AIDGC Australasian Institute of Dangerous Goods Consultants

WHAT'S HAPPENING?

April 2008

WELCOME TO OUR NEW ASSOCIATE MEMBERS

Maurice Barnes
Queensland

Stephen Rutledge
Queensland

Don't forget the VOPAK Site Visit! May 7

SAFETY IS NO ACCIDENT

WorkSafe Alert
High Visibility Clothing May Catch Fire

This alert covers the potential danger of high visibility synthetic clothing catching fire when flames or ignition sources are present (e.g. in the case of 'hot work').

http://www.worksafe.vic.gov.au/wps/wcm/resources/file/ebd424078be1ec9/high%20visibility%20shirt%20catches%20fire.pdf

In the News

Ethanol-Boosted Petrol Damages GRP Fuel Tanks & Boat Engines

www.boatus.com/seaworthy/fueltest.asp#results.

http://www.latimes.com/business/la-fi-boat15apr15,1,2853648.story

Hybrid Technologies
Australia's Best Energy Options?

http://www.industrysearch.com.au:80/news/viewrecord.aspx?id=31806

STANDARDS WATCH

DR 08081: Portable fire extinguishers – Classification rating and performance testing. Proposed revision of AS/NZS 1850:1997 with comment period closing 5 June 2008.

http://www.saiglobal.com/shop/Script/Details.asp?DocN=MSWD08081ATCRD

Mark This Date in Your Diary

Annual Conference Friday September 12 Crowne Plaza Sydney

Hazmat 2008

Will be held in Melbourne on May 15 and 16.

If you haven't received your email copy of their brochure, please contact
robynhogan@unwired.com.au

IN THE FACTORY

Insulation fire at Vegetable Oil Tank in Biofuel Refinery.

http://www.thisislancashire.co.uk/news/headlines/display.var.2197220.0.cooking_oil_tank_fire_at_church_refinery.php

Worker Dies In Nitrogen Tank
Employer Fined $300,000

A hefty fine levied against a company following the death of a worker indicates growing community intolerance to workplace misadventures.

http://www.canada.com/calgaryherald/news/city/story.html?id=865f1a25-88cb-495d-8b97-65772d62147a

Company Convicted For Chemical Fire in Victoria

Waste Management Pacific Pty Ltd was found guilty and convicted of causing an environmental hazard from a smoke pall emitted via a fire that developed consequent upon mixing reactive chemical wastes at a prescribed waste treatment plant. The Company was ordered to pay $50,000 together with $10,000 in EPA costs.

http://epanote2.epa.vic.gov.au/EPA/media.nsf/7957c9b407150e5f4a256695000c4970/092aaaf73fc08698ca2574100075a3ce?OpenDocument

RESOURCES

Amazing Chemical Reactions
Class 5.1, PG II – Potassium Chlorate

Potassium Chlorate is often used as a disinfectant and in fireworks and explosives. When potassium chlorate is heated to melting point, any item added to it will cause a rapid decomposition. The gas emitted is oxygen. Because of this, it is often used in airplanes, space stations, and submarines as a source for oxygen. A fire on the space station Mir was attributed to this chemical.

http://www.youtube.com/watch?v=MUensqlmzXM&feature=related

Managing Gas Cylinders Involved in a Fire

The British Compressed Gas Association Guidance Note GN15:

http://www.communities.gov.uk/documents/fire/pdf/130349

This month, my thanks go to John Baker, Peter Hunt, Brett McPhee and Rick Hall for their contributions.

Ethanol Fuels Create Fire Fighting Concerns

Increasing use, transport and storage of bulk ethanol based fuels has elevated the likelihood of significant polar solvent fires. Water is not used for fighting non-polar solvent (e.g. petrol) fires because it can spread burning fuel, particularly into drains. Rather foam is employed, forming an isolating blanket on top of the non-polar solvent to extinguish the fire.

Fires involving polar solvents such as ethanol or ethanol-petrol mixtures pose different hazards. Polar solvent fires require the use of alcohol-resistant foams that contain special polymer additives.

A video "Responding to Ethanol Incidents" illustrates relative performance of various foams when comparatively tested on ethanol or ethanol-petrol fires.

http://www.dtnethanolcenter.com/index.cfm?show=10&mid=62

Drum Deflagration Risk Reduction: Current Research and Testing

Steel drums are used for storage, transport and disposal of waste. Biological, chemical and/or radiological processes operating on drum contents may lead to an internal drum atmosphere that provides a potentially "explosive" air/fuel mixture. Given an ignition source, this mixture could subsequently result in a drum explosion or fire, most commonly referred to as drum deflagration.
The video shows the results of deflagration (explosion) of a flammable gas initiated inside a sealed 200 L drum at test facilities.
The resulting reaction ripped the lid from the drum retaining ring and propelled it over 20 m into the air. Based on calculations, pressures as high as 150 psi were likely inside the drum prior to ejection of the lid.
Testing of the prototype with calculated deflagration pressures up to 150 psi resulting from a propane-air mixture explosion has demonstrated that it can effectively constrain drum deflagration projectiles, potentially reducing the risk of injury and death to workers as well as collateral damage.

http://www.eetcorp.com/products/drumweb/drum_deflag.htm

Corporate Members

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

AJM Environmental –
Adrian Minshull
02) 9542 2366

Basset Consulting Engineers –
Tim Dean
(07) 3510 4000 or
0439 371 063

Leighton O'Brien MassTech –
Darrell Barton
03) 9813 5122

Store-Safe Pty Ltd –
Grant Breeze
02) 9569 2122

Vanguard Solutions
Brendan Fitzgerald
08) 9420 5322

GAS EXPLOSION

COMPLIANCE LESSONS LEARNT

An explosion and fire in a vehicle containing bottles of flammable gas in suburban Sydney has resulted in an air-conditioning company being fined $120,000 as a result of a WorkCover prosecution.

The explosion, on 17 August 2005, in Barton Street, Monterey, damaged homes, shattered car windscreens and showered glass and debris across roofs and backyards. A 64-year-old air conditioning technician, rendered temporarily unconscious in the blast, escaped before the service vehicle was engulfed in flames. The man suffered from glass embedded in his skull, lacerations to his hands and ears requiring 20 stitches, concussion and continuing tinnitus, and is still receiving treatment for psychological injury and post traumatic stress.

In the NSW Industrial Court this week (Wednesday 16 April), the man's employer, Victorian-based Carrier Air Conditioning Pty Ltd was convicted of failing to ensure the health and safety of its workers under the OHS Act 2000. An extensive investigation by WorkCover NSW, including its TestSafe Australia facility at Londonderry, concluded that the explosion was most likely caused by gas leaking from an acetylene cylinder being ignited by a spark from a faulty electrical circuit.

The investigation also revealed that, at the time of the incident, Carrier Air Conditioning did not have a company policy on quantities of compressed gases carried in service vehicles, or in relation to checking compressed gas cylinders for leaks. There were no policies in place as to how the gases were stored in the service vehicles or in relation to ventilation of the service vehicles.

The company failed to comply with WorkCover Improvement Notices directing it to provide adequate ventilation in storage vehicles carrying flammable material until September 2006.

Referring to these delays, Justice J Marks commented: "I am not satisfied on the basis of the evidence that this defendant committed itself in a timely and appropriate fashion to removing the risk which was exposed by this incident, and in complying with the WorkCover requirements. For the same reason, I cannot be persuaded that there was total co-operation by the defendant with the WorkCover Authority in and about its investigation. There can be no suggestion that what was required by WorkCover was unreasonable or inappropriate." The company was ordered to pay a moiety of the fine and costs to WorkCover NSW.

WorkCover CEO Jon Blackwell said: "This case highlights the serious risks created when flammable gases are stored in inadequately ventilated vehicles, and the vital importance of complying with the regulations. An employee is suffering long-lasting effects from the injuries he received in the explosion, which could also have had a far more serious impact on passers-by and local residents."

(WorkCover NSW media release dated 28 April 2008)

Any internet links that you would like to share with members, please first send to jdbaker@ozemail.com.au

CASE STUDIES

Final CSB Report and Video on Hazardous Waste Fire At Apex.

Final Investigation Report
http://www.csb.gov/completed_investigations/docs/EQFinalReport.pdf

Video
http://events.powerstream.net/002/00174/player/progDL.asp?contID=EmergencyinApex

AIDGC WEB SITE

A significant upgrade to the web site was conducted recently in conjunction with the release of the external AIDGC email newsletter 'The Dangerous Goods Report' to over 1200 recipients in government and industry.

NATIONAL STANDARDS

OUR RECENT SEMINAR

The PowerPoint Presentation will be downloadable from the Members' Only pages of the AIDGC website.

AIDGC 2007 ANNUAL CONFERENCE

Papers are also downloadable from the Members' Only pages of the AIDGC website.

KEEP IN TOUCH

If you have any suggestions or queries please do not hesitate to contact the AIDGC Executive Officer, Robyn Hogan: robynhogan@unwired.com.au or leave a message with the AIDGC paging service 02 9430 6739 and I will return your call.