



## **WHAT'S HAPPENING?**

**April 2012**



Two contractors were performing welding atop a 10,000 gallon slurry tank when hot sparks ignited flammable vapours inside the tank, causing an explosion that killed one contractor and seriously injured another.

**Welcome to Our New Members**

**Bradley Houseman  
Western Australia**

**And**

**Jorge Chaparro  
Victoria**

### **Hot Work: Hidden Hazards CSB Report on Fatal Hot Work Explosion at Dupont Buffalo USA**

The U.S. Chemical Safety Board (CSB) today released a new safety video detailing a fatal 2010 hot work accident that occurred at the DuPont facility near Buffalo, New York. The video, entitled "Hot Work: Hidden Hazards" features a computer animation showing how hot work being conducted on top of a tank led to a deadly explosion that killed one contractor and injured another. In the video, CSB Chairperson, Dr. Moure-Eraso notes that, "The tragic explosion at the DuPont facility exposed weaknesses in how process hazards were analyzed and controlled. The result was the death of a welder in a preventable hot work accident." He emphasizes that hot work is often seen as a routine activity, but it can prove deadly if fire and explosion hazards are overlooked."

The video details the events leading up to the accident noting that, although DuPont personnel monitored the atmosphere above the tank, no monitoring was done to see if any flammable vapor was inside the tank. The CSB investigation found the hot work ignited the vapor as a result of the increased temperature of the metal tank, sparks falling into the tank, or vapor wafting from the tank into the hot work area. CSB Investigator Mark Wingard says in the video, "We found that the contractors did obtain hot work permits for welding, but those permits were authorized by DuPont employees who were unfamiliar with the specific hazards of the process and did not require testing the atmosphere inside the tanks."

**Goto: <http://www.csb.gov/videoroom/detail.aspx?VID=65>**



Photo: 10TV.com

## **Massive Fire at Oil Company Caused by Static Electricity Say Investigators – Ohio USA**

A massive blaze at an oil company took firefighters six hours to get under control and will require an extensive environmental cleanup. More than 50 agencies responded including every fire department in Clark County to the fire at the R.D. Holder Oil Co., in Springfield. The blaze produced flames that shot 200 feet up, black smoke could be seen as far away as Dayton and Butler County, and the plume even showed up on weather radar.

See fire report and aftermath:

<http://www.whiotv.com/videos/news/clark-co-cause-of-oil-fire-released/vGzwG/>

## **Plastic Containers for Flammable Liquids/Hazardous Areas - HSE Executive Report**

Flammable liquids have traditionally been stored in metal containers, however in recent years, due to a variety of commercial reasons, plastic containers of a wide variety of shape, size, type, and materials, have seen widespread adoption for the storage and transport of liquids and other free flowing materials. Unfortunately most plastics are highly electrically insulating and tend to become electrostatically charged and may result in either electrostatic brush or spark discharges which are capable of igniting explosive atmospheres.

See the Report: <http://www.hse.gov.uk/research/rrpdf/rr804.pdf>

## **AIDGC 2011 Conference - Expert Witness Presentation by Hugh Selby**

Available for viewing at: <https://www.youtube.com/user/aidgc/feed>

**The 2012 AIDGC Conference is to  
be held on Friday, September 14 at  
the ParkRoyal, Sydney.**

**HazMat 2012  
Melbourne  
May 9 and 10**

**Registration Program**

<http://a.cdn.fpa.com.au/events/docs/HZ12%20Rego%20Brochure%20web.pdf>

**Speaker Profiles**

<http://a.cdn.fpa.com.au/events/docs/HZ12%20Speaker%20Profiles.pdf>

## Opinion Article Comments on Adoption of “Gillard laws” and High Court Ruling on Responsibility

Ken Phillips, Executive Director of Independent Contractors Australia commented on Queensland and Victorian attitudes to the WHS harmonization. Price Waterhouse Coopers has prepared a report that “that the cost to Victoria of moving to the Gillard OHS model would be \$3.44 billion over five years”.

The article also comments on an appeal to the High Court which “puts legal cement to the principle that under OHS law people must be held responsible for matters over which they have ‘reasonable and practicable control.’ Further, that because OHS law is criminal law, ‘control’ must be proven ‘beyond reasonable doubt.’”

Read the full article, with links, at

[http://www.businessspectator.com.au/bs.nsf/Article/Gillard-OHS-IR-Newman-Qld-Baida-High-Court-pd20120416-TDRWZ?opendocument&src=idp&utm\\_source=exact&utm\\_medium=email&utm\\_content=31847&utm\\_campaign=kgb&modapt=commentary#jumpComments](http://www.businessspectator.com.au/bs.nsf/Article/Gillard-OHS-IR-Newman-Qld-Baida-High-Court-pd20120416-TDRWZ?opendocument&src=idp&utm_source=exact&utm_medium=email&utm_content=31847&utm_campaign=kgb&modapt=commentary#jumpComments)

## Graincorp Chemical Leak

Residents at about 30 homes in the Newcastle suburb of Carrington were forced to stay indoors on April 9 after a gas leak at Graincorp.

The New South Wales Fire and Rescue Hazardous Materials (HAZMAT) unit was called to the Graincorp Carrington terminal after about 100 kilograms of the gas methyl bromide leaked from a canister, while staff were fumigating at the site. A Graincorp spokesman says while the gas is commonly used to kill pests and bugs, a leak of this kind is uncommon.

A 200 metre exclusion zone was set up and the leak was contained on site. As a precaution police spoke directly to residents at 30 houses and told them to stay indoors and keep windows shut. Part of the site was shutdown for the night with atmospheric testing deeming it unsafe.

A HAZMAT crew carried out further test on Sunday morning and it was cleared to reopen.

The Environment Protection Authority is investigating the incident and says that the gas leak caused no risk to the environment. Source: 1233ABC Newcastle

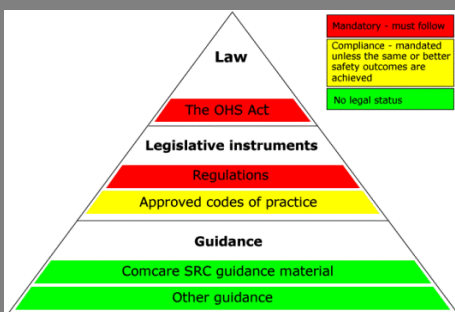


Diagram: ComCare



The materials are believed to come from a truck carrying radioactive isotopes from Sydney's Lucas Heights nuclear reactor which crashed in 1980.  
Picture: Youtube

Tests undertaken by specialists working with Roads and Maritime NSW showed the presence of acid sulphate soil, which is common in the area and can produce gas and acid.  
Source: smh.com.au



Photo: theherald.com.au

## **Workers' Illness Not Caused by Radiation – Pacific Highway Spill**

Independent chemical experts have failed to find any radioactive material at a Pacific Highway worksite on the NSW mid-north coast, NSW Roads Minister Duncan Gay said. Road workers became visibly ill after uncovering suspected radioactive material during a Pacific Highway upgrade. The area is close to the site of a 1980 accident involving a truck carrying waste from Sydney's Lucas Heights nuclear reactor. Mr. Gay said initial investigations had found no radioactive material at the site, but assured people the government was "treating this investigation seriously and we are taking all the necessary precautions to protect workers at the site". "Independent chemical specialists could not find any radioactive material present in samples taken from the site to date, but investigations are ongoing into any other possible contaminated substances," Mr Gay said in a statement. He said a broader investigation would be conducted into the Pacific Highway site, but said the Environment Protection Agency (EPA) had confirmed a container that fell from the truck in 1980 did not rupture and had been transported to Brisbane. "This will include examining the approvals process for the work, the risk assessments that were undertaken and what measures were put in place to protect road workers and the public," Mr Gay said. "I've been advised by RMS (Roads and Maritime Services) that there are no threats to the travelling public, and that personnel are onsite to ensure the site is kept secure." "The NSW government will keep the community informed as updates come to hand."

Source: <http://www.news.com.au>

## **Orica Admits Leak Breaches**

The company behind chemical leaks in Stockton last year has pleaded guilty to two offences over an incident in August that preceded a string of leaks and a government inquiry. Orica admitted it failed to operate its plant in a "proper and efficient" manner, pleading guilty in the Land and Environment Court to breaching its Environment Protection Licence. It also admitted failing to notify the Environmental Protection Authority of a hexavalent chromium leak in the appropriate timeframe.

Source: Erik Jensen, Sydney Morning Herald



## **Exclusion Zone as Explosives Removed from Garbage Bin**

**Police seized explosives from a garbage bin at South Windsor, in Sydney's north-west.**

**A member of the public alerted police and other emergency services after discovering several suspicious items in a rubbish bin on McQuade Avenue, South Windsor. A 200-metre exclusion zone was installed around the scene and a number of homes were evacuated as a precaution. Specialist police from the Rescue and Bomb Disposal Unit attended the scene and removed 18 sticks of gelignite and 19 detonators from the bin – none of which were active or posed an immediate safety threat. The items have been seized for forensic examination. Local residents have now been allowed to return to their homes. Source: Police Media**



**NSW Fire and Rescue HAZMAT called to deal with chemical spill at Graincorp Carrington Terminal Photo: ABC News**



**SLAMABAD: Firefighters struggle to extinguish the fire caused by a gas cylinder explosion in a shop near Sector G-11/1. Photo: Pakistan Today**



**Few of us realize that more people have been killed in CNG cylinder blasts than in attacks by unmanned US aircraft. Photo: Express Tribune**

## **Pakistan - Over 2,000 Killed in CNG Cylinder Blasts during 2011**

**More than 2,000 people died in CNG cylinders' explosions in 2011 and the figures are likely to be doubled this year as the government and concerned authorities have yet not taken any concrete steps in this regard, stated a report released by the Civil Society Front (CSF) Pakistan, a non-government organization (NGO) during a press conference at a local hotel on Monday.**

**CSF Director Ayub Munir said that the number of people killed in CNG cylinder explosions is four times greater than the number of people who died in US drone strikes in 2011, but the issue of low-quality CNG cylinders was never given the necessary importance at the government level or the media.**

**Read more at**

**<http://www.thenews.com.pk/Todays-News-4-102120-Over-2000-killed-in-CNG-cylinder-blasts-in-2011-report>**

**Homemade CNG tanks in Pakistan can be deadly - report published by an NGO, Civil Society Front Pakistan. The report says that the figures are more likely to be doubled in 2012 as the government and concerned authorities have yet not taken any concrete steps to prevent the illegal sale of low-quality cylinders.**

## **EPA Action on Asbestos Claims**

**Aargus consulting, Glenelg Shire Council and Benedict recycling have all copped EPA fines.**

### **Aargus Pty Ltd**

**The NSW EPA has commenced six criminal proceedings in the Land and Environment Court against Aargus Pty Ltd and two of its employees for allegedly providing false information about waste.**

**The EPA alleges that in late 2010 Aargus Pty Ltd, an environmental consultant, and its employees supplied documentation to an Oakville resident that falsely stated there was no fibro or asbestos observed in a stockpile of waste at his property in Oakville NSW when fibro and asbestos were in fact present in the stockpile.**

**The allegations were brought to the EPA's attention by Hawkesbury City Council and Council officers assisted in the EPA's investigation.**

**The EPA has now commenced two criminal proceedings against each defendant for alleged breaches of section 144AA of the Protection of the Environment Operations Act 1997, one in relation to an asbestos clearance certificate and one in relation to a soil classification report. Each offence carries a maximum penalty of \$120,000 for an individual and \$250,000 for a corporation.**

### **Glenelg Shire Council**

**The Victorian EPA has fined the Glenelg Shire Council \$6,100 for leaving waste exposed at its Portland landfill. Under license the Council-operated landfill can accept disposal of asbestos waste from households, shredded car tires, industrial waste and general household waste – requiring that this type of material is covered by 30cm of soil at the end of each day to reduce health and environmental impacts.**

**EPA south west manager Eve Graham said during a visit in November to monitor the landfill's compliance with license requirements, EPA officers found uncovered waste and litter beyond the boundary fence.**

**Glenelg Shire Council has 28 days to pay the \$6107 fine, seek an internal review or have the matter dealt with in court.**



Photo: <http://www.ben-global.com>

## CATCHING THE OFFENDERS

Recent asbestos clean-up notices issued to:

Anthony Samual Zizza - 30,000 tonnes of asbestos-contaminated waste at Goolara Road, Mangrove Mountain.

RailCorp - skip bins and stockpile containing asbestos at Mort Street, Granville.

Bourke Shire Council - broken asbestos sheeting, a potential a danger during flooding, at Lucern View Farm.

Robv Pty Ltd - stockpiles of waste contaminated with asbestos at Old Glen Innes Road, Waterview.

Boiling Pty Ltd - a firm associated with Dial a Dump owner Ian Malouf found to have a stockpile of 170,000 cubic metres contaminated with asbestos. He blamed rogue employees and waste contractors.

### Dumpings

Six tonnes of asbestos-contaminated waste were recently dumped alongside Chain Valley Bay Road in Wyong Shire.

### Current EPA prosecution

Aargus Pty Ltd, an environmental consultant, was charged with writing a report on a pile of waste at Oakville, in Sydney's north-west, falsely stating that no fibro or asbestos was present.

### Recent EPA Prosecutions

In 2010, Dib Hanna prosecuted for dumping asbestos-contaminated waste across western Sydney. He was convicted for the four offences and fined a total of \$104,000. In 2009, Kate Maree Pal was prosecuted over 18,000 and 44,000 cubic-metre piles of waste at Cobbity. Asbestos was found at both sites. Ms Pal was fined \$45,000 and ordered to serve 440 hours of community service.

## Benedict Recycling

Chipping Norton-based company, Benedict Recycling, was fined \$2,200 and ordered to pay prosecutor's costs of \$4,000 by the Bankstown Local Court late last week after it elected to have a \$1,500 penalty notice for breaching a condition of its licence heard in court.

In November 2011 the Environment Protection Authority issued Benedict Recycling with a \$1,500 penalty notice after an inspection by its officers found sediment had been tracked by vehicles from its waste recovery premises on to a public road.

Magistrate Truscott heard that during the inspection, EPA officers observed that the sediment tracked from the driveway of the premises onto Riverside Road continued for approximately 100 metres down Riverside Road in a southerly direction.

The NSW Environmental Protection Authority has started criminal proceedings against a consultancy that allegedly provided false information about asbestos. Aargus Pty Ltd, an environmental consultant, allegedly wrote a report on a pile of waste in Oakville, in Sydney's north-west, stating that no fibro or asbestos was present in a waste stockpile. Employees of the company appeared before the Land and Environment Court this month but did not enter a plea.

Source: [http://www.ben-global.com/Waste/News/EPA\\_fines\\_Aargus\\_Glenelg\\_and\\_Benedict\\_9941.aspx](http://www.ben-global.com/Waste/News/EPA_fines_Aargus_Glenelg_and_Benedict_9941.aspx)

## Asbestos: The Outlawed Fibre With a Licence to Kill

Ignorance, negligence and cover-ups led to the deaths of tens of thousands of Australians from asbestos-related diseases. When the building material was finally banned in Australia in 2003, too many people assumed it was a receding nightmare – that the real threat had died with one of its victims, the tireless campaigner Bernie Banton. They could not have been more wrong. Natalie O'Brien reports. Tonnes of asbestos-contaminated materials are being illegally dumped across the state, exposing current and future generations to the deadly fibres.

Rogue dumpers, commercial contractors and home renovators are putting lives at risk as they dodge costly disposal fees.

An investigation by The Sun-Herald has established that 80 clean-up notices – a third of all the notices issued by the

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NSW Environmental Protection Authority in the past five years – have been for illegal or improper asbestos disposal. A group of professional waste transporters became so fed up with rogues in their industry that they organised undercover surveillance – shown above – to follow trucks working for a company they suspected of illegal dumping. Their investigator followed and filmed one truck until it illegally dumped waste at Maroota, north-west of Sydney. Their surveillance was handed to the Western Sydney Regional Illegal Dumping Squad – better known as the RID Squad – and resulted in the offenders being caught, fined and forced to clean it up. But many offenders are never caught.

When broken down, asbestos dust fibres can be carried in the air and, if breathed in, can cause the deadly lung disease mesothelioma, asbestosis or lung cancer.

"There are people who are not even born yet that will come down with asbestos-related diseases because of this," warns Barry Robson, president of the Asbestos Diseases Foundation of Australia. "It should have stopped by now."

But it hasn't, and Mr Robson calls it a "time bomb".

In the past year asbestos has been found in:

- Garden mulch sold to residents by Bega Valley Shire Council
- A thousand tonnes of contaminated sand that was spread across a sporting oval at Rockdale. The culprit could not be identified so it was cleaned up at the council's expense;
- Skip bins across Sydney;
- Kerbside pick-ups for recycling;
- Garden sheds and under homes;
- A 30,000-tonne pile dumped on a private property at Mangrove Mountain on the Central Coast.
- Stockpiled and buried on Norfolk Island properties because of a lack of funding to take it off the island.
- Backyards, often rising to the surface. Asbestos removalists say this is a particular problem on the Central Coast, where waste from demolished asbestos homes is often buried on site. One 80-year old woman, who asked not to be named, told *The Sun-Herald* she had been pulling pieces of asbestos fibro out of her garden in Gosford for years.

In an operation late last year, the RID Squad's investigators and EPA officers covertly tracked vehicles



**I am grateful for any contributions – this month my thanks to Don Johnston, Tim Dean, Stephen Kennedy and Peter Hunt.**

**Please email me [robhogan@tpg.com.au](mailto:robhogan@tpg.com.au) if you have any interesting articles, noticed any opinions or newspaper pars, or any material or photographs that could contribute to entertaining and informing our Members.**

**dumping waste illegally in eight locations across Sydney's west. Asbestos was found at three of the sites.**

**The state government does not keep central records that can analyse or track asbestos dumping offences. *The Sun-Herald* manually trawled through the EPA's clean-up notices to determine how many related to asbestos and found the number of dumpings on the increase, at least on private properties.**

**There have been 35 notices issued since January last year. But there are no systems in place to tally dumpings on public land. However, the RID Squad, formed in 1999 by the state government and seven councils to fight illegal dumping, estimates it has investigated about 150 cases involving asbestos in the past year.**

**"For the government not to have at hand the extent of illegal dumping is reckless," says the Greens environment spokeswoman Cate Faehrmann.**

**In the past five years the EPA has launched 11 prosecutions against seven defendants with \$230,900 in fines issued and 450 hours of community service ordered. There are 16 charges of illegal dumping of asbestos currently before the Land and Environment Court. Criminal proceedings have also begun against a consultancy, Aargus Pty Ltd, which allegedly provided false reports claiming a property was asbestos-free. It is yet to enter a plea.**

**Tony Khoury, from the Waste Contractors & Recyclers Association of NSW, said the single biggest factor behind the illegal dumping of asbestos – whether it is a home renovator or a rogue operator – is the high price of disposal. Tipping fees alone are between \$200 and \$400 a tonne, but removing an average asbestos roof can cost about \$45 a square metre – amounting to as much as \$5000. The state government needed to subsidise the cost so "price is not a disincentive to public safety", Mr Khoury said.**

**Last year a company owned by the Dial a Dump entrepreneur Ian Malouf's wife, Larissa, was ordered to clean up a stockpile of 170,000 cubic metres of asbestos-contaminated waste at its Alexandria property.**

**Two government inquiries, one state and one federal, are under way into asbestos management. The NSW inquiry is examining the impact of tipping fees on illegal dumping and ways to encourage proper disposal. All waste, including asbestos, is subjected to a \$82-a-tonne recycling**

**The AIDGC Members'  
Only Pages of your  
AIDGC website are  
constantly being  
updated,  
Check out the new  
links for Members.  
<http://www.aidgc.org.au>**

**levy. Asbestos then attracts additional fees.**

**The Minister for the Environment, Robyn Parker, said the anecdotal evidence was that "illegal dumpers are motivated by the desire to avoid all waste costs, not just the levy".**

**The NSW government has also set up the Heads of Asbestos Co-ordination Authority. Its chairman, Peter Dunphy, said: "We are developing a model policy to show councils what they should be doing. One of the problems has been that the issue is just pushed between agencies."**

**Source: <http://news.domain.com.au/domain/diy/asbestos-the-outlawed-fibre-with-a-licence-to-kill-20120410-1wmkc.html>**

## **Minimize the Risk of Flammable Materials**

**AICHE – the global professional community for 30,000 chemical engineers in the latest issue of its journal has produced a 6 page technical 'back to basics' by Daniel A. Crowle of Michigan Technological University.**

**Source: CEPmagazine.org**

**Goto: <http://www.aiche.org/uploadedFiles/CEP/Issues/2012-04/041228.pdf>**

## **Zinc and Lead Spill Fine for Miner**

**A mining company has been ordered to pay \$45,000 in penalties following a zinc and lead spill from one of its northwest Queensland pipelines in 2009.**

**MMG Century Limited pleaded guilty to one charge of unlawfully causing material environmental harm in the Mount Isa Magistrates Court, the state government says. The spill occurred along MMG Century's Lawn Hill to Karumba pipeline, about 115km northeast of its Lawn Hill mine, in October 2009.**

**The Department of Environment and Heritage Protection (DEHP) says 750 cubic metres of zinc and lead slurry was released over 1.5 hectares of flat grassland following a rupture in the pipeline. About 25,000 cubic metres of soil was contaminated.**

**In 2010 the Mount Isa Magistrates Court ordered MMG Century pay \$130,000 after it discharged toxic wastewater into a creek near the Lawn Hill mine during the 2009 wet season. Source: AAP from Industry Search**

## **China Probes Tainted Capsules**

More inspection teams have been sent to investigate the incident of contaminated drug capsules and find out those held responsible, said the State Food and Drug Administration (SFDA) Saturday.

Inspection teams from several departments, including the police, health authorities and supervision agencies, have been sent to Zhejiang, Hebei and Jiangxi provinces to supervise the investigation of the case, said a statement from the SFDA.

China Central Television (CCTV) reported last Sunday that several companies have been manufacturing drug capsules with industrial gelatin, which contains a greater amount of chromium than edible gelatin and can be toxic if ingested in excessive amounts. It named several medications that have been packaged in the contaminated capsules.

In response to the report, the SFDA ordered 13 medications produced by nine pharmaceutical companies named in the TV report to be suspended from distribution and use until they are cleared by a lab analysis.

An overhaul has been carried out on the production of drug capsule makers, pharmaceutical companies and manufacturers of gelatin for medical use, the statement said. Those who refuse to cooperate in the investigation and try to cover up malpractice will be severely punished, the statement said.

Chinese police have detained 53 suspects and closed 10 industrial gelatin and gel capsule factories believed to have been involved in producing contaminated medicine capsules, said the Ministry of Public Security in a statement.

Source: China Daily USA

## **Chemical Watch**

Australia's National Industrial Chemicals Notification and Assessment Scheme (Nicnas) has published the April 2012 edition of its Chemical Gazette, including new chemical reports and notice of chemicals eligible for listing on the Australian Inventory of Chemical Substances (AICS).

Goto:

[http://www.nicnas.gov.au/Publications/Chemical\\_Gazette/Chemical\\_Gazette\\_April\\_2012.asp](http://www.nicnas.gov.au/Publications/Chemical_Gazette/Chemical_Gazette_April_2012.asp)



Shell's oil refinery in Geelong. Photo: Nicholas Walker, theage.com.au

The answer to a query re this event posted on the HazMat DG Group site:

The incident involved a leak in the catalyst return line. Hot catalyst was escaping from a small hole in the line. The catalyst particles were coated with coke from the cracker unit and if the hot coke covered catalyst particles had come into contact with any hydrocarbon vapours there was the chance that a fire could have ensued. Warren Glover, Scientific Officer, Fire & Emergency Management, Country Fire Authority



## **Shell Oil Refinery in Victoria Shutdown Following Chemical Leak**

**A section of Shell's southern Victorian oil refinery was shut down following a chemical leak.**

**About 20 firefighters were called to the plant at Corio, southwest of Melbourne when super-heated flammable sand, used in fuel production, began leaking from a pipe. Part of the plant was shut down and roads in the vicinity closed as a precaution while authorities responded to the leak, Country Fire Authority (CFA) spokesman Ian Beswicke said.**

**The area was declared safe after a few hours and air monitoring equipment was used to confirm that no dangerous substances had escaped from the refinery.**

**Source: WeeklyTimesNow.**

## **Explosion and Fire Kills Two at Evonik Plant in Germany**

**An explosion and fire has killed two workers at Evonik Industries chemical plant in Marl, northern Germany. A spokesman for Infracor, the Evonik-owned industrial park where the plant is located, said an investigation into the cause of the accident is now under way.**

**The explosion and fire occurred in the early afternoon of March 31 at the plant, which produces cyclododecatriene, an intermediate used to make flame retardants, flavours, and fragrances. The explosion immediately killed one worker; and a second suffered severe burns and later died of his injuries in hospital.**

**About 130 firefighters fought the blaze for 16 hours before it was extinguished. Local residents were warned to stay indoors with their windows and doors shut.**

**Infracor officials acknowledged that some butadiene leaked after the blaze, but they said emissions into the air were below danger threshold limits.**

**About 10,000 Evonik employees work at the 2.5-sq-mile Infracor industrial site, which is also home to 30 other chemical-related companies. Among the products Evonik manufactures at the site are acrylic acid, fuel additives, plastics, adhesives, and catalysts.**

**Source: HazardEx**



In this October 30, 2011, file photo smoke rises from the damaged headhouse of the Bartlett Grain elevator in Atchison, Kan. The federal government cited the Missouri grain company on April 12, 2012, for willful safety violations and proposed a hefty fine for an explosion that killed six workers. (AP Photo/The Kansas City Star, Keith Myers, File)



## **Kansas Grain Company Cited for Serious Violations**

The Occupational Safety and Health Administration is seeking \$406,000 in penalties and is citing five willful and eight serious safety violations at Bartlett Grain Co., a Missouri-based grain company, following an explosion that killed six workers and injured two more last October at one of its grain elevators at Atchison in Kansas.

Among the willful violations, OSHA alleges Bartlett Grain allowed grain dust, which is nine times as explosive as coal dust, to accumulate and used compressed air to remove dust without first shutting down ignition sources. OSHA defines a willful violation as one committed with intentional knowing or voluntary disregard for the law's requirements or with plain indifference to worker safety and health.

The serious violations, defined as those with a substantial probability of death or serious physical harm, include claims that there was a lack of preventative maintenance and that the housekeeping program was deficient because it didn't prevent grain dust accumulations.

Source: ABCNews.go.com

## **Draft Australian Work Health and Safety Strategy 2012–2022**

### **Public Comment Closes May 21**

The Draft Australian Work Health and Safety Strategy 2012–2022 is now open for public comment.

The Australian Work Health and Safety Strategy will provide the national framework to support change and drive improvement in work health and safety. The vision is to enable Australians to lead healthy, safe and productive working lives.

Safe Work Australia has developed the draft strategy which is available for public comment until Monday 21 May 2012.

To make a submission during the public comment period visit the SafeWork Australia Website:

<http://safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/PublicConsultation/Pages/WHSSstrategyPC.aspx>



## **Explosion Risks and Safety Hazards of Nanomaterials**



**An article entitled Review of the Explosibility of Nontraditional Dusts in the American Chemical Society journal Industrial & Engineering Chemistry Research by a team from Dalhousie University in Canada claims that nanomaterial dust could explode from a spark with only 1/30th the energy needed to ignite sugar dust, or less than 1/60th the energy required to set wheat dust aflame. The researchers looked into the explosion risk of three types of non-traditional dusts: nanomaterials; flocculent (fibrous or fuzzy) materials used in products such as floor coverings; and hybrid mixtures of a dust and a flammable gas or vapor.**

**After reviewing results of the relatively few studies that exist on the topic, the researchers concluded that the energy needed to ignite nanomaterials made of metals, such as aluminum, is less than 1 mJ, which is less than 1/30th the energy required to ignite sugar dust .**

**Dust is defined as a solid less than 420 microns in diameter, but that would not usually extend down to the nanoscale world.**

**A general rule of thumb in the world of dust research holds that the smaller the particle size and the greater its surface area, the more explosive it is. Nanoparticles are tiny, but have a large relative surface area because of the way atoms are arranged in them.**

**They also tend to agglomerate together, and these large clumps of nanoparticles, called nanopowders, are also very explosive, igniting with just 1 millijoule of energy. They could ignite with a spark, a collision or mere friction, according to the researchers. Also, because they are so small, nanoparticles can remain suspended in the air for days or weeks without any obvious evidence of their presence.**

**Flocculent dust also usually does not fall under the normal definition of dust, but the researchers say this too is dangerous. Flocculent materials are often manufactured using electrostatics, so they also could easily ignite. The third category, hybrid mixtures, behave in a more variable way, according to the Dalhousie team.**

**The article concludes that significant research is still needed into dust explosions in industry, especially of non-traditional dusts. The researchers call for increased toxicology and safety research into nanomaterials, based on international standards.**

Source: HazardEx

## **Nine Killed in China Plant Blast**

**At least nine people have been killed after an explosion followed by a huge fire wrecked a chemical plant in China's northeastern province of Heilongjiang. The incident occurred at a three-storey building at Fuxin Chemical Plant in Lamadian Town of Daqing City.**

**Nine workers died on the scene while five others managed to leave the building, Xinhua news agency reported on Thursday.**

**Firefighters were mobilized to the site to put out the fire. Ambulances also shifted the dead bodies as well as those wounded to nearby hospitals. Local safety authorities said the main reason behind the explosion was the accumulation of gas due to poor ventilation in the plant. Fuxin Chemical Plant, which covered 11,000 square meters and employed 34 workers, was functioning without a license.**

**Its operator, Cui Dehai, has been arrested and police are engaged in conducting a full investigation into the deadly incident.**

**Most accidents in China are blamed on failures to follow safety regulations, including a lack of required ventilation or fire control equipment.**

Source: MP/AKM/MB

## **Chemical Plant Explosion Inner Mongolia**

**Fire put out the blaze in a chemical plant in north China's Inner Mongolia autonomous region, which has caused one dead and three others injured. The accident happened at Inner Mongolia 3F Fluorochemical Co. Ltd. in the city of Fengzhen.**

**A huge amount of flammable gas has been leaked after the chemical plant caught fire and exploded. Some tanks containing VDF gas, a flammable and narcotic gas, on the ground floor of the plant's high-rise workshop caught fire.**



**The chemical plant wrecked by an explosion and fire in China's northeastern province of Heilongjiang on April 13, 2011.**

**Fire fighters rescued three injured workers trapped in the flames, and evacuated other workers out of the building. Firemen are still clearing embers to prevent secondary explosions.**

**The plant, located in the city's industrial park, is 10 km away from the city proper, and the nearest residential area is 3 km away.**

**An investigation into the cause of the blast is under way.**

Source: GNA

## **Who Would Have Thought? Dangerous Pig Farms!**

**A strange new growth has emerged from the manure pits of mid-western America's hog farms, and the results are literally explosive. Since 2009, six farms have blown up after methane trapped in an unidentified, pit-topping foam caught a spark. In the afflicted region, the foam is found in roughly 1 in 4 hog farms. There is nothing farmers can do except be very careful. Researchers are not even sure what the foam is. "This has all started in the last 4 or 5 years. We don't have any idea where it came from or how it got started," said an agricultural engineer of the University of Minnesota.**

**The pits are emptied each fall, after which waste builds up again. Methane is a natural byproduct, and is typically dispersed by fans before it reaches explosive levels. However, inside the foam's bubbles, methane reaches levels of 60 to 70 percent, or more than 4 times what is considered dangerous. The foam can reach depths of more than 4 feet. Disturb the bubbles and enormous quantities of methane are released in a very short time. Add a spark — from, say, a bit of routine metal repair, as happened in a September 2011 accident that killed 1,500 hogs and injured a worker — and the barn will blow.**

**The foam can appear in one barn but not another on a farm where every barn is operated identically. Once the foam is established, it keeps coming back, regardless of cleaning and decontamination efforts. However, though it is now common in southern Minnesota and northern Iowa, and in adjacent parts of northwestern Illinois and southwestern Wisconsin, the foam does not seem to be spreading outside that area. Source:**

<http://www.wired.com/wiredscience/2012/03/hog-manure-foam/>



**Likely linked to GM feed served to most livestock in the US, methane-filled "foam" growing on pig manure has resulted in several pig farm explosions since 2001, killing thousands of animals.**

Photo and caption

<http://foodfreedomgroup.com/2012/03/17/597/>

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## **Lawsuit on 'Horrific' Sulphuric Acid Burns – Perth, W.A.**

**TWO workers who suffered horrific burns after a sulphuric acid spill at an Australind chemical plant have launched a multimillion-dollar lawsuit against their employers.**

**The men and two other workers were sprayed with the corrosive in February 2010 when a valve failed at the plant in Australind, 155km south of Perth.**

**They were flown to Royal Perth Hospital where burns specialist Fiona Woods headed a team of surgeons who carried out skin grafts and other operations.**

**Lawyers for one worker, who had to have a leg amputated, and chemical engineer Andrew Carruthers this week confirmed lawsuits would be lodged against plant owner Millennium Inorganic Chemicals and contractor CCR Group.**

**A writ for Mr. Carruthers was submitted in the Perth District Court this week. He was in hospital for more than three months and still requires medical treatment.**

**The document said Mr. Carruthers would never be able to work again, which forms part of his claim.**

**Millennium Inorganic Chemicals was fined \$90,000 in September for four counts of breaching the Dangerous Goods and Safety Act.**

**Source: Silobreaker**



**TOXIC LAWSUIT: Two men are suing their employers after being rushed to Royal Perth Hospital suffering from acid burns. *Source: PerthNow***

## **Explosion at Oil Storage Tank Kills Four in Egypt**

**Four people have been killed and 22 others injured by an explosion at an oil storage tank in the eastern Egyptian city of Suez.**

**The blast occurred at around 6 p.m. local time (1600 GMT) on Saturday, April 14, at one of the tanks of the Nasr Petroleum Company and caused a massive blaze, the Xinhua news agency reported. Troops were mobilized to evacuate the site and help contain the fire. Dozens of fire trucks and four helicopters were still struggling to put out the fire late on Saturday.**



**Fire and smoke rise from the Nasr Petroleum Company in Suez city  
Photo: presstv**

**A section of an Egyptian pipeline supplying gas to the Israeli regime and Jordan was recently blown up in the fourteenth attack on the energy link since January 2011. The attack on the gas pipeline, which crosses the Sinai Peninsula, occurred on April 9 in the northern Sinai at the entrance of the Mediterranean coastal town of Al-Arish. No group or individual claimed responsibility for the attack.**

**The gas pipeline's operations had been suspended following the last bomb attack on February 5 and had only been resumed one week before the attack.**

**The issue of supplying gas to Israel has always been a contentious topic for Egyptians, who view Israel as their number-one enemy and oppose engaging in any form of business with it.**

**Egypt was forced to agree to the supply of gas to Israel as a major precondition for an annual US economic aid package, which was part of the 1979 US-sponsored "peace treaty" between the two sides.**

**According to a \$2.5-billion export deal with Tel Aviv signed in 2005, the Israeli regime receives around 40 percent of its gas supplies from Egypt at a below-market rate.**

**Source: ABNA.co**

## **What if You Unload the Wrong Material into a Tank?**

**This Process Safety Beacon publication relates incident, the 'Whys' and what can be done to avoid.....Goto:**

**<http://www.aiche.org/uploadedFiles/CCPS/Publications/Beacon/201204BeaconEnglish.pdf>**





Horse lover and talented farrier Chantelle Holden is fighting for her life in a critical but stable condition in the Royal Brisbane Hospital after suffering burns to 90% of her body.  
Photo: Daily Mercury

## **Burnt Woman in Critical Condition**

**A WOMAN** who received burns to more than 90 per cent of her body in a fuel drum explosion remains in a critical condition.

**A spokeswoman** for the Royal Brisbane and Women's Hospital says the 29-year-old is in an intensive care ward in a "critical but stable" condition.

**Emergency services** were called to a property at Bucasia, near Mackay in central Queensland, where a 44-gallon drum of ethanol had exploded. A woman had burns to more than 90 per cent of her body.

**A man aged 37** also has serious burns to a large part of his body, and two other men received minor burns.

**All four** were rushed to Mackay Base Hospital, with the woman later flown to Royal Brisbane Hospital.

**Police** are investigating.

Source: The Australian

## **Coal Mines under Investigation**

**Four coal mines** are under investigation over possible environmental breaches after accusations they discharged contaminated water into the Fitzroy catchment.

**The Queensland Government** says there has been an inquiry launched into compliance issues at BMA's Peak Downs coal mine, Anglo American's German Creek and Callide coal mines, and the Cook colliery, according to The Morning Bulletin.

**It comes** as the government stated that six mines - BMA's Saraji, Rio Tinto's Hail Creek, Yancoal's Minerva mine, Peabody Energy's Burton, Macarthur's Moorvale, and Wesfarmers Curragh coal mine - are all pumping under approvals.

**The breaches** at Callide reportedly included a failure to notify authorities of exceeding the electrical conductivity limit and insufficient dilution.

**A number of mines** across the Rockhampton region were affected by late season rains, which have inundated their pits.

**Peabody** is expected to release water from Moorvale for the next two months, while Minerva will be pumping for the next several weeks.

Source: Cole Latimer, Australian Mining



## **Explosion Simulates Mysterious Buncefield Blast**

**On 11 December, 2005, a massive explosion rocked a fuel storage depot in Buncefield, UK, causing £1.5 billion in damage.**

**Although it was clear that the fire started when vapour from a huge petrol leak ignited, the scale of the damage was puzzling. Metal structures were flattened, cars blown apart and lamp posts bent out of shape, all in a pattern of destruction that was much more extreme than what calculations predicted.**

**Now simulations by Mike Johnson from oil and gas consultants GL Noble Denton and a team of investigators are revealing the likely cause of the blast. By attempting to recreate the explosion, they're showing that trees close to the site could have helped propagate the flame front, creating turbulence and accelerating combustion.**

**In this video, the first test with propane gas and flexible pine trees doesn't result in detonation. However, in the second simulation, which uses dense, deciduous trees more similar to the hedgerows near Buncefield, a massive blast occurs.**

**Video:**

**<http://www.newscientist.com/blogs/nstv/2012/04/explosion-simulates-mysterious-buncefield-blast.html>**

**Source: Article from HAZMAT 101; ADR Training UK**



**The huge amount of smoke produced by the fire is indicated by the black and grey area to the south of the depot visible on this UK satellite image taken a few hours after the blast. Photo: BBC News**



## **THE 100 LARGEST LOSSES 1972–2011 Large Property Damage Losses in the Hydrocarbon Processing Industry**

**[http://f1.grp.yahooofs.com/v1/gLqTT9\\_KZgRIU9OqRPb8igRhxKLAwt3qcIVvmIDnlyKvMbVWiKoIT8JNRrJ2oMsMNIUW\\_eS\\_Sug9J-](http://f1.grp.yahooofs.com/v1/gLqTT9_KZgRIU9OqRPb8igRhxKLAwt3qcIVvmIDnlyKvMbVWiKoIT8JNRrJ2oMsMNIUW_eS_Sug9J-)**

**[LanvwgRErxbq1O7i0/100%20Largest%20Losses%20Final%202012.pdf](http://f1.grp.yahooofs.com/v1/gLqTT9_KZgRIU9OqRPb8igRhxKLAwt3qcIVvmIDnlyKvMbVWiKoIT8JNRrJ2oMsMNIUW_eS_Sug9J-LanvwgRErxbq1O7i0/100%20Largest%20Losses%20Final%202012.pdf)**

## **Fire at Japan's Iwakuni Otake Petrochemical Complex in Yamaguchi Prefecture in Southwestern Japan**

**A blast at a chemical plant in western Japan killed one worker and injured at least fifteen others on April 22, police said.**

**The accident occurred at a factory operated by comprehensive chemical manufacturer Mitsui Chemicals in Yamaguchi prefecture, some 700km south-west of Tokyo, an official at Yamaguchi prefectural police said.**

**The deceased was a 22-year-old male employee, police said, with Jiji Press identifying him as Shota Sunakawa. Nine other company employees and workers for subcontract companies were severely or slightly injured, while at least four residents in the neighbourhood were slightly injured, police said.**

**Source: the Sunday Times**



**Fire at Japan's Iwakuni Otake Petrochemical Complex in Yamaguchi Prefecture in southwestern Japan**

**Iwakuni Otake Petrochemical Complex in Yamaguchi Prefecture in southwestern Japan after an explosion rocked the plant at 2:20 am, April 22, 2012, killing one worker, injuring eleven. The cause of the explosion is being reported as lightning.**

**Also at the site, stored uranium for nuclear fuel and radioactive waste. The complex is reported as being used for the manufacture process of chemical adhesives.**

**The Fukushima Diary website reported the Iwakuni Otake Petrochemical Complex is still on fire with 3379 units of radioactive waste (200L in each unit) and Uranium for nuclear fuel stored at the site.**

**Video: <http://deathby1000papercuts.com/2012/04/japan-chemical-plant-explosion-radioactive-depleted-uranium-on-site-video/>**