



Australasian Institute of Dangerous Goods Consultants

WHAT'S HAPPENING?

January 2012

AIDGC Site Visit

**Sydney Water
Quakers Hill
February 28**

RSVP Robyn Hogan
info@aidgc.org.au

A flyer is on the way to all
Members.

Please feel free to invite
someone as your Guest

**2012 AIDGC
Conference
September 14
ParkRoyal, Sydney**

Exposure to High Concentrations of LPG: Safety Alert for Suppliers, Manufacturers & Distributors: WorkCover NSW Safety Alert

A recommendation that manufacturers, suppliers and distributors of liquefied petroleum gas (LPG) include information in their material safety data sheets (MSDSs) about the inherent dangers of the gas. Goto:
<http://www.workcover.nsw.gov.au/formspublications/publications/Documents/exposure-high-concentrations-lpg-safety-alert-3491.pdf>:

Orica Reports Mercury Leak from Sydney Site

Embattled chemical company Orica has reported a leak of mercury vapour from a facility in Sydney's south-east. Orica only informed the Environmental Protection Authority (EPA) yesterday afternoon of the escape in December from a stack at its Car Park Waste Remediation Project at Botany.

A monitoring sample recorded a reading of 0.49 milligrams per cubic metre of the toxic metal.

EPA acting chief regulator Gary Whytcross says the reading is twice the regulated limit but still within safe limits. He says he has no concerns about the time it took for Orica to notify the EPA. "The testing takes a matter of weeks to actually be finalised and be provided to us, so that's not out of the ordinary," Mr Whytcross. "I want to assure members of the community that this potential breach does not pose a risk to public health or the environment." "We consider this incident to be relatively



Image: Sydney Morning Herald

HazMat 2012 Melbourne May 9 and 10

Registration Program

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

Speaker Profiles

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

minor and the EPA has already started its investigation into what occurred there."

Orica treats contaminated soil at the facility, stored under an open-air car park. The plant is currently closed for general maintenance and will now remain shut while the EPA investigates.

Orica has been under intense pressure since August last year, mostly over the operations of its Kooragang Island Ammonia Plant in Newcastle. Public anger was initially prompted by a leak of the carcinogen hexavalent chromium into neighbouring suburbs.

The EPA then closed the Newcastle facility after a series of subsequent leaks, with the plant only reopening a fortnight ago.

Environment Minister Robyn Parker says she is concerned by the latest leak. "I need some early answers in terms of why this happened. It's certainly not good enough from Orica, yet again," Ms Parker said. "We've got strong environmental legislation and the EPA is watching and auditing all of these facilities."

Source: ABCNews: Bridget Glanville

Video: <http://www.abc.net.au/news/2012-01-18/orica-reports-another-breach/3781550>

Hundreds of NSW Petrol Stations Leaking Fuel?

MORE than 900 NSW petrol stations and depots could be leaking fuel into soil and groundwater and petrol-related land makes up the bulk of the state's 300 most contaminated sites, official data shows.

Figures contained in a NSW Auditor-General report released late last year show 770 service stations and 176 other petroleum sites were actually or potentially contaminated, with many leaking fuel from underground tanks.

In two of the worst confirmed cases, high levels of the cancer-causing agent benzene leaked from a Brighton-le-Sands petrol station and were detected beneath a waterfront park, and elevated concentrations of a toxic chemical mix were recorded inside a home near a service station at Rosebery.

More than 300 NSW sites were found to be significantly contaminated, the largest number of which were petrol stations. About two-thirds were yet to be remediated. The

**Don't forget to
regularly check the
Members' Only
Pages of your
AIDGC website
www.aidgc.org.au**



Image: News.com.au - Michael Franchi

data shows serious contamination by Sydney petrol stations at Randwick, Forestville, Lane Cove, Sutherland, Chatswood and Canterbury.

In several cases, contamination had travelled to nearby homes. A leak from a Sutherland service station was migrating to an adjacent Sydney Water reservoir site. Some fuel companies, including BP, Caltex and Mobil, class all petrol station sites as potentially contaminated and refer them to authorities as a matter of precaution. The Environment Protection Authority is yet to fully assess many of the 1070 suspect sites in NSW, most of which are petrol stations, but says many have only minor issues and do not require regulation. Major petrol chains contacted by the Herald reported a range of measures to prevent contamination including stock loss systems to detect fuel leaks, regular monitoring and infrastructure upgrades. But the director of Total Environment Centre, Jeff Angel, said the effects of previously lax approaches to fuel storage were now being felt.

"They built underground tanks, stuck a petrol station on top and that was it. There was no real monitoring or high quality standard of storage," he said.

Source: Sydney Morning Herald: Nicole Hasham

OZ Minerals Ordered to Clean Up Copper Spill in Northern Territory

NT WorkSafe has ordered OZ Minerals to remove copper concentrate from the Edith River following a train derailment late last month. The train reportedly went into the river after flash flooding wiped out sections of the track.

Around 1200 tonnes of copper concentrate washed from the train into the river after a flash flood on 27 December. The train was travelling north to Darwin at the time. Two employees from Genesee and Wyoming Australia (GWA), which operated the train, were safely evacuated. Following the incident, OZ stated that "given the large volume of water flowing through the system it is likely that any concentrate that has been impacted by the would be highly diluted".

OZ Minerals has been ordered to remove the remaining concentrate and to facilitate the cleanup of the river. However, any copper concentrate found which is not in the immediate vicinity of the derailment is not subject to



the orders, NT WorkSafe added.

Despite fears raised of the potential for traces of uranium to be washed into the river along with the concentrate, the Northern Territory Government gave the river the all clear following testing.

It stated that the low to moderate amounts of copper, zinc and aluminium detected at test sites were "well below health guideline values", the NT News reported.

"Testing did not detect uranium at any of the four testing sites," the Government statement said.

Since the incident, OZ Minerals has ordered new containers to transport the spilled materials.

OZ spokesperson Rachel Eaves said "they could be considered beyond compliance as they are developed to load a bulk commodity without the use of a ship loader".

According to the miner, the total value of the concentrate was between US\$7-8 million.

The crossing bridge over the Edith River is expected to re-open this week, with the rail line repaired by the end of the month.

Source: Australian Mining: Cole Latimer

Political fallout has already begun over whether the Territory's infrastructure is up to scratch. Severe flooding at Edith River Crossing coincided with a goods train derailling and its carriages being swept up and slamming into the high-level road bridge.

Cullen River Bridge - which sits south of Pine Creek and was recently given a \$9 million upgrade - has also been closed since it was submerged by up to 3m the same day.

Source: NTNews.com.au: Alyssa Betts

U.S. EPA Issues First National Standards for Mercury Pollution from Power Plants

The U.S. Environmental Protection Agency (EPA) has issued the Mercury and Air Toxics Standards, the first national standards to protect American families from power plant emissions of mercury and toxic air pollution like arsenic, acid gas, nickel, selenium, and cyanide. The standards will slash emissions of these dangerous pollutants by relying on widely available, proven pollution controls that are already in use at more than half of the nation's coal-fired power plants.

Mercury has been shown to harm the nervous systems of children exposed in the womb, impairing thinking, learning and early development, and other pollutants that will be reduced by these standards can cause cancer, premature death, heart disease, and asthma.

EPA Administrator Lisa P. Jackson says "The Mercury and Air Toxics Standards will protect millions of families and children from harmful and costly air pollution and provide the American people with health benefits that far outweigh the costs of compliance. Since toxic air pollution from power plants can make people sick and cut lives short, the new Mercury and Air Toxics Standards are a huge victory for public health," said Albert A. Rizzo, MD, national volunteer chair of the American Lung Association, and pulmonary and critical care physician in Newark, Delaware. "The Lung Association expects all oil and coal-fired power plants to act now to protect all Americans, especially our children, from the health risks imposed by these dangerous air pollutants." Power plants are the largest remaining source of several toxic air pollutants, including mercury, arsenic, cyanide, and a range of other dangerous pollutants, and are responsible for half of the mercury and over 75 percent of the acid gas emissions in the United States. Today, more than half of all coal-fired power plants already deploy pollution control technologies that will help them meet these achievable standards. Once final, these standards will level the playing field by ensuring the remaining plants – about 40 percent of all coal fired power plants - take similar steps to decrease dangerous pollutants.

The Mercury and Air Toxics Standards and the final Cross-State Air Pollution Rule, which was issued earlier this year, are the most significant steps to clean up pollution from power plant smokestacks since the Acid Rain Program of the 1990s. More information: <http://www.epa.gov/mats/>

Miners Inhale Toxic Gases at Mine near Bendigo, Victoria

ELEVEN miners have been taken to hospital after they were exposed to toxic gases at Fosterville gold mine, 20 km east of Bendigo. The men had re-entered the mine after underground rock blasting. They suffered breathing problems after being exposed to toxic gases, and had to be helped to the surface. Ten men were taken to Bendigo Hospital, while another man, 41, was airlifted to Melbourne in a critical condition. The toxic gases were said to include nitrous oxide, carbon dioxide and, possibly carbon monoxide. The mine, operated by Perseverance Corporation, is investigating the cause of the incident.



Security guards at the Fosterville gold mine. Herald Sun

“Until the reason for the incident has been determined, works in that area of the mine have been discontinued,” Perseverance executive general manager Mark Mitchell said.

Fosterville is Victoria's second biggest gold mine after Stawell, also operated by Perseverance, with annual production of around 80,000 ounces.

Source: Australian Mining

Hoeganaes Report Released by US Chemical Safety Board

Three combustible dust incidents over a six month period occurred at the Hoeganaes facility in Gallatin, Tennessee, resulting in fatal injuries to five workers. The facility produces powdered iron and is located about twenty miles outside of Nashville.

The CSB investigation found that significant amounts of fine iron powder had accumulated over time at the Hoeganaes facility, and that while the company knew from its own testing and experience with flash fires in the plant that the dust was combustible, it did not take the necessary action to reduce the hazards through engineering controls and basic housekeeping. The investigation also found that Hoeganaes did not institute procedures such as combustible gas monitoring or provide training for employees on avoiding flammable gas fires and explosions.

The Board issued several safety recommendations, including that the Occupational Safety and Health Administration (OSHA), develop and publish a proposed combustible dust standard within one year and ensure that the new standard includes coverage for combustible iron and steel powders.

CSB Chairperson Rafael Moure Eraso said, “The three accidents at the Hoeganaes facility were entirely preventable. Despite evidence released by the CSB and information that Hoeganaes had in its possession even before the first accident in January 2011, the company did not institute adequate dust control or housekeeping measures. Dust fires and explosions continue to claim lives and destroy property in many industries. More must be done to control this hazard. No more lives should be lost from these preventable accidents.

The first of the three 2011 accidents at the Hoeganaes plant occurred on January 31 when fine particles of iron



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dust ignited while a maintenance mechanic and an electrician were troubleshooting a problem with a bucket elevator. Both employees suffered burns and later died from their injuries.

The CSB investigation into that accident was underway when, just two months later, on March 29th, a similar flash fire burned another Hoeganaes worker.

At a news conference in Tennessee on May 11, 2011, the CSB released laboratory test results on dust samples taken from the plant after the second accident. The testing demonstrated the combustibility of even small amounts of the iron dust when dispersed in air in the presence of an ignition source.

Just sixteen days after the CSB released those test results, on May 27th, a hydrogen explosion erupted in the plant, after the gas began leaking from a corroded furnace pipe. The blast shook loose iron dust accumulations from the upper reaches of the building, which ignited and rained down on workers. The explosion and ensuing fire killed three workers and injured two others. The CSB found that the company did not require atmospheric testing for hydrogen or other explosive gases.

Investigator Johnnie Banks said, "When the Hoeganaes facility was built, more than thirty years ago, it was not designed according to good practice guidelines on combustible dust, such as those set forth by the National Fire Protection Association, or NFPA. And during its decades of operation, it was never redesigned to address the serious dust hazard. The CSB is recommending that Hoeganaes conduct periodic audits to ensure compliance with the appropriate NFPA codes and standards."

The CSB report notes that engineering controls, such as enclosing conveyors and installing properly designed dust collection equipment are the best ways to prevent dust accumulations. CSB investigators found that the plant's powder handling equipment was not adequately sealed.

The Hoeganaes facility has numerous flat overhead surfaces where dust can accumulate, such areas are difficult to reach and clean. The CSB case study noted that NFPA 484, the Standard for Combustible Metals, recommends that floors, elevated platforms, and gratings be designed to prevent dust accumulations and to facilitate cleaning. The NFPA standard also requires that all machines that release combustible dust be connected to a dust collection system.

AIDGC BOARD MEETING DATES

**The AIDGC Board will
meet on the following
dates this year:**

February 20

March 19

April 23

May 21

June 18

July 23

August 20

September 10

October 22

November 19

December 17

**A number of Board
Sub-Committees will
convene at various
other dates.**

**Should you wish to
bring a matter to the
Board's attention,
please contact any
Board Member, or
Robyn Hogan at
info@aidgc.org.au**

The CSB is recommending that the International Code Council, which sets safety standards that may be adopted by state and local governments, revise its standards to require mandatory compliance and enforcement with the detailed requirements of NFPA standards related to preventing accumulation of combustible dust in workplaces.

Additionally, the CSB is recommending that the City of Gallatin require all facilities covered by the International Fire Code to conform to National Fire Protection Association standards for combustible dusts.

Investigator Banks said, "It is a tragedy that five lives were lost at Hoeganaes from these accidents. The CSB believes that adhering to recommended industry practices will greatly reduce the potential for a future dust fire or explosion." In 2006 the CSB released a study on the hazards of combustible dust, ultimately recommending that the Occupational Safety and Health Administration create a combustible dust standard for general industry. In response, OSHA initiated a National Emphasis Program in 2007 to target industries with combustible dust hazards for additional inspections and enforcement. Two years later, OSHA announced it would begin rulemaking on a comprehensive standard for general industry.

Yet, in 2011, at the time of the accidents at Hoeganaes, a specific standard had not yet been proposed or completed. As a result, the CSB is recommending that OSHA develop and publish a proposed combustible dust standard within one year - ensuring that the new standard includes coverage for combustible iron and steel powders. The Board is also recommending that the Tennessee Occupational Safety and Health Administration target facilities that generate metal dust.

CLICK HERE to view the CSB's case study:

<http://www.csb.gov/documents/default.aspx?SID=100>

CLICK HERE to view the CSB's safety video "Iron in the Fire" <http://www.csb.gov/videoroom/>

CLICK HERE to view the CSB Hoeganaes Investigation Information Page

<http://www.csb.gov/investigations/detail.aspx?SID=100&Type=2&pg=1&F All=y>

Transporting Dangerous Goods?

A young Queensland man has been filmed taking a dangerous highway joyride on the back of a chemical tanker.

Watch the Video:

<http://news.ninemsn.com.au/national/8406740/queensland-man-filmed-taking-tanker-joyride>

Source: NineMSNNews

Char Plant Explosion in W.A. Charges Laid

Charges have been laid against Griffin Coal and Carpenter Mine Management (now subsidiaries of Lanco Resources Australia and collectively referred to as Griffin) over the char plant explosion on October 23, 2008. No pleas have been entered and the charges have been adjourned to February 29. A 61-year-old grandfather, electrical contractor Anthony (Tony) Eames of Bunbury, was left in a critical condition with 40 per cent burns to his body after the blast, which occurred when Ric Stowe still owned the mine. One charge alleges Griffin “as an employer at a mine failed, so far as is practicable, to promote and maintain a mine working environment in which that employer’s employees were not exposed to hazards and by that contravention caused serious harm to Anthony Eames”. Another alleges failure “to ensure that the safety and health of a person, not being its employee, was not adversely affected ... and caused serious harm to Anthony Eames”.

A spokesman said: “Griffin is currently taking legal advice in relation to the matter and it is therefore not appropriate for the company to offer any specific comment in relation to the charges. “Griffin does, however, stress that the incident in question occurred well prior to the company’s acquisition by its current owners and at a time when all operations were carried out and managed by Griffin’s former owners.”

Source: Collie Mail: Raelene Heston

Myths & Facts of Static Fires at Retail Fuel Stations

From the Australian Transport Safety Bureau:

http://www.esdjournal.com/static/Static_Fires.pdf



Photo: Bunbury Mail

Drum Site Video: Produced by U.S. EPA Environmental Response Team

In Matthews, NC, EPA Region IV was faced with the formidable task of identification and disposal of 5,000 contaminant-filled drums from an abandoned warehouse. Various wastes were contained in the drums including ethylene glycol, peroxides, acids, and flammable liquids and solids. An on-site laboratory was set up at the small 2-acre site to aid in the characterization of wastes, allowing compatible waste streams to be "bulked" for disposal. Running time is 6 minutes.

<http://www.clu-in.org/asxfiles/ert/drum.asx>

Fatal Fire at Eastern Ohio, U.S.A. Hazardous Waste Storage and Processing Facility

CSB Chairman says Tragedy Emphasizes Importance of a National Fire Code for Hazardous Waste Handling

I would like to call attention to a recent tragedy that occurred late last week in eastern Ohio. On December 17, 2011, a chemical fire occurred at Heritage-WTI, Inc. which resulted in two workers being seriously burned, one of whom succumbed to his injuries days later. Heritage-WTI, Inc. is hazardous waste storage and processing facility located in East Liverpool, Ohio. According to company officials a flash fire occurred when workers were splitting a large solid waste drum of hazardous flammable inorganic material into smaller storage drums.

Unfortunately accidents at hazardous waste processing facilities are all too common. The CSB investigated a major fire in 2006 at the Environmental Quality Company (EQ), a hazardous waste facility located in Apex, North Carolina, which resulted in the evacuation of thousands of residents for two days. The CSB's EQ case study found 21 other fire and chemical release incidents at hazardous waste facilities in the United States that occurred from 2002 – 2007. These incidents resulted in two fatalities, 16 injuries, and eight community evacuations, shelter-in-place events, or transportation disruptions.



Image: csb.gov

Rena Update

Salvors have removed four dangerous goods containers from the bow of Rena. The containers held empty tanks which formerly held hydrogen peroxide and still have residual amounts of the chemical inside. Braemar Howells has plans and procedures in place for handling the containers when they are brought ashore.

- This means there are no dangerous goods containers left above deck on Rena. There are still dangerous goods containers in the holds of the wreck. More information on the dangerous goods held on Rena is available here

http://www.maritimenz.govt.nz/Rena/Container.asp#danger_goods%3Ehttp://www.maritimenz.govt.nz/Rena/Container.asp

- The total number of containers removed from Rena since it broke in half is now 43.

Source: <http://www.voxy.co.nz>



The inferno reached about 30 metres into the air and destroyed the entire 3,500 square metre building on Christie Street, St. Marys. Picture: Bill Hearne
Source: The Daily Telegraph

The CSB also investigated a 2009 explosion and fire at the Veolia ES Technical Solutions L.L.C. facility in West Carrollton, Ohio. The accident occurred when flammable vapor was released from a waste recycling process, ignited, and violently exploded. The blast seriously injured two workers and damaged 20 nearby residences and five businesses.

As a result of these two investigations, the Chemical Safety Board issued recommendations to the Environmental Technology Council (ETC), a hazardous waste industry trade group. Specifically, one of the recommendations is to petition the National Fire Protection Association (NFPA), a developer of U.S. fire prevention codes, to issue a standard specific to hazardous waste treatment, storage and disposal facilities. The standard would provide guidance to prevent the occurrence of fires, explosions, and releases at these types of facilities. This recommendation has still yet to be implemented.

The second recommendation to ETC was to develop its own guidance document for its members on the safe processing, handling and storage of hazardous waste. Heritage-WTI, Inc as well as all ETC members would receive this document.

It is the CSB's view that the ETC's petition to the NFPA will lead to the development of a national standard that will improve safety practices at hazardous waste treatment plants across the country.

Link to Veolia Investigation Page:

http://www.csb.gov/investigations/detail.aspx?SID=80&Type=2&pg=1&F_All=y

Link to EQ Investigation Page:

http://www.csb.gov/investigations/detail.aspx?SID=15&Type=2&pg=1&F_All=y

Chemical Factory in Sydney Catches Fire Twice in a Week

A FACTORY stocked with hazardous chemicals burst into flames last night in what was the second fire on the premises in a week. The inferno reached about 30 metres into the air and destroyed the entire 3,500 square metre building on Christie Street, St. Marys after starting about 12.30am.

The factory worked reconditioning drums filled with



The large factory was totally destroyed by fire. Picture: Bill Hearne Source: The Daily Telegraph

flammable chemicals and acids.

NSW Fire Department is investigating the incident. An office at the side of the building was hit by fire last week - with this next fire destroying the rest of the factory and causing a wall to collapse.

Source: The Daily Telegraph: Leigh van den Broeke

Corrosive Chemical Spill Has Six Dock Workers Hospitalised

Six Melbourne dock workers have been treated at hospital after a corrosive chemical spill.

The workers had been unloading a cargo ship on Friday evening in the city's industrial ports when a release valve on a giant cylinder was damaged, a fire department spokesman says.

About 200 litres of isopropylamine then pooled onto the ground, forcing the crew to flee to a safe distance. The liquid, which is extremely flammable and causes severe burns and blindness, was cleaned up in about an hour. Six workers who were experiencing chest pains and breathing problems were taken to hospital.

A crane and nearly two dozen firefighters were part of the effort to fix the cylinder and clean up the hazardous spill.

Source: AAP NewsWire

ConocoPhillips to Pay \$158M Damages for Oil Spill - China

Energy giant ConocoPhillips said that it would pay 1 billion yuan (\$158 million) to settle compensation claims arising from the oil leaks from its Penglai 19-3 oilfield in Bohai Bay in June 2011.

ConocoPhillips, China National Offshore Oil Corp (CNOOC), the Ministry of Agriculture and the governments of Hebei and Liaoning, the two provinces most affected by the environmental disaster, have reached an agreement on the compensation claims, the ministry's website said.

ConocoPhillips and the CNOOC will also pay 100 million yuan and 250 million yuan to restore the marine, especially fishing, environment in the Bohai Bay and monitor the situation, the ministry said. The Hebei and Liaoning provincial governments will distribute the

compensation among affected fishermen. Source: Cao Yin and Zhao Yanan: China Daily



Image:
<http://www.france24.com>



Five Dead after Vapour Explosion on Korean Tanker

The explosion tore the ship almost into two parts leaving it half-submerged. Initial reports suggest that it was caused by static electricity igniting fuel vapours during cleaning.

A Korean Coast Guard spokesman said the explosion on the 4,191-tonne freight ship, with 16 crew on board, happened in waters north of Jawol Island near Incheon. Five people, including the captain, were rescued. At least two of the dead crewmen were from Myanmar, the spokesman said. The coast guard was trying to identify the bodies of the other crew. A search is still underway for six others that are missing.

The cause of the explosion was not known immediately but the Yonhap news agency quoted the captain of the vessel as saying the blast had occurred whilst the crew were draining fuel vapors from an oil tank on the deck to remove residues. He said that static electricity may have ignited the gas, causing the explosion.

No oil leakage was reported.

The ship was heading south to return to Daesan, another port on the west coast, after unloading gasoline at the Incheon port.

Source: HazardEx

UK HSE - REVISION TO REGULATOR'S MANUAL ON LOSS OF CONTAINMENT OFFSHORE

The HSE has published a revision of its Loss of Containment Manual, originally designed to give guidance to inspectors under the programme to reduce offshore hydrocarbon releases.

The expanded document now gives advice on elements relating to the management of the integrity of the process containment envelope and provides advice on topics for inspection within each of the elements.

Goto: HSE.

<http://www.hse.gov.uk/offshhttp://www.hse.gov.uk/offshore/loss-of-containment-manual%202012.pdf>



Image: www.dailyrecord.co.uk

Chemical Spill at Warehouse - Scotland

MORE than 20 people have been taken to hospital following chemical spill at a warehouse. The incident happened at the two-storey Palletways warehouse in Livingston, West Lothian, shortly after 8am today. The chemical involved was understood to be denatonium benzoate, which is included in products such as shampoos and liquid soaps. Lothian and Borders Fire and Rescue Service said 23 people taken to the town's St John's hospital after complaining of breathlessness and throat irritation.

The spillage happened as the chemical was being moved on a forklift truck. Fire crews evacuated the building before making the area safe and clearing the chemical.

About 20 firefighters wearing breathing equipment and chemical suits were involved in the two-hour operation. Denatonium benzoate, often known as Bitrex, is a foul-tasting substance used in toxic household products, such as bleach or anti-freeze, to make them taste bitter and prevent accidental ingestion.

Dr Alison McCallum, director of public health and health policy at NHS Lothian, said: "The chemical involved, denatonium benzoate, was quickly identified as non-toxic and, therefore, there was no risk to the wider community."

Source: www.dailyrecord.co.uk

Ammonia Gas Can Shrink Wrap

Firefighters: Extract from SAFTENG Newsletter

Not a year goes by where I am teaching a HAZMAT or PSM course at an ammonia facility where I am challenged on the fact that NH₃ is explosive/flammable. I stress that it takes 160,000 ppm of the gas for it to burn, but it WILL BURN when it reaches this level - all that is needed is an ignition source! Of course the only way anyone could be in 160,000 ppm of Ammonia gas is if they are wearing a LEVEL A suit. And this is the problem...

Too often, responders get a blind eye while in these suits, as the vast majority of chemicals responded to in this type of suit are toxic, not flammable. Sort of like fire-fighters in their turn out gear, HAZMAT responders feel they are invincible in their LEVEL A's. I KNOW I HAVE BEEN IN

THESE SHOES ALL TOO OFTEN! Last year I posted an article about the Borden's Ammonia Explosion in Houston, TX in December 1983. Well less than a year later (September 1984) in Shreveport, LA a fire-fighter was killed in another ammonia gas explosion. This FF and his partner were both donned in Level A (fully encapsulating suits) when the ammonia gas ignited. One FF died 36 hours later from his burns and his partner survived with 3rd degree burns over 50% of his body. Their suits ignited and melted to them as they were trying to get out of them!!! Below are some critical points to this incident, taken from USFA and NFPA investigation report. Emergency Responders and ammonia operators **SHOULD TAKE HEED** to these facts as they are presented to us from **VERY RELIABLE** sources: On Monday, 9/17/1984, at approximately 4:00 p.m., an explosion occurred in a cold storage warehouse building. The explosion occurred while two members of the Shreveport FD HAZMAT Team were attempting to isolate an anhydrous ammonia leak in a section of the building refrigeration system. Employees had earlier detected the leak and workers had begun repairs earlier in the day, but were unable to complete the repair due to the effects of the ammonia. The force of the explosion raised the building's roof assembly in the immediate area of the leak approximately one foot and severely damaged interior wall assemblies. The initial explosion also resulted in a severe fire from the ignition of ordinary combustibles in the adjacent areas of the building. The two FF's within the room of origin were severely burned when their Level A suits became ignited. One FF died within 36 hours of the explosion; the other FF was admitted to a hospital in critical condition.

Based on the investigation, the following are considered to be major contributing factors to the loss of life in this incident:

- 1) the ignition of a flammable mixture of anhydrous ammonia gas during the emergency scene operations
- 2) the lack of proper precautions by workers to reduce the possibility of a hazardous accumulation of anhydrous ammonia gas, and
- 3) the lack of awareness by FF's that the conditions for a hazardous accumulation of flammable anhydrous ammonia gas were present.

Other IMPORTANT facts from this incident:

1. at the time of the explosion, visibility within the room

was ZEROFF's were using a non-rated forklift in their efforts to repair the leak in a room with ZERO visibility

2. the forklift struck a wall and curb and at that time the ammonia gas ignited
3. the FF's encapsulating suits were set on fire in the flash fire
4. the surviving FF was able to remove his burning suit and crawl through a 12" opening to escape the building, leaving behind his SCBA
5. the deceased FF was not able to remove his burning suit and collapsed inside the room
6. the ignition source was determined to be either an electrical arc from the forklift truck or a spark caused by the steel frame of the truck contacting the concrete curbing at the base of the wall assembly

Go Here: (pdf) to read the entire USFA/NFPA Report.

http://www.safteng.net/index.php?option=com_content&view=article&id=1564:ammonia-gas-can-deliver-you-shrink-wrapped&catid=52:emergency-response&Itemid=296

Chemical Safety Data Sheets – MSDS App

A free app by ThatsMyStapler Inc. This application displays International Chemical Safety Cards [ICSC] produced by the United Nations Environment Programme (UNEP), the International Labour Office (ILO), and the World Health Organization (WHO). <http://itunes.apple.com/us/app/chemical-safety-data-sheets/id405208132?mt=8>

Chemical Compatibility Database

One of the most comprehensive chemical compatibility databases in the world, the Cole Parmer compatibility database, is now available for iPhone and iPad. Every day thousands of scientists, engineers and technicians need to determine chemical compatibility for storage, transport and use. Finding the right material compatibility is key to safety and saving money. This app leverages years of research on chemical compatibility for plastics, metals, Elastomers and ceramics. It contains more than 24,528 entries covering 584 chemicals and 42 materials.

http://www.safteng.net/index.php?option=com_content&view=article&id=1564:ammonia-gas-can-deliver-you-shrink-wrapped&catid=52:emergency-response&Itemid=178



Image: ABCNews

Residents Return Home Following Toxic Gas Scare - Victoria

The company responsible for a toxic gas cloud at Wangaratta, in north-eastern Victoria, says it has engaged a number of experts to investigate the cause of the incident. At least 100 people were evacuated from their homes overnight and a number of people became ill when a combination of paint-making chemicals produced the cloud. Nuplex Resins has reassured staff and local residents the area is now safe. The regional president of Nuplex, Sam Bastounas, says operations at the site have been suspended pending a full investigation. He says the company will co-operate with authorities.

"We are working with the regulatory authority and we have engaged a series of experts who will work with our staff," he said. "We have a very structured approach to dealing with the matter and that will involve looking at every aspect of the process and at the environmental impact as well."

Source: ABCNews

An Analysis of the NSW EPA Draft Pollution Incident Response Management Plans


Associate Member, Andrew Doig – who is National Director of ASBG has sent the following for the information of Members:

"My organization has undertaken a preliminary assessment of the proposed Pollution Incident Response Management Plans (PIRMPs). This information may assist AIDGC Members in provision of comment and submissions to the EPA to assist in developing a better regulation as ASBG considers there are many flaws.

This draft is destined to become a regulation and enforceable to all sites holding Environment Protection Licences (EPLs).

Let's look at a short summary of the Draft PIRIMPs which requires:


1. All pollutants (which would include any DGs and Hazardous Chemicals plus foods, dirty water etc. [what is not a pollutant?]) are to be listed, quantified and located on a map.

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- 2. A risk assessment and control measures to be developed to avoid hazards posed to human health and the environment**
 - 3. Contact names and details for the site and for neighbours likely to be affected (this can be >50,000 for a large MHF).**
 - 4. The PIRMP to be placed on a corporate website or post a hard copy to anyone asking for it.**
 - 5. PRIMPs to be tested and maintained and reviewed at least every year or after an incident one month.**

ASBG's current preliminary issues with the draft includes:

a) The publication of the Pollution Incident Response Management Plans (PIRMP) on corporate websites is not supported due to:

- *Security issues* – exposing storage details of chemicals, explosives and other security sensitive materials is considered dangerous and probably contravenes security laws and policy. This would also extend to any risk assessments of incidents as this would likely identify sensitive chemicals and that the site uses them.**
- *Privacy issues* - Providing names of individuals both corporate and neighbours would also contravene privacy and a security law and policies.**
- *Commercial in confidence issues* – Providing materials locations and amounts will raise many proprietary and commercial in confidence issues.**
- Overall only the potentially effected neighbours, and government agencies will benefit from knowledge of a site's PRIMP. So why need to make it broadly public? Even publishing a partial PIRMP by removing sections which would likely contravene security, commercial in confidence or privacy policy or laws, would provide such general and scant information its value is questionable. Distribution of PIRMPs need to be reviewed. ASBG will provide more details on our views on distribution in our submission.**

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- b) Testing of the plans needs to be made reasonable and practical as it is currently too broad. For MHF sites to fully test such plans would require the co-operation of numerous government agencies, which may prove highly costly to all parties on an annual basis. Incidents which can be handled largely internally can be tested on a 12 month basis. However, larger incident scenarios will need to be assessed (if they have not already been done) on an one-on-one basis. Given the scale of larger incidents a partial test of the plan would be more practical (e.g. evacuating a suburb to undertake a full test would not be practical or popular). Overall any testing of PIRMPs should include reasonable practical tests, which simulate sections of the plan such as the involvement of external parties if required. Additionally, the tests need not be full scale, but simulate a range of scenarios identified by a risk assessment process.**
- c) The scale of incidents covered under PIRMPs needs to be better explained. Incidents where external agencies, e.g. the Fire Brigades takes over control of the site, should be exempt from this process as it will be covered under other general emergency plans required by law. This would appear to limit the coverage of PIRMPs to internally manageable incidents where the site has control over the operation of the incident. This position is based on NSW Pollution laws which provide the defence of having no control. Such limitations should be made clear in any such guidelines. In any case larger incidents are already well covered under other emergency plan obligations. It would make sense to limit PIRMPs to the sub external control incidents.**
- d) Sections (j) and (o) appear to overlap and are not clear in their intent. Given that (j) has a focus on the mechanism rather than the concept, this would be the more effective section to include.**
- e) Section (h) 24 hour contact details, are inconsistent with emergency contact detail required under many Environment Protection Licences, which are generally aligned to the operational hours of the site. Contact availability should be reflective of the site's**

risks and operational arrangements.

- f) **Section (k) The NSW Government must identify how contradictory advice from contacted and involved government agencies will be handled. Generally for a major incident the Fire Brigades has control, but for smaller incidents a hierarchy of advice from other government agencies is needed to avoid confusion. Once clarified then can co-ordinated responses with government agencies can be best incorporated into the site's PIRMP.**
- g) **The need to review the PIRMP within one month after an incident is misfocused. The review should be on the procedure for that type of incident rather than the entire plan."**

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The Singapore-based Eline Enterprise was damaged in the Arafura Sea on Australia Day and is anchored in Darwin Harbour with damage to four containers of flammable ethylene gas. Picture: Katrina Bridgeford



Dislodged containers can be seen on the bow of the Eline Enterprise. Picture: Darwin Port Corporation

More Leakage Forces Cargo Ship Back to Sea – Northern Territory

A CARGO ship has been towed back out to sea after more flammable gas was detected.

The Singapore-based Eline Enterprise was escorted into the harbour with the help of a tug and pilot vessel yesterday morning, but was towed to the outer limits of Darwin Harbour after technical experts detected further leakage.

The boarding party included representatives from the ship's agent Toll, Fire and Rescue Services, Marine Safety Branch, Australian Maritime Safety Authority and the Darwin Harbourmaster.

Harbourmaster Captain Ian Niblock said the vessel was given the all-clear to enter the harbour at 8am.

"This is a very positive outcome and at no stage were there safety concerns for the general public.

The considered and cautious approach that was taken by all agencies involved took time, but was ultimately successful," he said.

Two attempts to board the ship last Friday were unsuccessful due to bad weather.

The vessel was be towed to the Toll/Perkins Frances Bay wharf this morning.

Source: Damian McCartney: NTnews.com.au

Researchers Looking at Possible Toxic Chemical Risk to Firefighters

As usual at the height of summer, hundreds of volunteer fire brigades will be kept on their toes in coming weeks in rural areas and on the fringes of big cities where urban development meets the bush.

But if they are called to fight a fire, do these volunteer firefighters realize the toxic chemicals they may be exposed to - from burning vegetation or burning buildings? It's an issue that's been overlooked amid the rapid spread of urban housing into bushland at the edges of big cities and the associated increase in the risk of bushfires that engulf both bushland and homes. For further information:

<http://www.bushfirecrc.com/>

<http://www.afac.com.au/home>

Source: ABCRural: Bel Tromp



Police and Hazmat crews at the scene in 2009.

Sydney Woman Dies from Pesticide

An elderly woman who died on the semi-rural property she shared with her invalid husband after ingesting a toxic pesticide dose was worried the couple's only son was trying to kill her, an inquest has heard.

Tereza Rendaric, 69, was discovered lying motionless on the laundry floor at her Leppington home in southwest Sydney in the early hours of December 1, 2009.

Her husband Martin Rendaric, 78, found the unconscious woman after waking around 2.50am and the couple's son, Steven Rendaric, 38, who lived in a separate house on the property, called emergency services.

Mrs Rendaric was dead when ambulance officers arrived and her family and several paramedics required treatment after inhaling toxic fumes from her body.

Glebe Coroner's Court this morning heard before Mrs Rendaric died she told her doctor she had been worried about Steven's threatening behaviour over the past three or four months. "(Mrs Rendaric) was depressed and had the belief that her son was trying to kill her," counsel assisting the coroner Warwick Hunt said.

Police stumbled across a horde of 50 Harley-Davidson motorbikes connected to the Rebels bikie gang in an underground bunker on the property during a later search. The inquest before State Coroner Mary Jerram continues.

Source: Peter Bodkin *The Daily Telegraph*

This article was written by Member, Peter Hunt, past President and currently Vice President of the AIDGC Board.

I am grateful for any contributions. This month thanks go to Andrew Doig and Peter Hunt.

Please email robhogan@tpg.com.au if you have any interesting articles, noticed any opinions or newspaper pars. or anything that could contribute to entertaining and informing our Members.

Storage & Handling under NSW WHS Legislation & Code of Practice

From 1 Jan 2012, the storage and handling of what are now referred to as “Schedule 11 hazardous substances” (still referred to as “dangerous goods” for transport) is covered by Part 7.1 of the NSW WHS Regulation 2011. This brief article looks only at what might be called “preventive hardware” issues and does not address labelling, SDSs, emergency planning etc

General risk management requirements are set out in Clause 351, with more specific measures in Clause 354 (physical or chemical reaction), 355 (fire and explosion), 356 (stability), 357 (spills) and 358 (protection from damage). Clause 383 requires that “a system used at the workplace for the use, handling or storage of hazardous chemicals” is used only as intended and with regard to the health and safety of persons, and that training etc is provided to anybody involved with such a system. Clause 364 relates to the foundations and support for a “a container in which a hazardous chemical is used, handled or stored in bulk and any associated pipe work or attachments”

WorkCover NSW has withdrawn

(<http://www.workcover.nsw.gov.au/lawpolicy/codesofPractice/Pagefault.aspx>) the 2005 Code of Practice for the Storage and Handling of Dangerous Goods, but lists among the “six risk based codes of practice [which] will be provided as guidance until approved in 2012”, the WorkSafe Australia draft “*How to manage risks of hazardous chemicals*”. To download this you must go to SafeWork Australia’s closed for comment publications at <http://www.safeworkaustralia.gov.au/Legislation/PublicComment/Pages/Model-WHS-CoP-Public-Comment.aspx>

This document fails to provide practical means to address the risks. Its only reference to any of the Australian Standards for storage and handling is in relation to bunding. Its Section 3.4 “How to assess physicochemical risks” contains some good material (including dust explosion issues), but addresses the hazards more than it does risk assessment. Section 4.2 “Specific control measures” contains many “factors you should consider” and lists of generic “common methods” of risk control, but does not distinguish between control of health risks and of physicochemical risks.