Hazmat & Environment Notes Oct-Dec 2018

A Happy Christmas and New Year to everyone.

Hazmat & Environment Notes are prepared by:

Jeff Simpson

Hazardous Chemicals Consultant
Editor & Publisher

My approach is to provide a short, succinct note on each hazardous chemical issue, sufficient to allow you to make a decision of whether it is relevant to you.

If you need more information:
Contact details / Website details / etc are provided.

I encourage all readers to network and make comment on Draft Regulations, Codes, Standards and Guides.

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Hazardous Chemicals

• ACCC Recall: Silver Zinc Aerosol 400g (retail only)

29 Nov 2018: ACCC (Product Safety Australia) recall of Dy-Mark (Aust) Pty Ltd — Silver Zinc Aerosol 400g (Retail Supply Only). This product provided a "Dual action anti-corrosive primer and top coat". It was sold through Bunnings Warehouse between 12 Oct 2018 and 23 Nov 2018. Dates of aerosol product manufacture are: 10/10/2018 & 11/10/2018.

Can Image: https://cdn.productsafety.gov.au/system/files/styles/large/private/Silver%20Zinc%2039054014.jpg?itok=IliodVTy

Defects: Certain cans may fail due to an increase in pressure. **Hazards:** Risk of injury. The cans may over-pressurise, causing deformation and, at worst case, randomly burst, causing the users to come into contact with the product and potentially projecting components.

Actions Needed: Immediately cease use of the product and isolate the can in a cool well-ventilated safe area away from direct sunlight or heat sources.

Disposal: Do NOT return the product to the place of purchase. If empty, dispose of the empty can in a recycling bin.

IF the can is NOT empty, contact Dy-Mark Customer Service Centre for instructions regarding handling and disposal.

Dy-Mark Contact Details: Customer Service 1300 396 275 or
Email: sales@dymark.com.au or go to www.dymark.com.au

DyMark Recall Ad: www.productsafety.gov.au/system/files/recall/Recall%20Advertisement_42.pdf

From: www.productsafety.gov.au/recall/dy-mark-aust-pty-ltd-silver-zinc-aerosol-400g-retail-supply-only

• Safety Alert: Asbestos in Bunsen Burner Gauze Mats

An NT Worksafe Safety Alert has been issued due to the possible presence of asbestos in Bunsen burner gauze mats with ceramic centres.

Asbestos in Bunsen Burner Gauze Mats (2 page pdf, docx)

Tremolite Asbestos has been identified in the ceramic centre of Bunsen burner gauze mats in New Zealand and the United Kingdom. Preliminary testing in Australia indicates that gauze mats with ceramic centres may also contain Asbestos.

Mats can only be kept for use IF

- Your supplier provides you with documentation showing the mats have been appropriately tested and are asbestos free;
- Or; you send a mat for testing at NATA accredited lab and the test results are negative for Asbestos.

For Mats with Asbestos or Mats being sent for testing, follow the Handling & Disposal procedures in the Safety Alert.

From: www.worksafe.nt.gov.au/SafetyAlerts/Lists/Posts/Post.aspx?ID=62

3 Dec 2018: Heads of Australian Workplace Safety Authorities Imported Materials with Asbestos Working Group has issued this Safety Alert regarding Asbestos found in Bunsen Burner Gauze Mats that have been imported into Australia.

Full Alert: Asbestos in Bunsen Burner Gauze Mats (4page pdf)

https://www.asbestossafety.gov.au/research-publications/full-alert-asbestos-bunsen-burner-gauze-mats
www.commerce.wa.gov.au/publications/safety-alert-132018-asbestos-bunsen-burner-gauze-mats

• High Pressure Water Cleaning of Asbestos Cement

Nov 2018: WA Safety Alert 12/2018: High Pressure Water Cleaning of Asbestos Cement Prohibited (2 page pdf)

WorkSafe WA is investigating an incident where a registered painter used a high pressure water cleaner on an Asbestos Cement roof to prepare it for painting. This resulted in the property and neighbouring properties being contaminated by asbestos.

Using high pressure water cleaners on Asbestos Cement breaks down the surface of the material, and spreads Asbestos-containing residue over a wide area, including neighbouring properties.

The Asbestos residue that is dispersed as a result of the cleaning is considered friable and easily releases respirable Asbestos fibres which pose a significant risk to health.

From: www.commerce.wa.gov.au/publications/safety-alert-122018-high-pressure-water-cleaning-asbestos-cement-prohibited

Editor: I just attended a funeral for a former colleague (just turned 63) who was diagnosed with Mesothelioma 3 years ago and his only exposure was indirectly when Asbestos Cement walls and roofs were removed from the factory he worked in in the early 1990s.

• SafeWork SA Incident Alert: Flammable Liquid Drum

25 Oct 2018: SafeWork SA are investigating an incident that occurred yesterday at Salisbury Plain, SA, in which a worker sustained serious injuries. It is believed the worker was making modifications to a drum that is understood to have **previously contained Flammable Liquid**. The investigation is continuing.

SafeWork SA recommends businesses prohibit the cutting or welding of metal drums.

IF this is unavoidable, the following measures should be implemented:

- Reuse of Flammable Storage Containers should be Avoided and containers must be properly disposed of
- Do not perform hot work on or near Flammable Storage Containers unless all existing sources of ignition have been eliminated or controlled, and the container has been properly cleaned, and the contents have been neutralised and certified vapour-free by a competent person
- Always refer to the Safety Data Sheet & the manufacturer's instructions and precautions before performing any work on a container
- Always provide proper training and supervision to all staff so they understand the risks
- Develop safe work processes to manage the hazard and ensure all staff understand and are properly trained on these processes.

See the Safe Work Australia National Code of Practice for Welding Processes (July 2012 32 page pdf).

From: www.safework.sa.gov.au/news/flammable-liquid-drum#

• Safety Alert: Exposure to Hydrogen Sulphide Gas

12 June 2018: Worksafe NSW Safety Alert: Exposure of Workers to Hydrogen Sulphide Gas

Background: Recently two workers died at a paper mill, likely due to breathing in high levels of hydrogen sulphide gas from a tank used for containing process water. Uncovered openings allowed the gas to escape and overcome the workers.

Hydrogen sulphide is found during the production and drilling of crude oil and natural gas, in sewers and sewage treatment plants, in swine and manure-handling operations, and in pulp and paper operations. Hydrogen sulphide can be produced by bacterial breakdown (rotting) of organic materials and human and animal waste (e.g. sewage, vegetable waste). It is also found in petroleum refineries, natural gas plants, petrochemical plants, coke oven plants, food processing plants and tanneries.

From: www.safework.nsw.gov.au/resources-library/list-of-all-safety-alerts/safety-alerts/exposure-of-workers-to-hydrogen-sulphide-gas

(Alerted by DG Newsy Stuff: Dangerous Goods - Hazmat Global Network, https://groups.io/g/hazmat)

• Research into Carbon Dioxide Build-Up when Using BA

16 Nov 2018: New technology has now allowed the Vic CFA to carry out in-field trials to measure the physiological responses to wearing Breathing Apparatus (BA). In particular, we looked at heart rate, Oxygen saturation, & the amount of expired Carbon Dioxide.

The test results showed that only 16 of the 67 participants breathed at or close to a normal respiration rate, and of those 16 only seven reached the minimum level to ensure the balance of CO2 and Oxygen was maintained.

From: https://news.cfa.vic.gov.au/-/ba-carbon-dioxide-build-up?redirect=%2Flatest-news

• WA Court Fine: Anhydrous Ammonia Vapour Burns

13 Oct 2018: Kalgoorlie WA: Murrin Murrin Operations was fined $55000 after a WA mine worker sustained severe chemical burns to 20% of his body from vapour from a Liquid Anhydrous Ammonia hose rupture leak in July 2015.

Despite having procedures in place, a significant number of hoses in use at the mine were not being maintained in accordance with those procedures.

From: http://content.safetyculture.com.au/news/index.php/10/company-fined-wa-mine-worker-sustains-chemical-burns/

From: www.dmp.wa.gov.au/News/Murrin-Murrin-Operations-fined-24607.aspx

(Alerted by DG Newsy Stuff: Dangerous Goods - Hazmat Global Network, https://groups.io/g/hazmat)

• NSW Safety Alert: Servicing Refrigerant Systems

7 Nov 2018: This alert highlights potential risks associated with the servicing of Refrigerant Systems.

Background: A number of serious incidents have resulted in workers being severely burnt when a mixture of refrigerant and compressor oil was expelled and ignited while servicing air conditioning refrigerant systems.

The refrigerant systems contained a non-flammable refrigerant, R22, but when mixed with oil, was ignited by an oxy-acetylene torch used by the workers' to unsweat the copper fittings, when replacing the refrigerant compressor.

It's believed residual pressure in the system caused the refrigerant and oil to be released from the pipe joint, which contacted an ignition source and started a flash fire.

Oxy-Acetylene torches are commonly used to unsweat copper fittings. This plumbing practice can be extremely hazardous and unsafe unless appropriate control measures are taken.

From: www.safework.nsw.gov.au/resources-library/list-of-all-safety-alerts/safety-alerts/servicing-of-refrigerant-systems

• Silica Dust in Stone Benchtop Industry: Controls

31 Oct 2018: Qld Minister for Industrial Relations Grace Grace urgently alerted workers and employers in Queensland's engineered Stone Benchtop Fabrication Industry to the **risks of exposure to Respirable Crystalline Silica**.

As well as reminding employers that uncontrolled dry cutting of engineered stone is prohibited, she also announced plans to develop explicit regulations to re-enforce existing legislative requirements. This will include a New Code of Practice prescribing the minimum standard for controlling Silica Exposure in the Stone Benchtop Industry, to be in place by early 2019.

There is no proven treatment for Silicosis and the effects are irreversible, which means prevention of this disease through control of Silica Dust exposure is vital. WorkCover Queensland is currently managing multiple Silicosis claims from engineered stone benchtop workers and tragically several of these workers have been diagnosed with Progressive Massive Fibrosis (PMF). Many of these workers are under the age of 40 and most had no symptoms when their disease was diagnosed.

Engineered and natural stone used for bench tops contains Crystalline Silica, also called Quartz. Cutting, grinding and polishing natural or engineered stone generates Respirable Crystalline Silica, which puts workers' health at risk. Engineered stone bench tops have a very high Crystalline Silica content, up to 95%.

- Protecting Workers from Exposure to Respirable Crystalline Silica: Guide to Safe Bench Top Fabrication and Installation (25 Oct 2018, 16 page pdf)
- Silica Exposure Health Risk for Engineered Stone Benchtop Workers (Your Rights to Workers' Compensation – Workcover Qld) (25 Oct 2018, 1 page pdf)

From: www.worksafe.qld.gov.au/injury-prevention-safety/workplace-hazards/managing-respirable-crystalline-silica-in-bench-top-fabrication

From: www.worksafe.qld.gov.au/forms-and-resources/newsletter/esafe-newsletters/esafe-editions/esafe/october-2018/new-code-to-be-developed-for-silica-dust-in-stone-benchtop-industry

Also: 9 Nov 2018 WA Safety Alert 11-2018 - Stone Benchtop Workers at Risk of Silicosis.pdf (4 page pdf)

From: www.commerce.wa.gov.au/publications/safety-alert-112018-stone-benchtop-workers-risk-silicosis

• Respirable Dust Hazards in Coal-Fired Power Stations

3 Dec 2018: Managing Respirable Dust Hazards in Coal-Fired Power Stations Code of Practice 2018 (43 page pdf)

Workers in coal-fired power stations engage in a range of work tasks or processes which may involve handling or exposure to Respirable Dust, including Coal Dust or coal fly ash. The combustion process, in addition to producing steam for power generation, also produces Coal Fly Ash and Bottom Ash, collectively known as "Coal Ash", as a waste product.

This code applies to all Respirable Dusts in coal-fired power stations for which AS2985 applies and includes:

- Coal Dust and Ash (containing variable percentages of Respirable Crystalline Silica)
- Respirable Crystalline Silica.

Other (inhalable) dusts likely to be encountered and for which the risks of health effect from exposure must also be controlled. These include:

- abrasive blasting dusts such as ilmenite and garnet
- wood dusts
- welding fumes
- synthetic man-made mineral fibres (e.g. glass wool, rock wool and ceramic fibres)
- toxic dusts (e.g. Lead).

The potential health effects of some common dusts in coal-fired power stations (such as Coal dust, coal fly ash) are:

Pneumoconiosis (e.g. coal workers' pneumoconiosis or 'black lung') and chronic obstructive pulmonary disease (COPD) such as bronchitis and emphysema

From: www.worksafe.qld.gov.au/__data/assets/pdf_file/0003/169500/respirable-dust-hazards-in-coal-fired-power-stations-cop-2018.pdf

• Canadian Chemicals Management Plan Website

This Government of Canada website enables you to see the chemicals being currently assessed Canadian Authorities and look back at previous assessments in 2018.

Recent Chemicals that caught the editor's attention:

Dec 18: Talc; Triarylmethanes Group; Basic Violet 3, Malachite Green, Basic Violet 4, and Basic Blue 7; Coal Tars & their Distillates.

Nov 18: Epoxides and Glycidyl Ethers Group; Triclosan; Poly(bios) Group; certain Quaternary Ammonium Compounds; Poly(amines) Group; Hydrazine; Anthraquinones Group; Ozone-depleting Substances & Halocarbon Alternatives Regs.

Oct 18: Thiols Group: Asbestos; Base Oils.

From: www.canada.ca/en/health-canada/services/chemical-substances/latest-news.html

• USA: Combustible Dust Fires and Explosions

1 Nov 2018: Combustible Dust Fires and Explosions: Recent Data and Lessons Learned (from the Combustible Dust Incident Database provides insights into dust-related process safety). By Dr Chris Cloney, DustEx Research Ltd, via ChemEngOnline.com. Email: Chris@DustSafetyScience.com

How many dust-related safety incidents occur each year? This question is a major driver behind the formation of the Combustible Dust Incident Database (CDID; Halifax, N.S., Canada; www.DustSafetyScience.com). Created in 2016, the CDID features a twice-yearly report on fires and explosions having to do with combustible dusts. The CDID is an online portal with the purpose of reporting, tracking and generating lessons learned from fire and explosion incidents around the world.

The web article outlines the findings from the incident reporting completed to date. Comparisons are made between the CDID information and historical Combustible-Dust Explosion Data within the USA. Also, an overview of the personal and financial loss resulting from these types of incidents is provided.

The Reports can be downloaded by following the link: https://dustsafetyscience.com/chemical-engineering-magazine-2018.

From: www.chemengonline.com/combustible-dust-fires-explosions-recent-data-lessons-learned/

Chemical Management

• SWA: Chemical Storage Guide for Workplaces

28 Nov 2018: Learn how to safely identify, position and manage the risks of chemicals in your workplace.

This chemical storage guide will help small to medium businesses to safely store chemicals in their workplace. It outlines some of the common health and safety risks of storing chemicals and shows you ways to manage those risks.

The guide includes a handy storage checklist that sets out the standard precautions everyone should take and a detailed chart that shows which types of chemicals to separate and by how far.

This guide is for small to medium business owners who use and store chemicals in their workplace.

Chemical Storage Guide for Workplaces (pdf) (docx) (18p)

From: www.safeworkaustralia.gov.au/media-centre/news/new-chemical-storage-guide-workplaces

Editor's Comment: This Guide was not circulated to the Hazardous Chemicals network groups such as AIDGC, DGAG, CHCN nor the RACI HS&E Division for input or checking prior to its release, nor to the two specialists that Safe Work Australia contracted to carry out GHS Classification in all the States and Territories.

For example the following issues have already been raised:

- For segregation they have chosen to go down the AS/NZS 3833 distance path regardless of package size, which leaves workplaces either with impractical distances for small packages or a false sense of security for larger ones. And this is based on Dangerous Goods classification, identifying again the limitations of the Flame Pictogram.

- Given the requirements of WHS Regulation 257, the more consistent path would be to warn of Compatibility via likely Reactivity, as used in the WA, Victoria and NSW Codes of Practice for Storage and Handling of Dangerous Goods, which NSW retained as Guidance when it adopted WHS.

• AU Workplace Exposure Standards Consultation

13 Dec 2018: The consultation RIS outlined and tested the current state of knowledge regarding the costs and benefits of the status quo, and presented potential options to address the problems identified with the current Workplace Exposure Standard framework.

It also explored whether the Workplace Exposure Standards should remain mandatory under the model Work Health and Safety laws or if advisory status is more appropriate.

31 Submissions: https://engage.swa.gov.au/cris-workplace-exposure-standards/documents also has Key Documents.

Chemical Exposure Standards: Subscribe Link

From: https://engage.swa.gov.au/cris-workplace-exposure-standards

• Please Check: AU SDS Model Code of Practice

Editor: I have been alerted by a regulatory colleague, that if you down-loaded the Model Code of Practice: Preparation of Safety Data Sheets document for Hazardous Chemicals, when it first became available in May 2018, that the document contained the wrong GHS Pictogram for the GHS Respiratory Sensitisation Hazard on page 85.

For **Sensitisation – Respiratory** it **incorrectly** had:

Exclamation Mark pictogram - where it **should have had**: serious **Health Hazard pictogram**.

Safe Work Australia fixed this error, but did not re-date the SDS Code of Practice, for what could be a significant error for some preparers of SDSs. *Note:* Where users also double check against other documents, this Signal Word / GHS Pictogram error would have been picked up.

Please check your downloaded document and IF needed, re-download the **AU SDS Model Code of Practice .**

The Model Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals, was developed to provide practical guidance on how to prepare a Safety Data Sheet for any Hazardous Chemicals that are being manufactured or imported for use, handling or storage in Australia.

AU SDS Model Code of Practice (May 2018 116p) pdf docx

From: www.safeworkaustralia.gov.au/doc/model-code-practice-preparation-safety-data-sheets-hazardous-chemicals

• NZ EPA: Modern Chemical Management System

20 Nov 2018: The NZ EPA are pressing ahead with our extensive programme of work to create a modern chemical management system for New Zealand.

The NZ EPA 2017/18 Annual Report (76 page pdf) covers a wide range of activities including (for example):

- The introduction and issuing of Caution Notices that signal to New Zealanders when extra vigilance is needed around the use of certain common chemicals.
- Our Safer Homes Programme which aims to help Kiwi families stay safe around household chemical products.
- Workshops for importers, suppliers and operators of low-cost stores to promote a better understanding of their obligations under the Hazardous Substances and New Organisms (HSNO) Act.

- Our investigation into fire-fighting foams manufactured using PFOS or PFOA.

From: www.epa.govt.nz/news-and-alerts/latest-news/modern-chemical-management-system-key-to-new-zealands-environment/

Editor: Somehow Australia and New Zealand need to come into a common simple approach for "non-hazardous" chemicals (there is TTMRA, but it seems to be irrelevant), so that the chemicals that become hazardous are picked up sooner before their impact is too great. The proposed NICNAS Reforms approach is too complex and too expensive (in the Editor's opinion), and the current NZ approach (of nothing being required),where NZ has to wait for somewhere else in the world to alert such a hazard and then they will have no idea which businesses brought such "non" but "now" hazardous chemicals in. Don't the exposed NZ people matter!

Just tracking such "Non-Haz" CAS No.s / Chemical Names against each business, reported each year (& nothing more), and paying for having the Authority's database to check for "Haz" changes is the simplest system to protect AU and NZ citizens at the least cost. Then only act when a relevant 'Haz" change occurs.

• NZ EPA: LPG Guidance at Home & Outside Work

Nov 2018: The NZ EPA have published new Guidance on their website for LPG suppliers, compliance certifiers and enforcement officers who are working at homes (and other places that are not workplaces). They have also updated their information about storing LPG at home and in other non-workplaces.

Storing LPG at Home & Other Places Outside of Work (2p pdf)

LPG Guidance: www.epa.govt.nz/everyday-environment/using-lpg-gas-at-home/

From: Nov 2018 Hazardous Substances
www.epa.govt.nz/news-and-alerts/newsletters/hazardous-substances-update/

• NZ EPA Project: Hazardous Chemicals in the Home

The NZ EPA have commissioned Consumer NZ to undertake a Project about use of hazardous chemicals in the home.

Use, and disposal, of hazardous products attracts a lot of questions from the public at our Safer Homes displays.

The project's aim is to raise awareness of the hazards posed by some of chemicals such as herbicides, pesticides, paint thinners and solvents, and of how to dispose of used, partly-used, and any products that have been banned.

Consumer NZ has now finished surveying their members and is moving on to gathering information from Local Authorities, with a view to publishing the Results and Guide in Feb / March 2019, and promoting the safety information to the public.

From: Nov 2018 Hazardous Substances
www.epa.govt.nz/news-and-alerts/newsletters/hazardous-substances-update/

• NZ MBIE: Toxic or Flammable Refrigerant Gases

NZ MBIE Consultation closes 14 Dec 2018 (extended from the 17 Aug 2018) on the discussion document "Ensuring effective regulation of health and safety risks associated with Toxic or Flammable Refrigerant Gases".

The switch from HFCs to more environmentally acceptable alternatives will help combat climate change, but will also present increased risks to health and safety in some circumstances because of the higher toxicity or flammability of common alternatives.

This NZ MBIE discussion document seeks feedback on proposals to reduce the likelihood of harm to persons and property from the expected increase in Toxic and Flammable Refrigerant use as New Zealand transitions away from HFCs.

NZ MBIE is seeking feedback on three alternative options that would ensure only competent persons install, repair, and maintain refrigeration, heat pump, or air conditioning systems that use toxic or flammable refrigerants.

Review of health and safety mining regulations consultation document (30 June 2018, 26 page pdf)

From: www.mbie.govt.nz/info-services/employment-skills/workplace-health-and-safety-reform/development-of-regulations-to-support-the-new-health-and-safety-at-work-act/current-consultations

From: Development of NZ Regulations to support the new NZ Health and Safety at Work Act
www.mbie.govt.nz/info-services/employment-skills/workplace-health-and-safety-reform/development-of-regulations-to-support-the-new-health-and-safety-at-work-act

• NZ Worksafe: Location Compliance Certificates

In NZ, by 1 Dec 2019, you may require a Location Compliance Certificate if you store or use Explosive, Flammable, Oxidising, Toxic or Corrosive Substances and the quantity exceeds the Thresholds specified in the Health and Safety at Work (Hazardous Substances) Regulations 2017.

For example, a Hazardous Substance Location exists where you hold more than: 100 kg of LPG or 50 litres of Petrol

To check whether a hazardous substance location exists for the substances at your site you should search the database of Approved hazardous substances with controls and find out whether a location compliance certificate is required.

You must engage a Compliance Certifier to obtain the Location Compliance Certificate. Search the Register of Compliance Certifiers to find a Compliance Certifier who may issue the Certificate. As at 2 Dec 2018 there were 41 "Active" Location Compliance Certifiers in NZ.

A location Compliance Certificate is issued for 1 year for Explosive, Flammable and Oxidising Substances. You can apply to WorkSafe to extend this to 3 years if you meet certain requirements. If you have Toxic and Corrosive Substances a Location Compliance Certificate is issued for 3 years.

From: https://worksafe.govt.nz/topic-and-industry/hazardous-substances/certification-authorisation-approvals-and-licensing/certification-of-sites/location-test-certificates/

• NZ Worksafe: Hazardous Substances Update, Nov 18

16 Nov 2018: Hazardous Substances Update newsletter.

Toxic & Corrosive Substance Location Compliance Certificates

Site Plans: If your site requires you to establish a hazardous substance location, you need to have an accurate site plan.

Consultation: Toxic or Flammable Refrigerant Gases

Recently updated and new Hazardous Substances Guidance.

From: https://worksafe.govt.nz/about-us/news-and-media/hazardous-substances-update-november-2018/

• NZ MBIE: Updated / New Haz Substances Guidance

Alerted by 16 Nov 2018: Hazardous Substances Update

LPG In Hospitality *(Aug 2018, 4 page pdf)*

LPG In Industry *(Aug 2018, 5 page pdf)*

Delivering LPG Cylinders *(Aug 2018, 4 page pdf)*

Refurbishing and Relocating above Ground Tanks
(Sept 2018, 3 page pdf)

Signage *(Oct 2018, 10 page pdf)*

Certified Handler Requirements *(Sept 2018, 8 page pdf)*

Hazardous Substances that Activate Key Safety Controls
(Aug 2018, 18 page pdf)

From: https://worksafe.govt.nz/topic-and-industry/hazardous-substances/guidance/

• ME-017: AS 1940 & smaller Category 4 & 5 Tanks

A proposed editorial change needs to be as follows:-

"clause 5.3.3(f) In addition to the LAH, Category 6 tanks filled from ship to shore, from a refinery, or similar high volume transfers, shall incorporate a physical and electrically independent high-high level alarm (LAHH). It will warn of a failure of some element of a primary (process) control system. It shall be set at or below the tank rated capacity to allow adequate response time to terminate the transfer before the loss of containment/damage occurs."

This change will remove the added industry cost of this additional LAHH alarm on category 4 and 5 tanks.

(LAH – Level Alarm High; LAHH – Level Alarm High-High)

From: www.standards.org.au/getmedia/edcfa369-7199-47e1-ab9a-7ba1df4b2bb8/Approved_Project_Proposals_Project_Prioritisation_March_2018_Round_16.aspx (Excel Spreadsheet)

• National Transport Reform Implementation Report

19 Nov 2018: The sixth National Transport Reform Implementation Monitoring Report (50 page pdf), which was released on the 19 Nov 2018 by the National Transport Commission (NTC), shows improved progress towards building a uniform transport system across States & Territories.

This Nov 2018 Report shows that all participating jurisdictions have implemented or are on their way to implementing all amendment packages to the Heavy Vehicle National Law (HVNL) and the Rail Safety National Law (RSNL) in the 2017-18 fiscal year.

The Nov 2018 Report also shows that:

- The Applied Law approach for the HVNL and RSNL leads to rapid adoption of reforms of participating jurisdictions. Applied laws are laws which are 'hosted' in one state, and other participating states pass legislation to adopt the law from the host state.
- All jurisdictions except the ACT and the NT have implemented the changes to Limited Quantities in the Dangerous Goods Model Regulations and Code. The Limited Quantities reforms have benefits of up to $33 million per year in reduced compliance costs for industry.

  (reforms relating to the transport of Limited Quantities of Dangerous Goods that provide productivity benefits will not be fully realised for any movements that originate, terminate or pass through either territory)

- Most jurisdictions have implemented the 9th, 10th and 11th amendment packages for the Australian Road Rules. The 12th amendment package was only approved by transport ministers in November 2017.

From: www.ntc.gov.au/about-ntc/news/media-releases/ntc-releases-transport-reform-implementation-report/

Editor: The claims in the NTC Report are disputed by industry associations, which say only minimal benefits are achieved.

• Safety Alert: LPG Cylinders – NOT Allowed Places

20 Nov 2018: Safety Alert - LPG cylinders should NOT be Stored or Used inside Commercial Kitchens (revised Oct 18).

This NSW Safety Alert (revised in Oct 2018) advises NSW workplaces not to store or use portable LPG gas cylinders inside commercial kitchens. It is dangerous and illegal to use LPG gas appliances designed for 'outdoor use only', indoors. It puts workers and others at risk of fire, explosion and asphyxia, especially in commercial kitchens.

Work carried out on any gas installations by a person without the appropriate licence, training and experience also puts workers & others at risk of serious injury from fire & explosion.

Background: SafeWork NSW has responded to several serious incidents at the workplace involving gas, which ignited and led to serious burn injuries. Whilst SafeWork NSW has focused its compliance programs on the inappropriate use of gas appliances connected to portable LPG cylinders indoors the latest incidents relate to work being carried out on fixed gas installations by unlicensed persons.

From: www.safework.nsw.gov.au/resources-library/list-of-all-safety-alerts/safety-alerts/safety-alert-lpg-cylinders-should-not-be-stored-or-used-inside-commercial-kitchens

• ECHA News & Newsletter (Nov 2018)

20 Nov 2018: Terrestrial environments also being polluted with Lead Ammunition

20 Nov 2018: Here's what you need to know before Brexit

20 Nov 2018: Persistent Organic Pollutants – a new family of substances for ECHA. Some examples of newer POPs, which are gradually being phased out worldwide, include:

- Perfluorooctane sulfonic acid (PFOS), used in consumer products, such as some outdoor textiles and leather goods; metal plating; fire-fighting foams; and in stain repellents; and
- Hexabromocyclododecane (HBCDD) widely used as a flame retardant additive in textiles, electrical and electronic appliances, and construction materials.

From: https://echa.europa.eu/news

• CSB: "Call to Action: Combustible Dust"

Original Request: 24 Oct 2018, then on 20 Nov 2018 the time to respond was extended to 31 Dec 2018.

CSB: USA Chemical Safety and Hazard Investigation Board.

There is still time to submit answers to the CSB's "Call to Action: Combustible Dust". This hazard is relevant worldwide.

This initiative asks for information from all individuals and entities involved in the safe conduct of work within inherently dust-producing environments at risk for dust explosions.

The CSB agency seeks input on a variety of complex issues, including: recognizing and measuring "unsafe" levels of dust in the workplace, managing responsibilities and expectations that sometimes are at odds with each other (e.g., performing mechanical integrity preventative maintenance while simultaneously striving to minimize dust releases in the work environment), and the methods for communicating the low-frequency but high-consequence hazards of combustible dust in actionable terms for those working and overseeing these environments.

A full list of the 11 questions can be found in the Request for Comments (4 page pdf). Editor: I have listed 5 as examples.

Q. In real-world working conditions, where dust is an inherent aspect of the operation, can a workplace be both dusty and safe?

Q. In such working environments — where the amount of ambient/fugitive dust cannot be wholly eliminated 100% of the time - how does an individual or organization distinguish between an acceptable or safe dust level and one that has been exceeded? How often does judgment or experience play a role in such decisions? Should it?

Q. How are hazards associated with combustible dust communicated and taught to workers? What systems have organizations successfully used to help their employees recognize and address dust hazards?

Q. What are some of the challenges to maintaining effective dust collection systems?

Q. How common are dust fires in the workplace that do not result in an explosion? Does this create a false sense of security?

Comments can be emailed to CombustibleDust@csb.gov now until 31 Dec 2018.

From: www.csb.gov/csb-releases-call-to-action-on-combustible-dust-hazards/ (from 24 Oct 2018)

From: www.csb.gov/csb-extends-deadline-for-call-to-action-combustible-dust-to-december-31-2018-/ (from 20 Nov 2018)

• USA Chemical Safety Board Updates Oct-Dec 2018

The Oct-Dec 2018 updates are from: www.csb.gov/news/

Oct 2018: **USA CSB Releases Kuraray Factual Investigative Update** (3 page pdf):

From: www.csb.gov/assets/1/17/CSB_Kuraray_Factual_Eng06.pdf?16403

24 Oct 2018: **USA CSB Releases Call to Action on Combustible Dust Hazards**

From: www.csb.gov/csb-releases-call-to-action-on-combustible-dust-hazards/

31 Oct 2018: **Safety Digest: Emergency Planning and Response Stresses the Importance of Preparation, Training, and Communication.**

The USA Chemical Safety Board (CSB) has found that effective emergency response training and planning, as well as communication between the company, emergency responders, and the community, are critical to preventing injuries and fatalities from chemical incidents.

From: www.csb.gov/safety-digest-emergency-planning-and-response-the-importance-of-preparation-training-and-communication/

2 Nov 2018: **CSB: Husky Energy Refinery Explosion & Fire**

Emergency Response Safety Message (6m 26s updated animation/explanation video)

Previously in Notes June-Aug 2018: 2 Aug 18 CSB Releases Factual Update on Explosion and Fire at Husky Refinery

From:
www.csb.gov/husky-energy-refinery-explosion-and-fire/

20 Nov 2018: **CSB Extends Deadline for "Call to Action: Combustible Dust" to 31 Dec 2018** (4 page pdf)

From: www.csb.gov/assets/1/6/Call_to_Action_-_Final1.pdf

• USA OSHA Quick Takes e-News: Nov 18 - Dec 18

16 Nov 2018:**1/** Alabama Tank Cleaning Company Cited for Confined Space, Fire, and Explosion Hazards. Read the 31 Oct 2018 news release for more information. USA OSHA inspectors determined that the company allowed employees to enter a tank without testing for atmospheric hazards. The company was cited for allowing employees to use a non-explosion proof vacuum in a tank that transported a highly hazardous chemical; failing to provide appropriate personal protective clothing; authorizing employees to enter a permit-required confined space without a retrieval system; and failing to ensure confined space testing and monitoring equipment was properly maintained.

From: www.osha.gov/as/opa/quicktakes/

NICNAS (Industrial Chemicals)

• NICNAS Chemical Gazettes

No. C 11, November 2018 (takes you to the initial webpage)

No. C 12, December 2018 (takes you to the initial webpage)

From: www.nicnas.gov.au/news-and-events/chemical-gazette

• Polymer in FDP-S948B-09: Draft Sec. Notification Report

NICNAS required a Secondary Notification reassessment of the Polymer in FDP-S948B-09 because:

- it will now be used in on-shore oil/gas well operations, primarily in coal seam gas (CSG) extraction, resulting in a potential for release into the aquatic environment
- introduction volumes significantly exceed those previously assessed

The product FDP-S948B-09, containing the notified polymer at 10-30% concentration, is the hardener component in an Epoxy Resin system. The applicant (Halliburton Australia Pty Ltd, Adelaide) will use the product in on-shore oil/gas well operations, primarily (approximately 90%) in on-shore CSG operations. The resin permanently consolidates and binds fine particles, the proppant, and the geologic formation together in oil/gas wells that have been hydraulically fractured. After mixing with other components on site and just before use, the notified polymer is present in the total resin system at a concentration of <15%.

The maximum introduction volume of the notified chemical over the next two years will be up to two tonnes per annum as compared to an annual introduction of one tonne per annum as originally assessed.

It is recommended that users of the notified polymer should:

- not directly dispose of it to surface and ground waters
- employ best practice on-site treatment to maximise removal of the notified polymer from waste streams.

Draft: www.nicnas.gov.au/__data/assets/pdf_file/0020/84071/ECSNA2_Draft-SN-report-for-public-comment.pdf (40p)

Comment closed on the 4 Dec 2018.

From: www.nicnas.gov.au/news-and-events/chemical-gazette/numbers/2018/chemical-gazette-no.-c-11,-november-2018/draft-secondary-notification-assessment-on-polymer-in-fdp-s948b-09-for-public-comment

Editor: There were no recommended changes to the GHS Hazards previously recommended.

• NICNAS Science Strategy

31 Oct 2018: NICNAS have developed a science strategy to help them meet the challenges of the contemporary scientific and regulatory environment in assessing the health and environmental impacts of industrial chemicals.

Office of Chemical Safety (OCS) staff administer NICNAS

The science strategy guides the OCS/NICNAS organisation in:

- identifying 'best practice' in regulatory toxicology and risk assessment
- undertaking risk assessments in accordance with 'best practice' methodology
- developing scientific staff capabilities in risk assessment including access to information about current scientific methods and emerging scientific challenges
- maintaining stakeholder confidence in the regulation of industrial chemicals in Australia and
- providing implementable, evidence-based recommendations to risk managers

For Office of Chemical Safety (OCS) staff to maintain 'best practice' in regulatory toxicology and chemicals risk assessment, the following objectives need to be met:

- establishing an organisational culture of identifying and adopting 'best practice'
- building and maintaining staff scientific expertise, including in priority science areas
- establishing a repository of scientific information and assessment tools, including 'corporate knowledge', within the organisation
- promoting consistency of scientific approaches across assessment programs in OCS
- encouraging sharing of information between OCS staff and other chemicals regulators

From: www.nicnas.gov.au/about-us/our-science-strategy

Editor: It's good to see such recognition that the OCS / NICNAS organisation needs the Science Strategy guidance..

However, there is no recognition that an Equivalent Science Strategy is needed for Industry and for the necessary training in Universities and TAFEs to support Industry to "meet the challenges of the contemporary scientific and regulatory environment in assessing the health and environmental impacts of industrial chemicals".

• IMAP Tranche 25 Existing Chemical Assessments

26 October 2018: Tranche 25 of the **I**nventory **M**ulti-tiered **A**ssessment and **P**rioritisation (IMAP) framework for existing chemicals are open for public comments until **21 Dec 2018.**

Tranche 25 Existing Chemicals include:

176 Chemicals with Tier I Health Assessments at:
www.nicnas.gov.au/chemical-information/imap-assessments/imap-assessments/human-health-assessments

Editor: Three Tier 1 Chemicals caught my concern interest:

CAS 25684-76-8 (Domestic) [An Organofluorine!]
Ethene, Tetrafluoro-, Polymer with 1,1-Difluoroethene

CAS 13709-36-9 (Site Limited) Xenon Difluoride (XeF2) [Haz!]

CAS 69991-61-3 (Domestic) [An Organofluorine!]
Ethene, Tetrafluoro-, Oxidized, Polymerized

535 Chemicals with Tier II Health Assessments at:
www.nicnas.gov.au/__data/assets/excel_doc/0014/40820/Tier-II-HH-summary-all-tranches-published-26-Oct-2018.xlsx

Xylenols are **incorrectly classified** by NICNAS as "Toxic if swallowed" where the oral toxicity data in their Tranche 25 Human Health Tier II actually classifies it as "Harmful if swallowed". The ECHA Registered Substance Database has data that supports the Xylenols to be classified as "Harmful if swallowed" and "Harmful by skin contact" but they also incorrectly uprate these classifications to "Toxic"!!

www.nicnas.gov.au/chemical-information/imap-assessments/imap-group-assessment-report?assessment_id=13336

- 120 HCIS Classifications are proposed to be amended:

e.g. A Group Assessment: Ethoxylates of Aliphatic Alcohols (>C6) - all 59 chemicals in this Group will be classified as:

Harmful if swallowed - Cat. 4 (H302); Causes serious eye damage - Cat. 1 (H318); Causes skin irritation - Cat. 2 (H315)

www.nicnas.gov.au/chemical-information/imap-assessments/imap-group-assessment-report?assessment_id=424

e.g. Benzisothiazolinone & its sodium salt: CAS 2634-33-5; CAS 58249-25-5. They are recommended for Tier III assessment
www.nicnas.gov.au/chemical-information/imap-assessments/imap-group-assessment-report?assessment_id=13607

- 60 Chemicals are proposed to be SUSMP chemicals:

e.g. A Group Assessment: Ethoxylates of Aliphatic Alcohols (>C6) represent 59 potential S6 chemicals.

These chemicals are synthesised through processes that might result in 1,4-Dioxane as a residual by-product, although it is not expected to be present in any significant amount. The concentration of 1,4-Ddioxane (listed under Dioxane) is controlled through listing in the Poisons Standard (SUSMP) in Schedule 6, with labelling requirements applying at above 100 ppm (Appendix G, SUSMP 2018). It is urged that industry should continue to use additional purification steps to remove 1,4-dioxane from the chemicals before blending them into cosmetic formulations.

6 chemicals under Tier III Health Assessment

Fragrances with low worldwide production volumes: but no specific use has been identified in Australia.

Phenol, 2-Methoxy-4-Methyl-, Acetate	879-67-4
Cyclohexenecarboxaldehyde, 2,6,6-Trimethyl-	52844-21-0
Benzene, (2-Isothiocyanatoethyl)-	2257-09-2
Benzene, 2-Methoxy-1-Methyl-4-(1-Methylethyl)-	6379-73-3
Benzenepropanoic Acid, .Beta.-Oxo-, 4-Methylphenyl Ester	67801-43-8
Propanoic Acid, 2-Oxo-, 3-Methylbutyl Ester	7779-72-8

The critical health effects identified have not changed from the Tier II assessment [potential skin sensitisation and systemic long-term effects (genotoxicity and carcinogenicity)].

23 Chemicals with Tier 1 Environment Assessments

www.nicnas.gov.au/__data/assets/excel_doc/0016/40822/IMAP_Environment_Tier_I_summary-all-tranches-26-Oct-2018.xlsx

No Chemicals with a Tier II Environment Assessment

No Chemicals with a Tier III Environment Assessment

From: www.nicnas.gov.au/chemical-information/imap-assessments/imap-assessments

Scheduled Poisons

• The Poisons Standard (SUSMP No. 22) Oct 2018

Poisons Standard October 2018 (SUSMP No. 22)

685 page Standard commenced 1 October 18. The SUSMP:

Duplicated Note (for info) from previous Aug-Oct 2018 Edition

• Scheduling Delegate's Final Substance Decisions

29 Nov 2018: Final decisions amending, or not amending, the current Poisons Standard, November 2018, for medicines and chemicals referred to the June 2018 scheduling meetings.

2. Joint meeting of the Advisory Committee on Chemicals and Medicines Scheduling (ACCS/ACMS #19)

- 2.1. 2-Butoxyethanol (amend S6 cut off to ≤10%)
- 2.2. Dimethyl Sulfoxide (DMSO) (amend S6 cut-off to ≤10%)
- 2.3. Aliphatic Allyl Esters (amend S7 cut-off to 5% + ≤0.1%)
- 2.4. Astodrimer Sodium (S3 except in a condom lubricant)

3. Delegate-Only decisions on Ag & Vet Chemicals

- 3.1. Benzovindiflupyr (New S6 entry)
- 3.2. Dicyclanil (Amended S6 entry to ≤6.5%)

From: www.tga.gov.au/scheduling-decision-final/final-decisions-amending-or-not-amending-current-poisons-standard-november-2018

Food Chemical Issues

• A1162: Triacylglycerol Lipase as a Processing Aid

13 Nov 2018: This Application is to seek approval to permit the use of the enzyme Triacylglycerol Lipase from Trichoderma Reesei as a Processing Aid (Enzyme) in the manufacturing of cereal-based products.

Executive Summary (5 page pdf)

Lipase hydrolyses Ester bonds of Triacylglycerols, resulting in the formation of Mono- and Di-Acylglycerols, free Fatty Acids and, in some cases, also Glycerol. Lipases can be divided into four groups according to their specificity: substrate specific lipases; regioselective lipases; fatty acid specific lipases; and stereospecific lipases.

The substrates for lipase are non-polar lipids such as Triglycerides or Triacylglycerol.

Triglycerides are formed by combining glycerol with three Fatty Acids molecules. The Glycerol molecule has three Hydroxyl (OH^-) groups. Each Fatty Acid has a Carboxyl group ($COOH^-$). In Triglycerides, the Hydroxyl groups of the Glycerol join the Carboxyl groups of the Fatty Acid to form Esters bonds.

Triacylglycerol lLpase from Fusarium sp. expressed in T.Reesei is mainly intended to be used in baking processes, (e.g. bread, biscuits, tortillas, cakes, steamed bread and croissants) and other cereal based processes (e.g. pastas, noodles and snacks).

From: www.foodstandards.gov.au/code/applications/Pages/A1162.aspx

• A1171: Endo-Inulinase (GMAO) as a Processing Aid

23 Oct 2018: The purpose of this Application is to permit the use of Endo-Inulinase produced from a GM modified strain of **A**spergillus **O**ryzae as a Processing aid.

Executive Summary (Sept 2018 3 page pdf)

The food enzyme shows Inulinase activity as defined under IUBMB No EC 3.2.1.7 and is used as a Processing Aid in the production of Fructo-Oligosaccharides (FOS). The function of Endo-Inulinase is to catalyse the Endohydrolysis of (2→1)-β-D-Fructosidic linkages in Inulin. The substrate for Endo-Inulinase occurs naturally in foods.

The food enzyme object of the present application was subjected to several toxicological studies to confirm its safety for consumers. The mutagenicity studies supported that the food enzyme does not have the potential to damage the genetic material of living organisms, including mammals. The oral toxicity study showed that the food enzyme does not exhibit signs of toxicity, up to doses that are many times higher than those which are consumed via food.

From: www.foodstandards.gov.au/code/applications/Pages/A1171EndoinulinasefromGMAspergillusoryzaeasaPAEnzyme--.aspx

• A1172: Enzymatic Production of Rebaudioside D

6 Nov 2018: The purpose of this Application is to seek approval for a new specification for Rebaudioside D produced by an enzymatic conversion method.

Executive Summary (3 Oct 2018) (3 page pdf)

The Applicant has developed a novel multi-step biosynthesis pathway process to manufacture high-purity Rebaudioside D (≥95%) using enzymes Uridine 5'-Diphospho(UDP)-Glucosyltransferase and Sucrose Synthase that facilitate the transfer of Glucose molecules to purified Stevia Leaf Extract via Glycosidic bonds. These enzymes are produced by a Strain of Pichia Pastoris.

Consistent with the already permitted food uses of Steviol Glycosides, Rebaudioside D is intended for use as a low-calorie, high-intensity sweetener that provides technological advantages and benefits to consumers, and is suitable for use by individuals with diabetes as well as others who follow a low glycaemic diet. According to a sensory panel of 13 participants, the Applicant's Rebaudioside D was determined to be 200 times sweeter than Sucrose.

From: www.foodstandards.gov.au/code/applications/Pages/A1172EnzymaticproductionofRebaudiosideD.aspx

• A1129: Monk Fruit Extract as a Food Additive

13 Nov 2018: The purpose of this Application is to permit monk fruit extract as a food additive, specifically as an intense sweetener.

Approval Report – 13 Nov 2018 (31 pages) (pdf) | (docx)

Monk fruit extract is derived from the fruit of Siraitia grosvenorii, a perennial vine, native to southern China. Monk fruit extract has a number of advantages over other already approved intense sweeteners. It has a relative lack of bitter taste and can be used as a sugar substitute in baking (as it has high temperature stability and no unpleasant aftertaste).

Ministers have 60 days to ask for a review or agree that the sweetener should be permitted. If no review is requested, the sweetener could be permitted for use in food around January 2019.

From: www.foodstandards.gov.au/code/applications/Pages/A1129-MonkFruitFA.aspx

• Food Standards: Sweeteners

Nov 2018: Intense sweeteners are many times sweeter than sugar which means they can be used in much smaller amounts. They are added to foods instead of sugar to provide low energy or sugar-free foods.

Some sweeteners are referred to as artificial sweeteners. Others occur naturally e.g. Steviol Glycosides, which are extracted from the Stevia Plant.

- Acesulphame potassium (950)
- Advantame (969)
- Alitame (956)
- Aspartame (951)
- Aspartame-Acesulphame salt (962)
- Cyclamate (952)
- Monk Fruit Extract – potential new sweetener (see A1129)
- Neotame (961)
- Saccharin (954)
- Steviol Glycosides (960)
- Sucralose (955)
- Thaumatin (957)
- Sugar alcohols
- Labelling

From: www.foodstandards.gov.au/consumer/additives/Pages/Sweeteners.aspx

• Proposal: Alcoholic Beverages Pregnancy Warning

1 Nov 2018: Food Standards are working on a proposal that will consider a mandatory labelling standard for Pregnancy Warning Labels on Packaged Alcoholic Beverages.

11 Oct 2018: Government advice in Australia and New Zealand is that pregnant women do not consume any alcohol. If a baby is exposed to alcohol in the womb it can have irreversible impacts such as intellectual, behavioural and developmental disabilities. The Forum recognised that Fetal Alcohol Spectrum Disorder is a life-long disability which can be prevented if pregnant women do not consume alcohol.

Pregnancy warning labels on packaged alcoholic beverages can raise awareness and prompt discussions about the risks of consuming alcohol during pregnancy and may also support the establishment of cultural norms in relation to pregnant women not drinking alcohol. The alcohol industry has applied pregnancy warning labels to packaged alcoholic beverages on a voluntary basis since late 2011.

The AU&NZ Ministerial Forum on Food Regulation noted a Decision Regulation Impact Statement (DRIS) with four options for progressing pregnancy warning labels on packaged alcoholic beverages. The Forum agreed that, based on the evidence, a mandatory labelling standard for pregnancy warning labels on packaged alcoholic beverages should be developed and should include a pictogram and relevant warning statement.

From: www.foodstandards.gov.au/consumer/labelling/Pages/Pregnancy-warning-on-alcoholic-beverages-proposal-.aspx

And: http://foodregulation.gov.au/internet/fr/publishing.nsf/Content/forum-communique-2018-October

Agricultural Chemicals

• EPA NZ: Products with Synthetic Pyrethroids

29 Oct 2018: The EPA NZ are investigating products containing Synthetic Pyrethroids as part of EPA NZ's revamped reassessments programme

Synthetic Pyrethroids (which are not the same as the naturally occurring Pyrethrins derived from Chrysanthemums) are hazardous substances. They are insecticides found in some fly sprays, insect repellents, automatic dispensers, bed bug treatments, and animal flea collars and treatments.

New information from international regulators in the United States, Canada and the European Union has identified certain risks to people and animals from the use of products containing Synthetic Pyrethroids.

This information concerns risks to children from accidental exposure to flea collars and treated carpets, as well as people reporting a burning or prickling sensation, known as Paraesthesia, after coming into contact with Synthetic Pyrethroids.

It is important to clarify that Synthetic Pyrethroids, and products that contain them, are NOT banned. The call for information signals the EPA NZ's first step in exploring whether a Reassessment is necessary.

EPA NZ are calling for use information on products containing any of the 11 Synthetic Pyrethroids, which are available in off-the-shelf products for use in the home and garden, and products used professionally in the agriculture and commercial sectors (for example in crop protection products, timber treatments, and veterinary medicines).

The EPA NZ want any information industry and users can provide them with on the current use, practices, and benefits of these Synthetic Pyrethroids. This could include information relating to the adverse effects of the substances including toxicology, ecotoxicology, and environmental fate studies.

Current human health and environmental effects information from any existing research projects analysing the use of Synthetic Pyrethroids is also appreciated.

The 11 Synthetic Pyrethroids in NZ include:

- Bifenthrin; - Bioresmethrin; - Cyfluthrin; - Cyhalothrin
- Cyhalothrin, lambda; - Cypermethrin; - Cypermethrin, alpha
- Deltamethrin; - Fenvalerate; - Permethrin; -Tetramethrin

Nine of these Synthetic Pyrethroids are on the Priority Chemical List.

Comment until Friday 1 Feb 2019 to send a response.

Email your response form to Reassessments@epa.govt.nz.

From: www.epa.govt.nz/news-and-alerts/latest-news/fly-sprays-and-animal-treatments-come-under-epa-microscope/

• APVMA Annual Report 2017-2018

14 Sept 2018 (tabled 22 Oct 2018): Excerpts follow from the Summary and Outlook by: Dr Chris Parker, APVMA Chief Executive Officer.

The APVMA commissioned an independent review of assessment performance to identify the underlying causes for delays in assessment and registration. The review confirmed that fluctuations in our workload, and the range in quality and complexity of applications we receive make it difficult to meet the legislated performance measure of 100 per cent on-time assessments. The APVMA accepted all recommendations in the independent review and has worked towards implementing immediate priorities identified in the report.

On the forefront of regulatory science training, we have delivered the Accelerated Regulatory Science Training Program with the first of three cohorts graduating with a Diploma of Government (Regulatory Science).

The Agricultural and Veterinary Chemicals Legislation Amendment (Operational Efficiency) Bill 2017 was introduced into the Australian Parliament on 25 October 2017. Additionally, the proposed Agricultural and Veterinary Chemicals Legislation Amendment (Streamlining Regulations) Bill 2018 *has been* developed and *was* introduced into the Australian Parliament *on 18 Oct* 2018. If passed, the APVMA will be required to prepare for the introduction of new measures, including reporting requirements, streamlined regulatory processes and adjustments to APVMA governance.

In a significant step forward, building work commenced on our permanent leased premises in Armidale that will accommodate up to 150 staff by mid-2019. Funding provided by the Australian Government for our digital strategy will further ensure a smooth transition of our operations to Armidale.

With the conclusion of our staff intention survey, e-working trial and approach to market for scientific assessment services, we chose to retain 30–40 specialist scientists and decision makers in Canberra. Retaining the skills and expertise of our scientists is essential to the effective operations of the APVMA.

Download a Full PDF version of the 2017-18 APVMA Annual Report (137 page pdf, 7Mb)

From: https://apvma.gov.au/node/11031

• AgVet Chem Amdmt (Streamlining Regul'n) Bill 2018

The Agricultural and Veterinary Chemicals Legislation Amendment (Streamlining Regulation) Bill 2018 was introduced to the Australian Parliament on 18 October 2018. The Bill includes a number of measures, including allowing prescribed approvals and registrations and improving data incentives for applicants.

Several changes were made to the Bill following the Department of Agriculture and Water Resources (DAWR) public consultation, **including:**

- omitting the proposal for provisional registration
- simplifying the proposed legislation for accrediting persons and removing the aggravated offence for contravening conditions of accreditation
- aligning voluntary recalls more closely with Australian Consumer Law
- providing for internal review of an APVMA decision that is substituted for a computer-based decision
- simplifying the provisions for extending 'data protection' periods.

Further detail of this Bill is provided on the Australian Parliament House website.

Text of Bill (49 pages): First reading - docx pdf

Explanatory Memorandum (60 pages): docx pdf
(see the key points below)

From: https://apvma.gov.au/node/39356

• Streamlining Explanatory Memorandum: Key Points

The Bill will improve the effectiveness and efficiency of the national system for regulating agricultural and veterinary (agvet) chemical products. The Bill will:

- enable the use of new, simpler regulatory processes for low risk chemical products (to simplify the approval of active constituents and labels, and the registration of certain products)
- provide the Australian Pesticides and Veterinary Medicines Authority (APVMA) and industry with more flexibility to deal with certain types of new information provided when the APVMA is considering an application
- provide for extensions to limitation periods and protection periods as an incentive for chemical companies to register certain new uses of chemical products—particularly those uses (minor uses) with insufficient commercial return for chemical companies to normally add to the product label
- support computerised decision-making by the APVMA
- provide for a legislative instrument made by the APVMA to prescribe a scheme in the future that would allow applicants and the APVMA to use accredited third party providers to undertake assessment services
- optimise risk communication about chemical products by improving the transparency of voluntary recalls
- harmonise the need to inform the APVMA of new information (where it relates to the safety criteria) so that the same obligations apply to all holders and applicants
- provide a more practical mechanism for dealing with minor variations in the constituents in a product, that normally occur in the manufacturing process
- provide the APVMA with more proportionate options for dealing with false or misleading information, and clarify what information must be included on a label
- allow the holder of a suspended product to address the reason for the suspension
- fix anomalies in the regulation-making powers for the labelling criteria
- simplify the APVMA's corporate reporting requirements
- make minor and machinery changes including removal of unnecessary and redundant provisions.

From: Explanatory Memorandum (60 pages): docx pdf

• APVMA & Permethrin Insect Repellent Clothing

APVMA registration applies to clothing impregnated and/or treated with insect repelling chemicals, such as Permethrin.

The APVMA has identified several companies who are supplying or selling clothing with impregnated repellents that are not registered with the APVMA.

Clothing marketed as 'insect repelling' and which is treated or impregnated with a chemical, including Permethrin, needs APVMA registration. This can include hats, trousers, pants and socks.

Clothing marketed as 'protective' (other than clothing treated with a chemical) does NOT need APVMA registration. This can include hats with nets or corks, hair nets, and elastic bands around shirt cuffs to *physically* keep insects away from skin.

From: APVMA Regulatory Update #282, 15 Nov 2018
https://apvma.gov.au/node/39356

• Spray Drift Supplemental Consultation (to 8Feb19)

19 Nov 2018: The APVMA is seeking Supplemental Consultation on the Stage 1 approach to Spray Drift Management that incorporates the changes identified from previous Spray Drift Management consultation (which closed for consultation on the 30 Mar 2018 and had 26 responses).

The purpose of the proposed Spray Drift Management approach is to introduce refinements to buffer zone calculations; provide clearer label instructions, increased flexibility for pesticide applications; and support the use of Drift Reducing Technologies (DRT).

The Spray Drift Management Tool spreadsheet is a key document to understand:
https://apvma.gov.au/sites/default/files/publication/39706-sdmt.xlsx.
This Tool will be used by the APVMA to put buffers relevant to the use of Drift Reducing Technologies on labels or permits.

Consultation is open until COB on 8 Feb 2019.

Enquiries ph: 02-6210-4701. Em: enquiries@apvma.gov.au

From: APVMA Regulatory Update #283, 30 Nov 2018 https://apvma.gov.au/node/40416

And: https://apvma.gov.au/node/33726

Dangerous Goods

• IMDG Code 2018 – Significant Changes in 39-18

Flyer: IMDG Code, 2018 Edition (Amdt 39-18) (2 page pdf)

The 2 Volume Hard Copy is now available to purchase from Boat Books Australia. https://www.boatbooks-aust.com.au/ for $337.50 + $5 Standard Shipping.

The Code, as amended by Amendment 39-18, is mandatory as from 1 January 2020 but may be applied by Administrations in whole or in part on a voluntary basis from 1 January 2019.

Amdt 39-18: Summary of Significant Changes (1 page pdf)

Some of the Significant Changes are:

- Throughout the text 'risk' now reads 'hazard' and 'risks' reads 'hazards'.
- There is a new paragraph 2.0.6, Classification of Articles as Articles containing Dangerous Goods N.O.S.
- A new entry for 3227 was added to the table in paragraph 2.4.2.3.2.3 for Class 4. New entries for 3109, 3116, 3119 were added to the table in paragraph 2.5.3.2.4 for Class 5.2.
- Chapter 2.8, Classification of corrosives, has been overhauled.
- There is clarification in paragraph 3.1.2.2 that **only the more applicable PSN be used** when there are several distinct ones under one UN Number.
- In chapter 5.2, paragraph 5.2.2.2, the specimen labels are now presented in a landscape table.
- Chapter 5.3 is now extended to cover bulk containers.
- There is a new table added to paragraph 7.2.6.3, which provides segregation exemptions for organic peroxides UN numbers 3101 to 3120 with sub-risks that clash with other organic peroxides.
- Section 7.3.7 is restructured to merge the amendments to the Model Regulations and the existing text.

New Segregation Group Codes

- Eighteen new Segregation Groups are identified (see paragraph 3.1.4.4)
- Section 7.2.8 has been updated to reflect the new Segregation Group Codes.
- SG1 has been amended and new Segregation Codes SG76, SG77 and SG78 added.

Updates to the Dangerous Goods List (DGL)

- There are new entries TOXIC SOLID, FLAMMABLE, INORGANIC, N.O.S. (UN 3535) and LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT (UN 3536).
- There are new entries UN numbers 3537 to 3548 covering 'ARTICLES CONTAINING DANGEROUS GOODS'.
- The eighteen new segregation groups have now been coded & included in column 16b of the DGL (note: if a substance belongs to a segregation group (as identified in paragraph 3.1.4.4) it is now identified in the DGL, column 16b, by inclusion of the 'SGG' code. The intention is to make the identification of belonging to a segregation group more easily recognizable directly from the DGL).
- The heading in column 4 of the DGL now reads 'Subsidiary Hazard(S)'.

- Many substances in the DGL have now been assigned SG35, SG36 and/or SG49 (stow separated from Acids/Alkalis/Cyanides)
- The EmS guide has been updated and revised to reflect new assignments in column 15 of the DGL.

From: www.imo.org/en/Publications/IMDGCode/Pages/Default.aspx

• Vic: D.Goods (Transport by Road or Rail) Regs

Victoria's Dangerous Goods (Transport by Road or Rail) Regulations 2018 (DG TRR Regulations) (199 pages) commenced on 25 October 2018.

Statutory Rule: 2018-155sr Oct 2018 (Authorised pdf) (docx)

The new Vic DG TRR Regulations are mainly the same but they do reflect changes that have been made nationally for the transport of Dangerous Goods.

The changes affect those that:

- hold or require a dangerous goods vehicle or driver's licence
- transport empty dangerous goods packaging
- transport dangerous goods in limited quantities
- transport constituents of a bulk Ammonium Nitrate-based explosives to manufacturing sites
- transport cylinders
- are involved in packaging design (both bulk tanker and non-bulk tanker)
- want to seek an exemption or administrative determination or approval

They reduce the regulatory burden for the transport of lower risk Dangerous Goods by removing duplicate compliance requirements for Explosive component transport.

Reconciliation Table (39 page pdf) - Dangerous Goods (Transport by Road and Rail) Regulations 2018 with the changes to the Regulation numbering for the transport of Dangerous Goods compared to the 2008 Regulations.

Summary of Key Changes (8 page pdf)

While the new Vic DG TRR Regulations 2018 are mainly the same as the Vic Dangerous Goods (Transport by Road or Rail) Regulations 2008 (Vic DG TRR Regulations 2008), they do: reflect changes that have been made nationally to the Model Subordinate Instrument on the Dangerous Goods by Road or Rail (Model Regulations) in May 2018 include prescribed fees include amendments to improve clarity and meet modern drafting requirements.

A number of changes were also introduced to the Australian Dangerous Goods Code for the Transport by Road and Rail (ADG Code) in May 2018 that did not need to be included in the new Victorian DG TRR Regulations 2018. However, these changes do apply to Victorian duty holders from 25 October 2018.

The 8 page pdf has a Summary of the Key Changes made to the new DG TRR Regulations 2018 and the ADG Code that Victorian duty holders need to be aware of.

From: www.worksafe.vic.gov.au/news/2018-10/victorias-new-dangerous-goods-transport-road-or-rail-regulations

• ADG Code 7.6 final reformatted version: 12 Dec 18

Edition 7.6 (Sept 2018 Edition) has been reformatted and now includes a hyperlinked table of contents, list of tables and list of figures. This reformatted version was released 12 Dec 2018.

Australian Dangerous Goods Code Edition 7.6:
www.ntc.gov.au/Media/Reports/(A890348C-BEE7-3C64-A770-E98CFD8DDEFA).pdf (1257 page reformatted pdf)

There are no changes to obligations imposed by the Code. The NTC will shortly commence a new cycle of maintenance for the Code. If you have discovered any errors or omissions in the Code, please advise us at enquiries@ntc.gov.au

*Note: Aerosols are excluded from the personal care product exemption outlined at section 3.4.12.

^Please check with Your State/Territory Competent Authority whether Edition 7.6 currently has legal effect.

From: www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/

Editor: An ADG Code 7.6 Code was released 25 Sept 2018, then removed a day or two later as it had formatting errors.

I am informed that for Aerosol Personal Care Products the Note above is correct, as these products were always intended by Competent Authorities Panel (CAP) to be excluded under 3.4.12 in the ADG Code 7.6.

• AU Emergency Response Guide (by late Jan 2019)

The AU Emergency Response Guide based on the Canutec Guide (which various Dangerous Goods specialists have worked on to replace HB 76) *has been brought into a single AU electronic document.*

It has been agreed and now only needs to have out of meeting final approval under the CAP Process. With the final tick that makes it a CAP controlled document the AU ERG will soon be available to download from the National Transport Commission Dangerous Goods webpage:

www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/ (check in early 2019)

For comparison you may wish to have a look at the current (North American) Canutec Emergency Response Guidebook. This free ERG pdf (400 pages) is available from: *www.tc.gc.ca/eng/canutec/menu.htm*

• Transport of Dangerous Goods in Australia

Editor: I've included the website information below, as the Australian Dept of Infrastructure, Regional Development and Cities website is not obvious to persons outside of the Authorities and specialists who work in the field.
I have included weblinks so that the scope is able to be seen.

The Competent Authorities Panel - National Exemptions, Approvals and Determinations

The Competent Authorities Panel (CAP) is a body whose prime responsibility is to consider submissions requesting national exemptions, determinations and classifications that may operate at variance to the Australian Dangerous Goods Code. CAP generally meets twice a year and considers submissions from industry and industry associations.

List of State & Territory Competent Authorities

Technical Inquiries - State & Territory Competent Authorities for Road & Rail Transport that links to the previous **List.**

Infrastructure Etc Departmental Contacts
Email: Pauline.Unterberger@infrastructure.gov.au

Contact Details for Maritime & Aviation Dangerous Goods Authorities

International Harmonisation via the UN Sub-C'tee of Experts

Competent Authorities for Land Transport of D.Goods

Competent Authorities for Air & Sea Transport of D.Goods

The Australian Dangerous Goods Code Edition 7.5
This webpage includes a weblink to the NTC D.Goods.

Transport of Explosives (3rd Edition Code 2009)

Transport of Radioactive Substances (the Code link is broken)

It refers to the ARPANSA: Code for the Safe Transport of Radioactive Material (2014) which is available from:
https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpsc-2

From: https://infrastructure.gov.au/transport/australia/dangerous/index.aspx

• NaOH Liquid Chemical Spill, NSW Warehouse

5 Nov 2018: HAZMAT on Scene of Chemical Spill, Beresfield NSW Warehouse Evacuated

Fire and Rescue crews were called after reports that 1000 litres of liquid form Sodium Hydroxide (NaOH) had escaped a storage container at a warehouse.

On arrival at the scene crews discovered a container had ruptured after it was damaged by a vehicle, in what is suspected to be a workplace accident. At least 600 litres of the substance had escaped the container, HAZMAT crews cordoned off the area. More than 60 people were evacuated from the building and surrounding sites. An exclusion zone of 200 metres was put in place.

From: www.theherald.com.au/story/5739368/hazmat-on-scene-of-chemical-spill-warehouse-evacuated/

(Alerted by DG Newsy Stuff: Dangerous Goods - Hazmat Global Network, https://groups.io/g/hazmat)

• WA Dangerous Goods Documents & Publications

29 Nov 2018: Consultants Approved To Examine And Endorse Storage And Handling Proposals – List (16 page pdf)

There are 36 WA consultants with the DG Classes they cover listed. Their full contact details are also included.

22 Nov 2018: Flammable Refrigerant Gases Position Paper - Information Sheet (7 page pdf)

It includes information on:

- the use of flammable refrigerant gases in stationary and mobile (vehicle) workplace environments (including fixed or portable plant);
- how to manage the risk of fire & explosion from refrigeration & air-conditioning systems1 containing flammable refrigerant gases &
- the storage and handling of flammable refrigerant gases

15 Nov 2018: Fireworks Event Permit - Application Form (15 page pdf). The use of fireworks by the general public is banned in Western Australia (WA), except for unrestricted fireworks e.g. bon-bons, party poppers, Christmas crackers, throwdowns & sparklers.

5 Nov 2018: Register a Dangerous Goods Pipeline - Application Form (8 page pdf)

From: www.dmp.wa.gov.au/Dangerous-Goods/Dangerous-Goods-Publication-11093.aspx?query=Search&sort=date&start_rank=1

Environmental Notes on Chemicals

• Katherine, NT: PFAS clean up set to begin

The Australian Defence Department this week released the final in a series of environmental reports regarding PFAS & Katherine.

Now the full extent of the contamination is known, which is still flowing in the groundwater from the Tindal RAAF Base under Katherine, and into the Katherine River.

Defence has begun installing two water treatment plants at Tindal in an attempt to intercept the PFAS before it leaves the base.

A bore field basically on top of the base's old fire training area will intercept ground flow, remove the PFAS and re-inject the cleaned water back into the aquifer.

Defence lead spokesman on PFAS, Steve Grzeskowiak told Katherine Times the next steps on PFAS were management and remediation.

He said 65 water tanks had been installed at homes near the base not connected to the town's treated water supply and formerly reliant on bore water.

"Next dry season we will focus on the soil," he said.

Ground zero for Katherine's PFAS contamination is the former fire training areas on the base where the problem chemicals were contained in fire fighting foams once used there.

From: www.katherinetimes.com.au/story/5784974/pfas-clean-up-set-to-begin/ (29 Nov 2018)

(Alerted by DG Newsy Stuff: Dangerous Goods - Hazmat Global Network, https://groups.io/g/hazmat)

• Katherine, NT: PFAS Environmental Report - Nov 2018

Ecological Risk Assessment (ERA) Report (12 Nov 2018)

The objectives of the ERA were to:

- assess the potential for PFAS contaminants in soil, sediment, and surface water to result in adverse effects to ecological receptors within ecological habitats present on-Base.
- assess the potential for reported Base-derived PFAS contaminants present in off-Base environmental media and habitats to result in adverse effects to ecological receptors that inhabit the area surrounding the Base.
- assist in guiding the remediation and risk management measures to address PFAS contamination at the Base.

The risk characterisation was achieved through a three-step process:

- Step 1: Development of a Conceptual Site Model (CSM), including a source, pathway, receptor exposure analysis.
- Step 2: Screening of maximum reported concentrations in soil and surface water against adopted screening values and direct toxicity benchmarks.
- Step 3: Modelling of the intake of PFOS and PFOA based on diet and measured concentrations in plants and animals across different areas. The estimated intakes were then compared to adopted toxicity values to indicate potential ecological risks.

Executive Summary (11 pages)

http://www.defence.gov.au/Environment/PFAS/docs/Tindal/Reports/Tindal_ERA_Final_Executive_Summary_V2.pdf

Report Body (142 pages)

http://www.defence.gov.au/Environment/PFAS/docs/Tindal/Reports/Tindal%20ERA%20Final%20Report_V3.pdf

There are 16 Appendices also available

A separate Human Health Risk Assessment (HHRA) was completed for the Tindall Base (Coffey 2018b). Hence this ERA document is limited to addressing risks to flora and fauna in the terrestrial and aquatic environment that are potentially impacted by Base-derived PFAS compounds.

From: www.defence.gov.au/environment/pfas/Tindal/Publications.asp

Also see: RAAF Base Tindal PFAS Investigation www.defence.gov.au/environment/pfas/Tindal/

• Hobart Airport PFAS Contamination Report Released

18 Oct 2018: Air Services Australia releases PFAS report into Hobart Airport contamination. Air Services Australia said while the test results indicated low risk to the community surrounding the airport, it would continue to work with the airport and relevant agencies to determine the next steps.

Airservices stopped using fire fighting foam containing PFAS in 2010, including at Hobart Airport.

This study was conducted by GHD Pty Ltd environmental consultants. The preliminary study was conducted by SEMF Pty Ltd environmental consultants, released Oct 2017.

Hobart Targeted PFAS Investigation 2018 (June 18 197p pdf)

From: www.examiner.com.au/story/5712316/pfas-levels-low-risk-to-community-at-hobart-airport/?cs=95 (19-10-2018)

And: http://newsroom.airservicesaustralia.com/releases/airservices-results-of-pfas-investigation-at-hobartairport (18-10-18)

(Alerted by DG Newsy Stuff: Dangerous Goods - Hazmat Global Network, https://groups.io/g/hazmat)

• Guide: Remediation & Mgmt of PFAS Site Contamination

July 2018: CRC CARE Technical Report 43: Practitioner Guide to Risk-Based Assessment, Remediation and Management of PFAS Site Contamination

This Practitioner Guide deals with PFOS and PFOA given their known physical and chemical properties, toxicity, and behaviour, fate and transport in the environment. These factors are considered in terms of their relevance to risk-based site contamination. The Guide also provides an overview of the application of Australian approaches, which in turn provides the background for site-specific risk assessments, as well as the basis for the development and application of screening levels. It is a technical resource for the application of risk-based approaches to the assessment, remediation and management of PFAS site contamination.

Download:www.crccare.com/files/dmfile/CRCCARETechreport43_PFASpractitionerguide_web.pdf (July 2018 181p pdf)

https://www.crccare.com/publications/technical-reports

• Norwegian EA: PerFluoroButaneSulfonic Acid

31 Oct 2018, released 20 Nov 2018:
Norwegian Environmental Agency Report M-1122|2018

PFBS in the Environment: Monitoring and Physical-Chemical Data Related to the Environmental Distribution of Perfluorobutanesulfonic Acid (PFBS).

A literature review on relevant physicochemical properties and environmental monitoring data for PFBS has been performed and summarized in this report.

PFBS is a short-chain PFAS. Due to the increasing use of PFBS, and increasing number of reports of PFBS in the environment, the Norwegian Environment Agency is currently considering whether PFBS fulfils the criteria of a Substance of Very High Concern (SVHC) under REACH. The data in this report was generated to provide background information to this evaluation.

Temporal trends/Comparisons with other PFAS

There are multiple indicators that PFBS concentrations in aquatic media are continuing to increase, to an extent they are beginning to surpass most other PFAS substances. This has been observed in several recent waste water emissions & various fresh water studies, in which PFBS is either the dominant PFAS or amongst the top three. Several biota studies are also noticing an increase in PFBS over time; however concentrations in biota remain much smaller than other PFAS, due in part to the low bioaccumulation potential.

http://www.miljodirektoratet.no/Documents/publikasjoner/M1122/M1122.pdf (72 page pdf (in English))

From: www.miljodirektoratet.no/no/Publikasjoner/2018/November-2018/PFBS-i-miljoet-Miljoovervaking-og-fysikalskkjemiske-data-knyttet-til-fordelingen-av-perfluorbutansulfonsyre-i-miljoet/

• IMO Action Plan: Marine Plastic Litter from Ships

30 Oct 2018: The International Maritime Organization (IMO) has pledged to further address the significant problem posed by plastics to the marine environment, with the adoption of an action plan which aims to enhance existing regulations and introduce new supporting measures to reduce marine plastic litter from ships for preventing marine plastic litter entering the oceans through ship based activities.

Discharging plastics into the sea is already prohibited under regulations for the prevention of pollution by garbage from ships in the International Convention for the Prevention of Pollution from Ships (MARPOL), which also oblige governments to ensure adequate port reception facilities to receive ship waste. Under the London Convention and Protocol on the dumping of wastes at sea, only permitted materials can be dumped and this waste has to be fully assessed to ensure it does not contain harmful materials like plastic litter.

Specific identified measures include:

- a proposed study on marine plastic litter from ships. Review the application of placards, garbage management plans and garbage record-keeping in MARPOL Annex V;
- looking into the availability and adequacy of port reception facilities;
- consideration of making marking of fishing gear mandatory, in cooperation with the Food and Agriculture Organization (FAO);
- promoting reporting the loss of fishing gear;
- facilitating the delivery of retrieved fishing gear to shore facilities;
- reviewing provisions related to the training of fishing vessel personnel and familiarization of seafarers to ensure awareness of the impact of marine plastic litter;
- consideration of the establishment of a compulsory mechanism to declare loss of containers at sea and identify number of losses
- enhancing public awareness; and
- strengthening international cooperation, in particular FAO and UN Environment.

From: https://docs.imo.org/Common/NewsItem.aspx?id=b754f7a1-46ce-4f5e-9fdf-34540a10684f

• Remediation & Management of Contaminated Sites

CRC CARE is developing a National Remediation Framework (NRF) to provide practical guidance to practitioners and regulators.

NRF Public Consultation:
Provide feedback on Draft Guidance Documents

The Framework will:

- complement the National Environment Protection (Assessment of Site Contamination) Measure
- harmonise guidance and best practice in the remediation and management of contaminated sites in Australia
- be congruent with the harmonisation objectives of the former COAG Standing Council on Environment and Water
- not be legally binding
- not impinge on the policy and decision-making prerogatives of the states and territories
- adopt a modular approach so that it may be readily updated as circumstances require.

The Introduction to the National Remediation Framework (Aug 2018 75 page pdf) consultation document

A. Development of Remediation Action Plan

A1 Guideline on regulatory considerations (93p pdf)

A2 Guideline on establishing remediation objectives (83p pdf)

A3 Guideline on performing remediation options assessment (26p pdf)

There are an additional 22 Guide & Guideline documents for consultation available on the website below, which also cover:
B. Implementation of Remediation Action Plan
C. Post-Remediation Considerations

Please comment by 19 March 2019.

From: www.crccare.com/knowledge-sharing/national-remediation-framework

• Review of AU Refrigeration & Air Conditioning

Cold Hard Facts 3 (September 2018): Review of the Refrigeration and Air Conditioning Industry in Australia

Cold Hard Facts 3 (213 pages) *pdf docx*
With **Append A**: Methodology: taxonomy, data & assumptions

Cold Hard Facts 3 – Appendix B Spreadsheet (*xlsx*)
With B1: CHF3 Taxonomy; B2: New equipment sales mix by segment; B3: Bank projections by class and segment; B4: Bulk imports and pre-charged equipment imports

This Report presents the findings of a detailed examination of the **R**efrigeration and **A**ir **C**onditioning (RAC) industry in Australia. Using data largely from primary sources on supply of goods and services in the industry in 2016, Cold Hard Facts 3 (CHF3) has been able to make comparisons with two previous studies published in 2007 (CHF1) and in 2013 (CHF2).

This study aims to provide policy makers, industry, and any of the general public who may be interested, with a broad view of the size and value of the industry. The Cold Hard Fact series of reports also establishes benchmarks for the industry that can be used in future years as reference points against which to measure growth and change.

Specialised and energy intensive RAC services are vital for the operation of the country's hospitals and pharmaceutical supply lines. RAC systems also provide the essential climate control services for millions of workers and visitors in non-residential buildings. RAC systems maintain tightly controlled operational temperatures for the thousands of Data Centres that run our telecommunications, internet, banking and finance systems.

Air conditioning is now installed in the majority of the country's estimated 8 million homes and in the majority of the country's nearly 18 million registered road vehicles.

RAC technology in all its forms is the single largest electricity consuming class of technology in Australia. There are more than 54 million individual pieces of RAC equipment operating in Australia that consumed more than an estimated 61,000 GWh of electricity in 2016, slightly more than 23.6% of the 258,000 GWh of electricity production in Australia that year.

As a result of the huge quantity of electricity used, and leaks from the significant bank of high GWP refrigerants employed, use of RAC equipment can be considered one of the largest sources of greenhouse gas emissions in Australia.

From: www.environment.gov.au/protection/ozone/publications/cold-hard-facts-3

• Draft Policy: A Circular Economy for NSW

22 Oct 2018: Current patterns of resource use in NSW are no longer sustainable & current resource recovery policies & technologies are no longer fit for purpose. This impacts businesses, households, the environment, human health, State & Local Government & the NSW economy. These impacts are compounded by China's National Sword policy.

In early 2018, China began enforcing its National Sword policy, which imposed restrictions on the types of recyclable materials that China will accept.

The Circular Economy is about changing the way we produce, assemble, sell and use products to minimise waste and to reduce our environmental impact.

A Circular Economy is all about valuing our resources, by getting as much use out of products and materials as possible, and reducing the amount of waste we generate. For example, using recycled materials in manufacturing, repairing household goods before buying new ones, or re-purposing items that are no longer used.

The NSW Government released a draft Circular Economy Policy which outlined the principles and ideas that can help to shape our approach to resource use and waste management in NSW.

The NSW Govt drafted a Circular Economy Discussion Paper, which explains these Circular Economy Principles and how they play out around the world.

The consultation on this draft Policy was open from 22 October to 25 November 2018, and is now closed.

Too Good To Waste: Discussion paper on a circular economy approach for NSW, October 2018 (35 page pdf)

NSW Govt FAQs on the Circular Economy Policy - webpage:
https://engage.environment.nsw.gov.au/circular/faqs#38945

From: https://engage.environment.nsw.gov.au/circular

Also: www.epa.nsw.gov.au/news/news/2018/have-your-say-on-the-circular-economy-policy

• EPA Vic: New Land Use Planning Measures

18 Oct 2018: The new requirements, which implement the Victorian Government's response to recommendations of the Independent Inquiry into the Vic EPA, apply to the preparation of land use strategies and plans, and preparation of Planning Scheme Amendments that may result in significant impacts on the environment, amenity and human health due to pollution and waste.

Vic Planning Authorities will be required to seek the advice of the Vic EPA when undertaking a range of Strategic Planning Activities and include this advice with their application for authorisation to prepare a Planning Scheme Amendment.

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2018/october/18/new-measures-strengthen-epa-role

Also: www.epa.vic.gov.au/business-and-industry/guidelines/planning

• Vic: Environment Protection Amendment Act 2018

Assented 28 Aug 2018. To be fully in operation from 1 Dec 20.

The main purposes of this Act are—

(a) to reform the legislative framework for the protection of human health and the environment from pollution and waste; and

(b) to amend the Environment Protection Act 2017 to provide for—

  (i) a new general environmental duty in relation to risks of harm to human health and the environment from pollution or waste; and

  (ii) a new permissions scheme which allows the Environment Protection Authority to issue or grant development licences, operating licences, pilot project licences, permits and registrations; and

  (iii) a framework for the management of waste; and

  (iv) waste and resource recovery infrastructure and planning; and

  (v) the Environment Protection Authority or an authorised officer to issue improvement notices, prohibition notices, notices to investigate, environmental action notices or non disturbance notices; and

  (vi) a new civil penalty scheme for the contravention of civil penalty provisions under the Environment Protection Act 2017; and

  (vii) the collection, use, disclosure and publication of information by the Environment Protection Authority; &

  (viii) a system of civil remedies and compensation orders available to the Court; and

  (ix) transitional arrangements; and

(c) to repeal the Environment Protection Act 1970; and

(d) to amend the Mineral Resources (Sustainable Development) Act 1990; and

(e) to make consequential amendments to other Acts.

View the Amdmt Act 2018 (476 pages) at the Victorian Parliament's website. pdf docx

Fact Sheet: Environment Protection Amendment Act 2018 (5 page pdf)

From: www.environment.vic.gov.au/sustainability/independent-inquiry-into-the-epa/ep-bill-2018

• EPA Vic: Aust. Paper Waste Facility Works Approval

29 Nov 2018: EPA Vic has granted Paper Australia Pty Ltd (Australian Paper) a Works Approval to develop a large-scale, waste to energy facility in Victoria.

The facility is proposed to be co-located within the boundaries of the Australian Paper site in Maryvale, Latrobe Valley and process residual municipal solid waste, and industrial and commercial waste.

The plant would generate both steam and electricity that can be directly used in the papermill and its operations or power exported to the grid. As proposed, it would replace two existing gas-fired boilers, produce approximately 30 megawatts of electricity (MWe) and 150 tonnes per hour of steam and would result in a 13 million tonne net reduction of greenhouse gases through its lifetime.

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2018/november/29/epa-grants-australian-paper-waste-facility-works-approval

• Oil Refinery Released Hazardous Fluoride to Air

19 Nov 2018: Refinery company guilty of EPA Vic licence breach (Hazardous Fluoride emissions reached as high as 300 grams per minute)

An oil refinery operator *Viva Energy Refining Pty Ltd*, has been ordered to pay over $31000 in fines and costs without conviction in the Geelong Magistrate's Court, after it admitted to releasing excessive amounts of potentially Hazardous Fluoride to the atmosphere.

"On two occasions, it reached as high as 300 grams per minute, more than twice the limit under the refinery's EPA licence."

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2018/november/19/refinery-company-guilty-of-epa-licence-breach

• EPA Vic: West Footscray / Tottenham Fire Recovery

20 Nov 2018: The results (of Stony Creek water quality testing) show that a range of industrial chemical solvents, detergents and fire soot particles were washed into Stony Creek. The key chemicals detected were phenol (an industrial chemical and cleaning product), polyaromatic hydrocarbons (fire and soot by-products), chemicals called BTEX (benzene, toluene, ethylbenzene and xylene), PFAS, and industrial solvents such as acetone and butanone.

Concentrations of these chemicals were very high in Stony Creek on Thursday 30 August and caused rapid death of fish and aquatic life in Stony Creek and in some cases exceeded human health recreational contact guidelines for several days after the fire.

The latest available testing shows that water quality for Cruickshank Park and Hyde Street is generally good and below human health recreational water quality guidelines for recreational contact. However, concentrations of Xylene in the water remain above aquatic ecosystem guidelines, which are much lower than the human health guidelines. Until recently, Toluene and Ethylbenzene also exceeded the ecosystem guidelines but by 25 Oct 2018, these were at acceptable levels.

From: www.epa.vic.gov.au/our-work/current-issues/industrial-fire-in-west-footscray

• Mystery Shrouds Chemicals at West Footscray Fire

18 Oct 2018: Mystery continues to surround what chemicals were being stored at the site of the massive blaze that tore through a warehouse near West Footscray in August 2018.

Seven weeks after the inferno sent a plume of smoke across the city and devastated nearby Stony Creek, authorities are yet to reveal either the cause of the fire or a precise description of what materials were on site.

From: www.starweekly.com.au/news/mystery-shrouds-chemicals-stored-site-west-footscray-fire/

(Alerted by DG Newsy Stuff: Dangerous Goods - Hazmat Global Network, https://groups.io/g/hazmat)

Standards & Codes

• Aust. Standards: Call to be Free to Aust. Businesses

29 Nov 2018: Mr David Clarke, Chief Executive of the Safety Institute of Australia, today labelled the prices being charged to Australian businesses to buy Australian and International Business Standards as excessive, unsustainable, and unfair to Australian business. Mr Clarke has urged the Federal Government to intervene to ensure the ending of arrangements which for years have led to unreasonably high costs to Australian businesses, and to ensure that Standards are provided to businesses free of charge.

In 2003, Standards Australia spun off their commercial assurance business including publishing / distribution arm, creating an IPO on the Australian stock exchange. A critical element of this process was granting the newly created company SAI Global Limited an exclusive 15-year license (with an additional 5-year option) to publish and distribute Australian Standards. [A LinkedIn Article paragraph]

"Fifteen years ago, the distribution of Australian Standards was privatised. As a result, Australia's employers are now paying excessive sums to access the Standards – and that cost no longer bears any relationship to the real production and distribution costs. Today, only a tiny fraction of those funds actually flows to Standards Australia, the creators of the Standards." Mr Clarke said.

Mr Clarke explained that Australian Standards were critically important to assisting Australian companies meet health and safety obligations, and because of this, they should ideally be free to Australian business. "The whole system falls down if Australian businesses are unable to afford the price of accessing the Standards - especially smaller enterprises".

The Safety Institute of Australia has written to the Federal Government to ask them to support Standards Australia to end the monopoly distribution arrangements, and to take the further step of ensuring that Australian Standards are provided freely available to Australian business free of charge.

Further reading with suggested actions on the topic,
see David Clarke's LinkedIn Article:
www.linkedin.com/pulse/australian-standards-unfair-exchange-david-clarke/

From: www.sia.org.au/news-and-publications/news/media-release-call-australian-standards-be-free-australian-businesses

Editor's Comment: Our free technical specialist work to create AS1940 Storage & Handling of Flammable & Combustible Liquids should not be costing each purchaser around $400!!

• Standards – https://infostore.saiglobal.com/

https://infostore.saiglobal.com/store/Default.aspx?SearchType=power

AS ISO 31000:2018: Guidelines - Risk management – Guidelines. Pub: 30 Oct 2018, 16 pages, pdf (Personal-No Copy/No Paste & Print Once): $137.39; Hardcopy: $220.43.

• Drafts – https://infostore.saiglobal.com/

https://infostore.saiglobal.com/store/Default.aspx?SearchType=power

DR AS 2243.1:2018: Safety in Laboratories - Planning and Operational Aspects. Published 24 Oct 2018, 42 pages, pdf (Personal-No Copy/No Paste & Print Once): Free; Hardcopy: $48.97.

DR AS 2243.2:2018: Safety in Laboratories - Chemical Aspects. Published 24 Oct 2018, 74 pages, pdf (Personal-No Copy/No Paste & Print Once): Free; Hardcopy: $48.97.

DR AS 2809.1:2018: Road Tank Vehicles for Dangerous Goods - General Requirements for all Road Tank Vehicles. Published 30 Nov 2018, 282 pages, pdf (Personal-No Copy/No Paste & Print Once): Free; Hardcopy: $48.97.

DR AS 2809.2:2018: Road Tank Vehicles for Dangerous Goods - Road Tank Vehicles for Flammable Liquids. 30 Nov 2018, 23 pages, pdf (Personal-No Copy/No Paste & Print Once): Free; Hardcopy: $29.47.

ISO/DIS 21675: Water Quality - Determination of PolyFluorinated Alkyl Substances (PFAS) in water - Method using Solid Phase Extraction & Liquid Chromatography-tandem Mass Spectrometry (LC-MS/MS). Draft published 13 Nov 2018, 45 pages, pdf (personal use): $84.87; Hardcopy: $94.30.

https://www.hub.standards.org.au/hub/public/listOpenCommentingPublication.action

Note: Comment must be via the Hub. Any emails or forms sent to Standards Australia by fax or mail will not be considered by the Committee when it reviews the Public Comment received.

• NFPA News (Codes Newsletter)

Newly Published NFPA Codes

NFPA News November 2018 (3 page pdf)

New Project on Fuel Gases Detection: is anticipated that a standard be established for the selection, installation, operation, & maintenance of Fuel Gases Warning Equipment.

NFPA News December 2018 (4 page pdf) Same New Project as for NFPA News November 2018

All NFPA documents are at: www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards

Those open for input / comment are found at NFPA News: www.nfpa.org/codes-and-standards/resources/nfpa-news

Standards Seeking Public Input

For a complete listing of NFPA standards accepting Public Input, please go to www.nfpa.org/publicinput

Standards Seeking Public Comment

For a complete listing of NFPA standards accepting Public Comment, please go to www.nfpa.org/publiccomment

Both of the above take you to the various Committees:

*As part of its commitment to enhancing public safety, NFPA makes its codes & standards available for **free online**.*

Seminars, Conferences, Courses

• Safety in Labs and Design & Construction Stds

Safety in Laboratories and Laboratory Design and Construction Standards Explained.

4-6 Feb 2019, Mon-Wed, 8.30am to 5.00pm, CSIRO–Parkville, 343 Royal Parade, Parkville VIC 3052
Non RACI Members Cost $1870. Mobile: 0417-843-798.

Email: info@labsafety.com.au Mobile: 0417-843-798

From: www.raci.org.au/events/event/safety-in-laboratories-and-laboratory-design-and-construction-standards-explained

And: www.labsafety.com.au/training-courses

• DGAG Meeting, Port Melbourne, 6 Feb 2019, Melb

Dangerous Goods Advisory Group meeting, **Wed 6th Feb 2019**, 5.30pm for 6pm - 8.15pm meeting at Sandridge Trugo Community Centre (Port Melbourne). Corner Albert & Poolman Streets. $3-$5 cost to attendees (depending on numbers). There will be tea / coffee & biscuits, and those interested, go for a meal after.

Info: www.haztech.com.au/click-this-tab-for-a-list-of-all-meetings-conferences-seminars-workshops/

For those who would like to be added to my Dangerous Advisory Group / Chemical Hazard Communication Network email meeting issues list, please email me at: Jeff.Simpson@haztech.com.au. You don't have to be in Melbourne, to be on this email meetings & issues alert list.

• Collaboration: Industry & Academia 13 Feb 2019

Be More Ready for Industry – a joint initiative between RACI-Vic and Society of Chemical Industry (SCI) where Science meets Business. Join us to discuss the Collaboration issues with 2 notable speakers.

1/ Dr Ian James (Dept of Defence, Science & Technology) 2/ Dr Ian Dagley (Monash University)

Cost $25 or $15 (members); All students $15. *At BASF Aust, L12 / 28 Freshwater Place, Southbank VIC*

From: www.raci.org.au/events/event/industry-meets-academia-be-more-ready-for-industry-collaboration

• CHCN Meeting, Port Melbourne, 6 Mar 2019 Melb

Chemical Hazard Communication Network meeting, **Wed 6th March 2019,** 5.30pm for 6pm - 8.15pm meeting at Sandridge Trugo Community Centre (Port Melbourne). $3-$5 cost to attend (depending on numbers). Corner Albert & Poolman Sts.
There will be tea / coffee and biscuits and those interested, go for a meal after.

Info: www.haztech.com.au/meetings/chem-haz-comm-network

IF you would like to be added to my Dangerous Advisory Group / Chemical Hazard Communication Network meeting email issues list, please email Jeff.Simpson@haztech.com.au. You don't have to be in Melbourne, to be on this email meeting alert & issues list.

• HAZOP Leadership & Mgmt, 7 May 2019, Brisbane

Brisbane, 7 May – 9 May 2019: Explores best practice in HAZOP Leadership and Management. Learn about the application of the technique and how to plan and manage study programmes more effectively. Learn how best to lead study teams to ensure maximum effectiveness and successful project execution.

Cost: Non-Members $4040, IChemE Members $3515. *Email: austcourses@icheme.org, ph: 03-9642-4494*

From: www.icheme.org/career/training/courses/hazop-leadership-and-management/7-9-may-2019-australia/

• Fundamentals of Process Safety, Perth & Brisbane

Perth, 8-12 April 2019 & Brisbane, 24-28 June 2019:

Will benefit staff at all levels in an organisation keen to develop or improve their knowledge of process safety, hazards, risk and their management. *Cost: Non-Members $4090, IChemE Members $3565.*

Email: austcourses@icheme.org, ph: 03-9642-4494

*From: www.icheme.org/career/training/courses/fundamentals-of-process-safety/8-12-april-2019-australia/ (**Perth**)*

*From: www.icheme.org/career/training/courses/fundamentals-of-process-safety/24-28-june-2019-australia/ (**Brisbane**)*

• IChemE Training – New On-Line Courses

Editor: Most of these on-line courses have been run once as live sessions and are now available to purchase as on-demand recordings for the costs shown below.

An Introduction to HAZOP 2 CPD Hrs £149 + VAT Split into two, 60-minute sessions, the course will help you understand the Hazard & Operability (HAZOP) process, its benefits and limitations, the roles & responsibilities of HAZOP participants & when the HAZOP technique should be applied. Also there are two additional Introduction to HAZOP Modules

An Introduction to LOPA 3 CPD Hrs £199 + VAT Layer of Protection Analysis (LOPA) is a semi-quantitative tool for analysing and assessing risk on a process plant. It uses an order of magnitude technique to evaluate the adequacy of existing or proposed layers of protection against known hazards.

Confined Space Entry 3 CPD Hrs £199 + VAT This online Confined space entry course is intended for those operators, engineers and technicians working on process plant to raise awareness of the issues surrounding this activity to adopt safe designs and practices and avoid the occurrence of such incidents.

Dust Explosions 4 CPD Hrs £235 + VAT This award-winning online course, delivered in partnership with BPE, comprises of four modules, each between 60-90 minutes in length, examines the causes and prevention of explosive atmospheres and the requirements of the European ATEX directives and the associated IEC and ISO standards.

Dust Explosion Risk Reduction 4 CPD Hrs £235 + VAT This series of four 60 minute module case studies covers the reduction of risks from dust explosion making use of the DERReK methodology that is presented in the IChemE/BPE Dust Explosion online training modules. Each case study will demonstrate how the methodology works and how it can be applied to different potential dust explosion problems in different industries.

Plus several other relevant on-line courses.: *From: www.icheme.org/career/training/online-courses/*

• Lab Safety Training Courses

- Safety in Laboratories and Laboratory Construction & Design Explained (3 Days)
- Safety in School Laboratories – Chemical and Laboratory Safety (1 Day)
- Laboratory Safety: Ergonomics & Manual Handling (1/2 D)
- Laboratory Safety: Introduction to Nanomaterials and Work Health and Safety (1 Day)
- Ergonomics and Manual Handling (1/2 Day) - Risk Management and Risk Assessment
- Safety Leadership *Email: info@labsafety.com.au Mobile: 0417-843-798 From: www.labsafety.com.au/training-courses*

Haztech Environmental: Chemical Hazard Classifications done & reviewed. SDSs prepared & reviewed. Labels prepared & reviewed. Chemical Management & Safety Regulatory Compliance: checked for NICNAS, APVMA, FSANZ, TGA; prepared & reviewed for Dangerous Goods & Combustible Liquids, GHS Hazardous Chemicals / Workplace Hazardous Substances, Environmentally Hazardous Substances, Scheduled Poisons, and other Chemical and Physical Hazards.

I can come and work in your office, which provides better access to data with improved security, plus good technical contact with relevant personnel. This allows the work to be done more quickly and comprehensively. *I also work from my home office*, in Ashburton, Victoria, where I maintain an extensive reference library, developed over 28 years whilst preparing these Notes.

Contact: Jeff Simpson, Hazardous Materials & Regulatory Affairs Consultant, Haztech Environmental, 18 Laurel St, Ashburton 3147, Australia, 61-(0)3-9885-1269, 61-(0)403-072-092, Jeff.Simpson@haztech.com.au, Website: www.haztech.com.au.

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