in the past 10 days. Source: ABC News

Corporate Members

Our Corporate Members provide a range of products and services to the Dangerous Goods Industry. Their contact details are:

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New Agriculture & Veterinary Chemical Legislation (Removing Re-approval & Re-registration) Amendments

The Australian Government has committed to easing the burden imposed on the Australian economy and agricultural sector by reducing red and green tape on business by at least \$1 billion per year. This commitment includes a measure for improving the efficiency of the agriculture and veterinary chemicals regulation. The first priority is to remove the requirement for AgVet chemicals to be periodically re-approved and re-registered.

The Agricultural and Veterinary Chemicals Legislation (Removing Re-approval and Re-registration) Amendment Bill 2013 will give effect to this commitment and make further improvements to reduce red tape. At this time, the government intends that the Bill pass through Parliament by 30 June 2014.

An exposure draft of the Bill is available:

[Exposure Draft of the Bill](#)

The Bill would:

- Remove the requirement for agvet chemical re-approval and re-registration, including
 - Remove end dates for approvals and last renewal dates for registrations so that approvals and registrations will no longer end after a particular period
 - Remove redundant provisions that allow applications to re-approve and re-register
- Introduce further simple reforms to agvet chemical regulation to reduce red tape and improve efficiency, like providing for less frequent registration renewals
- Improve the APVMA's ability to secure information about the safety of chemicals supplied in the market to improve health and safety and compliance
- Require the APVMA to provide access to information about approvals and registration in its files to persons eligible to receive it
- Address some minor implementation issues identified in existing reform legislation.

The Bill would principally amend the *Agricultural and Veterinary Chemicals Code Act 1994*. A compilation of this Act, as it will be, when the exposure draft legislation has effect, is available:

- [Compilation of the Agricultural and Veterinary Chemicals Code Act 1994](#)

The AIDGC is looking to run another Hazardous Areas Workshop probably in March 2014.

If you are interested please email robhogan@tpg.com.au and you will be advised as soon as possible.



The unit where five emergency service personnel were injured on Saturday night. Photo: Simon Schluter

A consultation paper about the Bill explains how the government would remove re-approval and re-registration. This paper also discusses some additional amendments to reduce red-tape and address minor issues identified with implementing existing legislation, including a detailed explanation of specific provisions. The paper discusses regulations necessary to accompany the Bill. The consultation paper is available:

- [Consultation paper](#)

The government is encouraging stakeholders to review the draft Bill and consultation paper.

Submissions are preferred by email to [Agvet Chemicals Regulation Reform Team](#)

Submissions will also be accepted by mail:

Department of Agriculture

Agvet Chemicals Regulation Reform (M.6.137)

GPO Box 858

Canberra ACT 2601

Submissions should be made by AEST 5pm on Friday 7 March 2014.

Thanks to Member Jeff Simpson for the above summary, from:

<http://www.daff.gov.au/agriculture-food/ag-vet-chemicals/better-regulation-of-ag-vet-chemicals>

Five Emergency Services Personnel Injured in Melbourne LPG Explosion

A tourist has told of hearing “screams of agony”, and neighbours have recalled horrific scenes following a gas explosion that injured five emergency services personnel at a unit in Melbourne’s south on Saturday night. Police believe the blast was the result of an LPG gas canister exploding, but have yet to determine how the flare-up occurred.

Two junior female constables from St Kilda police station and a senior sergeant from South Melbourne station, aged in his 50s, were injured in the blast, with one woman sustaining horrific burns to her face and upper body. The explosion occurred after crews responded to calls of a man threatening self-harm in Hambelton Street, Middle Park. Source: ABCNews

Company Admits Shipping Explosive Cargo

“The article in the December Newsletter relating to the Oxygen generators is factually incorrect. The Generators don’t contain explosives and the aircraft described wasn’t brought down by an explosion but by an onboard fire started by the faulty generator.”

Comment from: Corporate Member: Grant Curran, EnLog Pacific Holdings P/L T/as RGM Pacific

Five Chemical Plant Explosions: the Causes & How to Avoid Future Disasters

In perhaps one of the most dramatic videos ever, the Henderson, Nevada rocket fuel plant, supplier to the US space shuttle program, explodes in 1986, two years after the Space Shuttle Challenger disaster. For its size and damage, it remains one of the largest ever chemical plant explosions. Following are five videos, first the Henderson, Nevada incident, followed by four that have occurred since.

Ongoing chemical plant explosions are devastating and point to the need for improved design and upgrading of facilities that use flammable substances. The U.S. Chemical Safety Board (USCS) has completed investigations into scores of accidents like these 5 chemical plant explosions, suggesting that the use of smarter technology, already available, will help plants avoid adverse events in future. But that's not all: advanced technology is well and good, but if people don't follow basic chemical regulations and safety standards disasters will continue unabated.

Watch the Video on [Henderson, Nevada, Rocket Fuel Plant - 1988](#)

Cause: The Henderson, Nevada rocket fuel (ammonium percolate) plant explosion in the above video registered 3.5 on the Richter scale and was felt 600 miles away. The explosion decimated the \$100 million plant, which made rocket fuel for the US space shuttle program. At the time of the event, the space shuttle program was on hold due to the Challenger disaster two years earlier. But work at the Henderson plant continued apace and eventually the plant ran out of containers. In building new storage containers, welders are believed to have ignited existing drums of ammonium percolate. The site was filled with many sealed bins, some stacked on top of others, covering an area the size of a football field. Once the first explosion occurred, a chain reaction soon followed.

Four other Videos:

[Geismar Plant Explosion, Louisiana- 2013](#)

[Diaper Manufacturing Facility, Japan - 2012](#)

[Chevron Oil Explosion, Richmond, California - 2013](#)

[Danlin Chemical Plant, Thomas, Oklahoma - 2013](#)



An explosion at the Williams Companies Inc. plant in the Ascension Parish town of Geismar, La., Thursday, June 13, 2013. (AP/Ryan Meador)



Press at the Chemical Plant. AP Photo/Kyodo News

What Can Be Done to Prevent These Types of Disasters?

One recent upgrade many plants are making is the inclusion of automatic shut off valves that are installed on the inlet or discharge piping of tanks. This technology employs thermal shut off valves that automatically close when they are heated above a preset temperature.

These automatic shut off valves would have prevented the Haz Mat team in the Garland event from having to enter a burning plant to turn off valves and would have kept any flammable, combustible or toxic liquids or gasses from leaking or fueling the fire.

Source: www.industrytap.com

Five Die in Blast at Chemical Plant in Japan

Five people were killed and at least 17 others injured in an explosion at a chemical factory in central Japan today.

Investigators suspect a chemical reaction involving hydrogen caused the blast at metal and chemical company Mitsubishi Materials Corp's Yokkaichi plant, about 220 miles west of Tokyo. The blast appeared to have happened when workers were rinsing heat exchange equipment during maintenance at the silicone plant, according to a Mie prefectural police official.

Police said five workers died. Fire department officials said that 17 people were taken to hospitals.

The dead and injured were all believed to be workers at the factory.

Source: London Evening Standard

U.S.A. Chemical Safety Working Group to Issue Draft Plan in early 2014

The Chemical Facility Safety and Security Working Group, established in the wake of the Texas fertilizer plant accident, has made substantial progress and plans to issue a draft plan according to a progress report.

The group is "assessing methods that Federal and State agencies can use to identify chemical facilities that have not met their regulatory obligation," the report said. It is also considering tightening chemical regulations and revising the Department of Homeland Security's "chemicals of interest" list.

Source: <http://thehill.com/blogs/regwatch/pending-regs/193889-belated-report-cites-progress-in-chemical-safety-push#ixzz2qLnUlzCg>

Read More:

[Chemical safety working group to issue draft plan early next year](#)

Chemical Facility Safety & Security Working Group
[23 Page List of Policy Options](#)



The Floating World

Hot-air ballooning is a unique form of aviation. Some challenges are ballooning's alone, while other safety aspects are familiar to any aviation operator.

How's this for a safety concept?

Weave a giant basket, big enough for up to 20 people, and then put it under a huge bag that you inflate by burning compressed flammable gas. Ascend into the sky. You've got no steering and subtle control over climb and descent.

Under the circumstances, hot air ballooning has an enviable record, by some measures comparable with air transport. Fatalities are very rare in both.

But analysing accidents against hours flown show that non-dirigible lighter-than-air flight also has unique safety challenges.

Data analysis suggests that in Australia, general aviation (GA) has the highest number of accidents, followed by commercial air transport and the balloon industry.

However, taking into account hours flown, the balloon sector has the highest accident rate, by quite some margin, followed by GA, and then commercial air transport.

Between 2007 and 2012, the average balloon accident rate per 1000 hours was 0.356; for GA it was 0.086; and for commercial air transport it was 0.016.

Balloon accident numbers are low enough to jump around from year to year-no more than five were recorded in any single year between 2007 and 2012, and that year had only one recorded accident.

But figures from the US confirm the general message of Australian statistics-and suggest a divergence between accident rates and fatal accident rates.

Source: FSA Issue 96/http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_101833



Read now: free access to January issue of AIChE Journal

Access is free to interested readers. The issue's Perspective column, coauthored by Nancy Leveson and George Stephanopoulos of MIT, focuses on "A System-Theoretic, Control-Inspired View and Approach to Process Safety." Two "AIChE Letters," which are brief, late-breaking research reports, are also featured. They deal with ambient-temperature fusible filters and co-firing technology for preparation of asymmetric oxygen transporting membranes.

<http://onlinelibrary.wiley.com/doi/10.1002/aic.v60.1/issuetoc>

If you have any parts that might be useful or of interest to Members they would be much appreciated! Please forward to: robhogan@tpg.com.au

Corrosion Under Insulation

Take care of the insulation in your plant to prevent corrosion! Literature suggests that CUI may be a concern for equipment service temperatures between minus4 and 175 deg. C (25 to 350 F).

Some common contributors to CUI include:

Water in the insulation, either because of improper storage before installation, improper installation, or damage after installation.

This may be compounded if there is corrosive chemical contamination of water soaked into the insulation – for example, acids and other process chemicals, or chlorides such as salt from the air near salt water or from de-icing chemicals.

Water or other fluids can flow through certain types of insulation and move away from the source of the leak. CUI may occur in areas farther from the leak than expected –especially in low spots.

Pinholes or small process leaks from gaskets and fittings underneath insulation, which may remain undetected until the damage causes a larger leak.

A 4-inch (10 cm) pipe containing liquid ammonia leaked because of extensive corrosion. The quality of the pipe insulation was poor allowing water to soak into the insulation. The piping system had been partially inspected during the previous turnaround, but this particular section of pipe was not examined.

A 1-inch (2.5 cm) flammable gas feed line ruptured because of wall thinning of the pipe due to corrosion under the insulation, causing a gas fire. The pipe which failed was a bypass which was not actually in operation at the time. Because there was no flow through the line, it was cooler, about 80 degrees C (175 F), than the main process pipe. The temperature was low enough that steam or moisture in the air could condense, and liquid water which contacted the insulated pipe did not evaporate quickly.

This, in combination with damaged insulation, created conditions which make corrosion more likely.

From Process Safety Beacon:

<http://www.aiche.org/ccps/resources/process-safety-beacon/201401/english>

Galvanic corrosion, alkaline acidic corrosion, and stress-corrosion cracking have all been known to happen in certain conditions. Here are ways to reduce attack.

Article from the National Board of Boiler and Pressure Vessel Inspectors

<http://www.nationalboard.org/Index.aspx?pageID=184>



Photo: www.ess-singapore.com

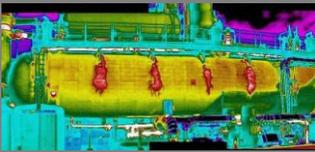


Photo: www.infrareddivision.co.uk



Photo: www.reptech.co.nz

Free AIDGC Membership for Students

Students must:

- Be enrolled in a full time course at University or TAFE;
- Provide evidence of enrolment on application and whenever membership renewals are due.

Students will receive:

- The "What's Happening" Newsletter via email
- Free attendance to seminars and site visits
- Access to the Members Only section of the web site
- Recognition as a student member on the AIDGC public web site

Applications must be made in writing to the board via the [application form](#) from the AIDGC website.



A BNSF grain train derailed and crashed into a crude oil train in North causing tank cars to explode in towering mushroom-cloud flames.

Photo and story:

<http://www.startribune.com/local/238070771.html>

A CN freight train carrying dangerous goods has derailed and caught fire in northwest New Brunswick, not far from the U.S. border.

□ CN Rail says 16 cars derailed, 8 carrying dangerous goods and one locomotive

□ First responders unable to approach the fire amid safety concerns

Story: CBCNews

US Will have Answers in Weeks on Crude-by-Rail Mishaps: Official

Officials should know within weeks whether oil companies in North Dakota are properly testing and labelling the kinds of crude-by-rail shipments involved in a recent string of explosive accidents, a U.S. regulator told Reuters.

In recent weeks, regulators have sampled crude oil at wellheads and train loading stations to try and understand why that fuel seems more prone to explode than other types of crude.

Producers and shippers could face fines or even criminal penalties if they are found to be wrongly labeling oil in rail cars, said Cynthia Quarterman, who oversees dangerous train shipments as administrator of the Pipeline and Hazardous Materials Safety Administration (PHMSA), part of the U.S. Department of Transportation.

A string of explosive train accidents involving Bakken crude, including a derailment in Quebec in July that killed dozens of people, have intensified pressure on regulators to ensure crude-by-rail shipments are safe.

The latest incident came when a train hauling crude oil and fuel gas derailed and caught fire in New Brunswick, Canada.

A week earlier, a train laded with Bakken crude had a fiery collision with a grain-hauling train in North Dakota.

"We are concerned that perhaps shippers have not been fulfilling their requirements in terms of testing and classifying and knowing what is coming out of the field," said Quarterman. "Whatever is in the crude will determine what our next steps are."



Bakken Oil Field
Photo:www.hdrinc.com



Bakken Shale Oil – natural gas flared as waste. Photo: National Geographic



Monica Chetty (supplied)

GAS-PACKED CRUDE

Officials have also in recent weeks begun to more closely scrutinize fuel produced in the Bakken, Quarterman said, and technicians are studying whether dangerous gas is loaded along with crude oil.

In the far-flung Bakken oil fields, many producers load liquid fuels onto tankers but have no way to capture and store the gasses that erupt from the wellhead.

But by loading tankers under pressure, industry officials say, they can pack more of those volatile gasses, sometimes referred to as "light ends," onto trains bound for refineries.

"From the producer's point of view, it's often a choice of either putting those light ends on the tank car or flaring them - basically, throw them away," said Harry Giles, former director of Crude Oil Quality Association, which sets standards for the industry.

Early this month PHMSA ordered shippers to "sufficiently degasify hazardous materials prior to and during transportation" among other safety steps conceived days after the North Dakota derailment.

Quarterman said the lab results due in weeks will guide officials as they consider penalties against shippers who have wrongly labeled dangerous cargo and also shape thinking on industry-wide reforms. Shipments of crude oil by rail have grown dramatically in the United States.

Trains carried nearly 700,000 barrels a day of North Dakota oil to market in October, a 67 percent jump from a year earlier, according to the state pipeline authority. For many producers, moving crude oil on railcars has been the preferred means of bringing the product to distant refineries. Source: Reuters

EPA, Industry Reach Siloxane Monitoring Deal

The U.S. EPA and silicone manufacturers have reached a long-awaited agreement to govern an environmental monitoring program for use in a future agency risk assessment of a widely used siloxane chemical after resolving a dispute over how the industry-funded program should report detection of the chemical below certain low levels specified by EPA. Source: InsideEPA.com

Homeless Woman Found with Chemical Burns

A Sydney man who spotted a homeless woman found days later in bushland with chemical burns to 80% of her body regrets not reporting her earlier.

Monika Chetty, 39, whose burns have been described by police as "black in nature and unmistakable" walked through Sydney suburbs for up to a week after being doused with chemicals, the ABC reported.



Chinese workers carrying boxes in the Jiafeng Bei shopping area in Chongqing on February 3, 2013

1 Dead, 7 Injured by Contaminated Parcels

A man was killed and seven others were injured in China after receiving parcels from a delivery company that had become contaminated with toxic chemicals. The man, from China's eastern Shandong province, died after taking delivery of a box of which were tainted with methyl fluoroacetate, a highly toxic chemical, the Xinhua news agency reported citing the local post bureau. The bureau said four parcels delivered by Shanghai YTO Express, a private delivery company, were found to be contaminated by the chemicals.

Xinhua said YTO had apologised for the accident and quoted a spokesman saying that the contamination occurred after a package containing the toxic chemical leaked during transport. The company said the package was sent by a chemical plant in central China's Hubei province who claimed it was "innocuous". Chinese citizens are often angered by their country's poor safety record amid regular industrial accidents, health scares and contaminations. Source: Bangkok Post

Ethanol Tanker Leaking in Arizona Rail Yard

Rough estimates are that between 10,000 and 20,000 gallons of ethanol gasoline leaked out of a tanker car and the hazardous material is very flammable. Phoenix Firefighters worked cautiously at the scene of the leak -- the tanker car was sitting right on the tracks. "It has a capacity of about 30,000 gallons they say it's leaking about 100 gallons an hour.. it is leaking from the bottom of the car," said PFD's Captain Ruben Saavedra.

While highly flammable, the ethanol also evaporates quickly, which helped alleviate the mess. Part of the cleanup was moving the ethanol to other tankers. The big challenge according to the Phoenix Fire Department and what took so long was finding a way to stop the leak. The good news is that the container holding the ethanol was not a pressurized tank. Source: FOX 10 News Staff



Cargo Ship Collides with Caustic Soda Tanker

The crash sparked a fire, but fortunately for everyone onboard the two vessels all 91 crew members were rescued safely. The Hong Kong-flagged tanker carrying 29-thousand tons of flammable chemicals was traveling in the waters off Korea's southeastern port city of Busan when it smashed into the freighter. Although the fire did not spread to other containers, officials say there's still a chance the tanker could break in half because the collision left a big hole in the side of the ship. Reporter : song@arirang.co.kr

Watch the Video:

http://www.arirang.co.kr/News/News_Video.asp?nseq=155350&category=2



A loud blast at Regina's Co-op Refinery Complex was heard all over the city. The explosion started a fire but no one was injured. Photo: Sa rah Taguiam/Metro



Oil Refinery Explodes: Saskatchewan, Canada

A Regina fire official says everyone has been accounted for and there are no injuries after an explosion at a Regina refinery. The blast could be heard and felt all over Regina and outside the city as well.

It's the fourth fire in about two years at the refinery. In February, a fire in a coker unit sent flames shooting nearly 20 metres in the air, but was quickly brought under control.

In October 2011, corrosion in a pipe triggered a fireball that sent seven contract workers to hospital and forced 1,400 workers from the facility. No one was injured.

In May 2012, a much smaller fire occurred when an overheated crude oil pump ignited. Source: CJME, CKRM

Leach Tank Ruptures at Uranium Mine

A leach tank rupture forced ERA's uranium mine to close production. The leach tank at the site's processing plant ruptured and collapsed, causing an acidic radioactive slurry spill; a hole was discovered in the side of a leach tank within the processing area, with staff evacuated before it collapsed. The capacity of the tank was approximately 1,450 cubic metres.

While no explosion occurred, it is not yet clear how much material leaked out of the faulty tank.

The incident forced the shutdown of operations and a massive clean-up at the site, with the Federal Government announcing the mine will not be able to restart production operations without regulatory approval and the go ahead from a joint operation taskforce.

In early November a mine left the site's controlled areas sparking fears of contamination, while later that month four uranium storage barrels were discovered in bushland near Darwin.

"Day by day, litre by litre, incident by incident, they're losing whatever trust traditional owners have in them," Mirrar spokesperson Justin O'Brien said.

Source and photo: Australian Mining

NICNAS Consults on Rules for Confidential Listing of Substances

Australia's chemicals agency, Nicnas, is consulting on draft guidelines on the listing of chemicals in the confidential section of the country's national chemicals inventory (AICS). Submissions are required by 14 February. [Draft Revised Guidelines](#)



Blast at Mitsubishi Materials Factory

An explosion at a chemical factory in central Japan on Thursday killed at least five workers and injured 17 others, authorities said. Investigators suspect chemical reaction involving hydrogen caused the blast at metal and chemical company Mitsubishi Materials Corp.'s Yokkaichi plant, about 350 kilometers (220 miles) west of Tokyo.

The blast appeared to have occurred when plant workers were rinsing heat exchange equipment at the silicone plant during maintenance, according to a Mie prefectural police official, who spoke on condition of anonymity due to department rules. Police said five workers died. Fire department officials said that 17 people were taken to hospitals.

Source and photo: Huffington Post

China Launches New 'Coal Safety Plan'

The Chinese Government has launched a new plan to increase safety at its coal mines in the wake of another horror week. Over the weekend four people died in two coal mine explosions across the country, as the Chinese Government released new information citing 2013 as industry's safest year yet.

According to CTV news, the Central Government said there were only 589 mining accidents last year that left approximately 1050 people dead or missing, adding that it decline of nearly a quarter compared to the previous period.

Death figures alone for 2012 and 2011 stand at 1300 and 1973 respectively.

In an effort to lower numbers even more, the government launched a 'nationwide safety overhaul' to develop better working conditions on site and in turn prevent more deadly accidents.

Photo and Story: SafetoWork



Chemical Leak Causes Fire at Avantor Plant

A chemical leak caused a fire at Avantor Performance Materials, Inc. in Paris. Plant workers believe the fire started when a leaking container of nitric acid ignited the corrugated case in which it was stored. Workers say the fire was extinguished by the on-site sprinkler system and contained to the warehouse area.

The Avantor Plant in Paris produces, packages and distributes high-purity solvents, acids, salts and bonded phase products. The 310,000 square foot manufacturing plant was established in 1978

Source and Photo: Melanie Kendall, WTVQ.com





Photo: www.flickr.com

Chemical Fire at Shell Godorf Refinery

A fire at a chemical tank at Shell's 195,000 barrel per day Rheinland refinery in Godorf, Cologne in Germany was put out at just over an hour after it started, the company said.

"The plant's and the external fire brigades and the police are present and extinguished the fire," it said, adding that its initial assessments found no sign that dangerous substances had been emitted.

In an earlier statement, Shell said that a tank of toluene, a solvent and a feedstock for the manufacture of other petrochemicals, had caught fire. Dark smoke hung over the plant, and local residents were asked to close doors and windows and stay indoors.

An accident at the same site injured two people in November.

Source: Reuters

Propane Leak at Albany Food Plant

Firefighters were called to the M&M Mars plant on Oakridge Drive in Albany, Oregon, when plant employees discovered a propane gas leak behind the main building.

Officials of the Albany Fire Department say that firefighters were asked to supervise the repair of a 25,000 gallon emergency propane tank, which was leaking from its relief valve.

Jordan said the valve was designed to release excess pressure within the tank, which was at about 50 percent capacity, but the valve malfunctioned, probably because of the recent cold weather.

The tank is being offloaded and drained, after which the faulty hardware will be replaced by personnel at M&M Mars, Jordon said.

According to Jordon, plant officials were alerted to the propane problem when someone outside the plant picked up the distinctive propane odour. Source: AlbanyHerald.com



Image:
charlestononion.com

Hazardous Materials Leak: Phillips 66 Refinery

Eleven workers were briefly treated for possible respiratory problems following a sulphur dioxide leak at the Phillips 66 Refinery in Wilmington, Los Angeles. The problem affected the grounds of the refinery but did not spread, said Katherine Main of the Los Angeles Fire Department. A firefighter at the refinery said the 11 people were workers who had been exposed to sulfur dioxide gas. They were taken to hospitals for emergency treatment in fair condition, Main said.

In a statement, Phillips 66 spokesman Rich Johnson said air monitoring showed no health threat shortly after the accident, and none of the workers was admitted into a hospital.

Source: presstelegram.com



Photo: articleslatimes.com

Sheffield Forgemasters Fined over Death

A Sheffield business has been fined £120,000 for a breach of health and safety laws which contributed to the death of a worker who was gassed to death.

Representatives from Sheffield Forgemasters International, on Brightside Lane, Attercliffe, were also told they must pay costs of £125,000 by a judge at Sheffield Crown Court.

Brian Wilkins, aged 48, died almost instantly after a carbon dioxide fire extinguisher system was activated, flooding the room he was working in with gas.

Prosecutor Jason Pitter said Mr Wilkins had been cutting up high voltage cables in a switch room using a petrol powered saw when the fire extinguisher system went off.

The court heard an alarm, which would have warned Mr Wilkins the extinguisher was about to go off, had failed to work.

Mr Pitter said other members of staff who rushed to his aid also suffered from the effects of breathing in carbon dioxide.

Forgemasters admitted breaching health and safety legislation by failing to carry out an adequate risk assessment, failing to write a method statement, failing to provide and enforce training and failing to provide emergency rescue arrangements.

Source: The Star

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The Safety Equipment Necessary to Transport Chemical Weapons

The BBC's Anna Holligan, is the only foreign journalist travelling on board the Norwegian frigate.

She explained how the chemicals would be contained once they were on board.

Watch the Video: [BBCs Anna Holligan](#)

Italy's Triangle of Death: Naples Residents Blame Child Cancer Rates on Mob Disposal of Toxic Chemicals



MARIO LAPORTA/AFP/Getty Images

Mafia's dumping of toxic waste blamed for high cancer rates in Italy
Cancer rates have increased 47% for men and 40% for women in the areas around Naples and Pompeii thanks to illegal disposal by Mafia-controlled companies that occurred during a 20-year period, in which the harmful substances were dumped into lakes, farmland, quarries and caves.

The Mafia has been accused of illegally dumping toxic substances throughout southern Italy for nearly 20 years, which has increased the chances locals have of getting cancer.

Mobsters were dumping the toxic sludge after winning a series of lucrative contracts to dispose of the hazardous material, according to the BBC. Millions of tons of nuclear waste were transported from Germany and dumped in lakes, on farmland, in quarries and caves in southern Italy close to Naples and not far from the world famous historical site of Pompeii.

According to a study conducted by the Pascale Institute in Naples, the mortality rate from cancer in the triangle of death has risen between 15 and 20 percent in the seven years. The Pascale study found that 9,969 people have died from cancer and pulmonary diseases, allegedly related to the toxic waste, since 2005.

The study followed a 2004 report by Lancet that first analyzed the rising levels of toxins after the U.S. military base in Naples started warning troops and their families stationed in the Naples area not to drink the water or eat dairy products like buffalo mozzarella because of suspected high levels of toxins.

A second study conducted by the U.S. Navy in 2011, meant only for military personnel based in Naples, was printed in the Italian magazine *L'Espresso* last week. The report alleges that high levels of arsenic, fecal coliform and dioxins were found in random tests of water samples in the area despite Italian assurances that the water was safe. The study also found high levels of insecticides that have been banned for years due to safety concerns in soil samples, which ultimately make it into the food chain. The report warned U.S. military personnel based in Naples to stay clear of the local water supplies, due to the widespread presence of contaminants (e.g., arsenic, fecal coliform, PCE) as measured in the tap water, as well as the other drinking water system infrastructure deficiencies." The navy also suggested that off-base families choose living accommodations above the second floor, "which will significantly mitigate concerns associated with vapour intrusion from soil gas."

The Italian government has been cornered into reluctantly admitting that they have known about the problem for years. Transcripts of 1997 testimony by Camorra turncoat Carmine Schiavone, made public recently, detail first-hand the Camorra's actions. "It became a real business, which brought money in, but the residents risked dying of cancer within 20 years. I don't think they can be saved," he told the court 16 years ago. "We have killed your children."

Source:

U.S.A. Dangerous Goods Advisory Council

Power Point slides of Speakers' presentations are now available online. Goto: [2013 DGAC Conference Presentations](#)

CSA Copper to Cleanup Chemical Spill

The NSW Environment Protection Authority (EPA) has issued Cobar Management Pty Ltd, the operators of the CSA Mine, with a clean-up notice to remove and dispose of material and clean up after a chemical spill at the premises.

EPA North Director, Gary Davey, said the chemical spill was discovered during an inspection by EPA officers of the Pybar Chemical Storage area, at the CSA Mine, Cobar on 8 January. "The EPA officers observed that the chemical had escaped from its storage container and flowed out from the bunded area near the container", said Mr. Davey. "These types of events are of concern to the EPA and the EPA has taken immediate steps to address the problem."

The EPA is still investigating the exact nature of the chemical involved and will be considering if other actions or improvements to the management of chemicals on the site are required to prevent a recurrence of this incident".

Off-site Mercury Contamination at Botany Likely to be Low – Independent Review

The NSW Environment Protection Authority today announced the findings of CDM Smith Australia's report into stage one of the review, which is investigating historical mercury emissions from the site of Orica's former mercury-cell chlor-alkali plant which operated between 1944 and 2002 at Botany. The findings indicate that off-site soil contamination around the Botany Industrial Park is likely to be low. For more information on Orica Mercury Independent Review, visit – [Independent Review](#)



Laboratory explosion at biotech firm Amgen's facility in South San Francisco

San Francisco Biotech Plant Explosion

CBS quoted South San Francisco Fire Marshal Luis De Silva as saying that some cleaning solvents used to sterilise equipment caused a chemical reaction that spawned a flash fire. He said the building was evacuated as a precaution.

The flash fire in a liquids cabinet on the third floor blew out a number of windows on one of the floors of the building, according to fire officials. One worker suffered serious facial injuries and the other suffered injuries to one or both hands. Both workers were hospitalized.

Da Silva said it was determined that no chemicals were released into the atmosphere and that there was no public health concern. It is the second explosion at the facility in a year. Last May, one person was hurt in an explosion that led to a citation against the company. In that incident, a worker was collecting hazardous materials when a flash fire ignited, seriously burning the worker.

Source: San Jose Mercury News

US Metal Company Required to Make Large Investment in Technology following Fatal Blast

The US Environmental Protection Agency has announced that AL Solutions, a West Virginia-based metal recycling company, had agreed to implement extensive safeguards to prevent future accidental releases of hazardous chemicals from its facilities, resolving alleged Clean Air Act violations (CAA) stemming from an explosion at the company's New Cumberland facility that killed three people.

The EPA estimates that the company will spend approximately \$7.8 million to implement extensive measures to ensure compliance with environmental requirements, assess the potential hazards associated with existing and future operations, and take measures to prevent accidental releases and minimize the consequences of releases that may occur. In consultation with EPA, the company has already completed significant portions of the work required by the settlement and a prior administrative order.

Among other requirements, AL Solutions must use advanced monitoring technology, including hydrogen monitoring and infrared cameras, to assess hazardous chemical storage areas to prevent fires and explosions. They must also process or dispose of approximately 10,000 drums of titanium and zirconium, or 2.4 million pounds, being stored at facilities in New Cumberland and Weirton, W. Va., both of which are overburdened communities, by December 2014 to reduce the risk of fire and explosion. Source: HazardEx



Explosion at Mexican Candy Factory

Mexican authorities have ruled that an explosion at a candy factory in Ciudad Juárez two months ago was accidental and as a result, there will be no further criminal investigation.

Just before lunchtime on October 24 a powerful explosion rocked the Dulces Blueberry candy factory, killing one worker immediately and seven others over the following few days.

Twenty-one people were injured, some with severe burns.

The explosion was the result of a chemical reaction involving corn starch and oxygen, according to a report issued this weekend by the Chihuahua State Attorney General's office (FGE). Corn starch is a primary ingredient in the candy-making process.

FGE spokesman Arturo Sandoval Figon said: "Everything seems to indicate that this was an accident in which there was no malice, or anything to indicate that it was a premeditated situation."

Source: kpbs.org

Watch the video: [Blueberry Candy Factory Explosion](#)

Illinois Petrochemical Plant Explosion

A blast caused a fire at the Blue Island Phenol plant in Alsip, Illinois, and two people, believed to be workers at the plant, suffered burns and were transferred to a nearby hospital. The plant employs about 100, and about 20 people were inside the plant when the explosion took place.

Huge plumes of thick black smoke could be seen billowing from the plant, and about 150 people in buildings west of the plant were evacuated.

The explosion and fire followed a chemical release in the factory's cumene unit, which manufactures phenol and acetone. The process to produce the chemicals runs continuously, and the two reactors used to store the chemicals were not damaged in the incident.

One building at the plant, a storage facility, was destroyed and others were damaged. Three chemicals used at the plant — propylene, propane and benzene — were "involved in the ignition" of the fire, although the cause of the fire remains under investigation.

A pool of "residual oil" in the plant ignited at one point, causing dark clouds of smoke to billow in the sky.

The U.S. Occupational Safety and Health Administration is investigating the explosion. Scott Allen, a spokesman for the agency, said the plant has been cited by OSHA for violations multiple times, including a violation for occupational exposure to hazardous chemicals in a laboratory after an inspection.

Source and watch the Video:

<http://abclocal.go.com/wls/story?id=9359463>





The city of Qingdao,
Shandong province

My thanks this month
for suggestions and
pars goes to: Don
Johnston, Jeff
Simpson, Scott Hale,
Tim Nightingale,
Peter Hunt, Rick Hall
and Grant Curran.

Qingdao Blast Caused by Oil Thieves

According to a Reuters report, the explosion and fire that killed 62 in the Chinese city of Qingdao in Shandong province on November 22 was caused by oil thieves, who tapped into the oil pipeline, causing the leak that led to the explosion.

An investigation into the cause of the explosion, which is the worst ever experienced by China Petroleum & Chemical Corp. (Sinopec), found that the most likely reason for the blast was crude oil that had leaked from one of the many holes into urban storm drains. The pipeline was punctured on average twice a week by thieves siphoning off the oil, but despite this, it had passed a safety check just two months earlier.

Pipeline explosions and leaks are becoming more of a threat to China's people as both the country's pipeline network and cities expand quickly, covering more ground and inevitably coming into contact with each other more often.

A source working at Sinopec told Reuters that the Dongying-Huangdao II pipeline is tapped more than 100 times a year, and yet still it managed to pass an internal safety inspection in September.

Deadly Blast at Argentine Base in Antarctica

A blast at an Argentine research base in Antarctica has killed an army officer. Argentina's Ministry of Defense says Tuesday's explosion at the Esperanza base was caused by inflammable material leftovers. The ministry says the blast happened when officers were trying to retrieve the inflammable material but didn't provide further details.

The base is located in Punta Foca, north of the Antarctic peninsula. It is used to research topics including glaciology, biology and seismography. The explosion is being investigated by a federal judge in the city of Ushuaia, about 3,000 kilometers (1,860 miles) south of Buenos Aires. Source: ABCNews

Chemical Plant Explosion Results in Fire

A serious explosion at one of Whitehall's Alcoa Howmet plants resulted in a fire last week. Authorities reported that the fire began Plant 4, 555 Benston Road in Whitehall. The initial cause of the fire was determined to be an explosion in a titanium dust collector caused a fire near the roof of the facility, which resulted in fire spreading through ducts in the building.

Firefighters struggled for over an hour to contain the blaze, and noted afterwards the intense heat of the burning chemicals.

Source: Atek



Fire Suppression System Fails

Anyone that is "into" fire protection has seen the videos of the airplane hanger foam systems discharging. They are quite amazing to watch; however, now we have a fatality as a result of a discharge. Results are sketchy right now and investigators are trying to determine what caused the tragic incident that killed one man and injured three other people in King Hangar, The worker, a 31-year-old contractor, died after a large amount of fire-fighting foam was released into the hangar. He had worked as a contractor at Eglin Air Force Base since 2006.

Source: nwf.dailynews.com

Watch a video of the fire-suppression system in action:

<http://www.youtube.com/watch?v=AnA6JE8SGVU>

EPA: Kraton Solvent Leak Secured

The U.S. Environmental Protection Agency announced Monday afternoon that the release of solvents from a leak last week at Kraton Polymers in Belpre has been secured.

A release from the EPA said outfall from the facility is going through carbon filters and there were no detectable levels of contaminants, "assuring no off-site release." The first leak of diethyl ether and cyclohexane, process solvents used to cool equipment, occurred early Thursday morning, after which 538 dead fish, one blue heron and one seagull were recovered, according to the EPA. There have been no subsequent fish or wildlife kills, the agency said.

Kraton responded with booms to recapture the cyclohexane, and aeration is being used to treat the diethyl ether.

A second leak happened on Friday, but that one was contained within the plant. Both leaks were attributed to recent cold weather.

Source: Evan Bevins , Parkersburg News and Sentinel



As the new year commences, it is a good time to stop and consider your business requirements for the year ahead. Be well prepared - get the Standards you need now for the various activities or projects you have planned for 2014. 30% discount on Australian Standards for three days only*. Simply enter the promotion code APAC16 in your shopping cart to claim your discount. Advertised, Wednesday January 15, 2014

