Hazmat & Environment Notes June-August 2019

Hazmat & Environment Notes are prepared by:

Jeff Simpson

Hazardous Chemicals Consultant
Editor & Publisher

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

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

ISSN: 1441-5534

Prepared by Jeff Simpson, Haztech Environmental, 18 Laurel St, Ashburton Vic 3147, ph: 03-9885-1269, email: Jeff.Simpson@haztech.com.au

Hazardous Chemicals

• AIOH: No Dust Exposure = No Dust Disease

2 Aug 2019: Australians have been shocked recently by images in the media of stone masons dying from Silicosis. Exposures to Respirable Crystalline Silica continue to exceed the regulated limits and go unrecognised until the worker's health is permanently damaged.

Dr Julia Norris, President of the Australian Institute of Occupational Hygienists, Inc. (AIOH) describes what the AIOH is doing about it. Last month, the Breathe Freely Australia roadshows were launched. Next month, there are 3 events to be held in Queensland. More will follow.

See www.breathefreelyaustralia.org.au for details.
Latest BFA News and Events: 10th 11th 16th Sept in Qld

Breathe Freely Australia is an adaption of the highly successful UK Breathe Freely. The UK British Occupational Hygiene Society (BOHS) initiative, was launched in 2017 to reduce occupational lung disease in the UK, which causes significant debilitating ill-health and an estimated 13,000 deaths per year (in the UK).

The AIOH, in collaboration with State Regulators, relevant industry sectors & employee groups will bring Breathe Freely Australia to major cities & regional areas across Australia.

From: www.aioh.org.au/resources/aioh-media-release-no-dust-exposure-no-dust-disease-1

Editor: Around 1980 I remember phasing out Sand Blasting parts in an Aircraft Factory Plating Shop, due to the Respirable Crystalline Silica hazard. I am shocked it is 4 decades later and our regulatory systems have not protected stone masons!

• ABC Radio: Silicosis is NOT the new Asbestosis

14 July 2019: ABC Radio – Ockham's Razor - When a young Gold Coast stonemason died from Silicosis in March, it was branded 'the new Asbestosis'. But the media couldn't have been more wrong. Silicosis has been known for a 100+ years!

Guest: Kate Cole - Occupational Health & Hygiene Manager on the Sydney Metro project.

Asbestosis and fatal Mesothelioma have been known to Australians for decades. But another lung disease - Silicosis - has been killing our stone workers for more than a century. Kate Cole tells the truth about this deadly disease, and what we must do to stop workers suffering and dying from it.

Mandatory Reporting has been recommended but not done.

This talk was recorded at Ockham's Razor Live at Vivid in Sydney with Presenter, Robyn Williams and Producer, Bernie Hobbs.

Hear the Audio: https://abcmedia.akamaized.net/rn/podcast/2019/07/orr_20190714_0745.mp3 (11m 21s) To have a copy of the mp3 audio file, right click & use "Save As"

From: www.abc.net.au/radionational/programs/ockhamsrazor/14-july-2019/11297274

• RR1146: Emissions from Desktop 3D Printers

2019: UK Health and Safety Executive Research Report
RR1146 - Measuring and controlling emissions from polymer filament desktop 3D printers (70 page pdf)

Some desktop 3D printers use filaments to deposit polymer through a heated nozzle to build three dimensional objects. This type of desktop printer is generally unenclosed and some published studies have raised concerns that they may release potentially harmful fumes and particles. The scientific evidence base on exposures and potential health endpoints is being developed internationally.

This report describes initial research in a laboratory setting to **a)** measure emissions of particulates and volatile organic compounds from desktop 3D printers and **b)** investigate the effectiveness of control measures to reduce these printer emissions. Two common filament materials were investigated: Polylactic Acid (PLA) which is generally used in schools, and Acrylonitrile Butadiene Styrene (ABS).

The research found that the heated filaments emitted large numbers of Very Small Particles and Volatile Organic Chemicals which could be breathed in. However, more research is required to establish if under real use conditions these printers release sufficient concentration of emissions to cause harm.

From: www.hse.gov.uk/research/rrhtm/rr1146.htm

• UK HSE Safety Alert: Mild Steel Welding Fume

Feb 2019: UK Health and Safety Executive - Safety alert

- There is new IARC scientific evidence that exposure to all welding fume, including mild steel welding fume, can cause lung cancer.
- There is also limited evidence linked to kidney cancer.
- There is a change in UK HSE enforcement expectations in relation to the control of exposure of welding fume, including that from mild steel welding.
- All businesses undertaking welding activities should ensure effective engineering controls are provided and correctly used to control fume arising from those welding activities.
- Where engineering controls are not adequate to control all fume exposure, adequate and suitable Respiratory Protective Equipment (RPE) is also required to control risk from the residual fume.

From:
www.hse.gov.uk/safetybulletins/mild-steel-welding-fume.htm

• WA DMP: Mining Diesel Emissions Research

29 July 2019: The results of two research projects into nano Diesel Particulate Matter (nDPM) in underground mining were outlined at a free information session hosted by the Department of Mines, Industry Regulation and Safety.

A copy of the consolidated report on the physical-chemical aspects of Diesel Engine Exhaust (DEE) is available at: www.dmp.wa.gov.au/Safety/Reports-16199.aspx.

Also available is a literature review of recent research findings relevant to worker exposure to DEE, with a specific focus on newer engine and after-treatment technologies.

From: www.dmp.wa.gov.au/News/Diesel-emissions-research-now-25681.aspx

• Qld: Worker Seriously Burned in Vehicle Gas Tank Fire

7 Aug 2019: In April 2019, a worker was seriously burned while attempting to decommission a liquefied petroleum gas (LPG) tank from a motor vehicle at a workplace. It appears he was removing screws on the LPG tank using a battery-operated screwdriver which created an ignition source and started a fire.

From: www.worksafe.qld.gov.au/injury-prevention-safety/alerts/incident-alerts/2019/worker-seriously-burned-in-vehicle-gas-tank-fire

• USA TSCA: Persistent, Bioaccumul. & Toxic Chemicals

21 June 2019: USA EPA is proposing for public comment a rule to reduce exposures to certain chemicals that are **Persistent, Bioaccumulative and Toxic (PBT).** These chemicals build up in the environment over time and can therefore have potential risks for exposed populations including the general population, consumers and commercial uses, susceptible subpopulations (such as workers, subsistence fishers, tribes and children).

The USA EPA is asking for public comment on the proposal for 60 days following publication in the Federal Register at docket EPA-HQ-OPPT-2019-0080 on www.regulations.gov.

- Uses and proposed risk management for five PBT chemicals under TSCA section 6(h)

  Decabromodiphenyl ether (DecaBDE)

  Phenol, isopropylated phosphate (3:1) (PIP (3:1))

  2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP)

  Hexachlorobutadiene (HCBD)

  Pentachlorothiophenol (PCTP)

- Additional information

From: www.epa.gov/assessing-and-managing-chemicals-under-tsca/persistent-bioaccumulative-and-toxic-pbt-chemicals-under

• 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 2011-2019.

Recent Chemicals & Issues that caught the editor's attention:

June 19 (from 15th)**: 1/** Organic Peroxides Group (Final); **2/** Acetonitrile (Nitriles Group) (Draft); **3/** Alkyl and Imidazolines Group (Draft); **4/** Chlorhexidine and its Salts (Final & Risk Mgmt Approach); **5/** Zinc and its Soluble Zinc Cpds (Final & Risk Mgmt Scope); **6/** Proposed Formaldehyde Emissions from Composite Wood Products Regs (for Comment).

July 19: 1/ Macrocyclic Lactones and Ketones, Ionones and Cyclohexanone Group (Final); **2/** Endocrine-Disrupting Chemicals (C'tee Report); **3/** Phosphoric Acid Derivatives Group (Draft); **4/** Acetic Acid (Draft); **5/** Dimethoxymethane (Draft); **6/** Chlorocresol (Draft & Risk Mgmt Scope)

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

• ECHA: HFPO-DA - Substances of Very High Concern

27 June 2019: The Member State Committee (MSC) unanimously agreed to identify 2,3,3,3-Tetrafluoro-2-(Heptafluoropropoxy)Propionic Acid, its Salts and its Acyl Halides (covering any of their individual isomers and combinations thereof) (denoted as HFPO-DA) as Substances of Very High Concern (SVHCs).

The substances are used as processing aids for producing Fluoro-Polymers with many applications, such as Fluoropolymer resins, wire cables and coatings. They were proposed by the Netherlands due to their properties which cause probable serious effects to human health and the environment, giving rise to an equivalent level of concern to Carcinogenic, Mutagenic and Reprotoxic (CMR), Persistent, Bioaccumulative and Toxic (PBT) and Very Persistent and Very Bioaccumulative (vPvB) substances.

At its meeting in June 2019, the MSC acknowledged that HFPO-DA has a high potential to cause effects in wildlife and in humans through the environment due to its very high persistence, mobility in water, potential for long-range transport, accumulation in plants and observed effects on human health and the environment.

Furthermore, the committee noted the lack of known natural removal of HFPO-DA once released, leading to a continuous presence in water and resulting in the continuous bioavailability of these substances. It also noted the expected exposure through the food chain and drinking water, as well as difficulties to remediate polluted media and remove HFPO-DA from drinking water.

From: https://echa.europa.eu/-/msc-unanimously-agrees-that-hfpo-da-is-a-substance-of-very-high-concern

• ECHA SVHC Candidate List: 4 Substances Added

16 July 2019: ECHA has added four new substances to the **Substances of Very High Concern (SVHCs)** Candidate List due to their toxicity to reproduction, endocrine disruption and a combination of other properties of concern. The latter causes probable serious effects to human health and the environment, giving rise to an equivalent level of concern to carcinogenic, mutagenic and reprotoxic (CMR), persistent, bioaccumulative and toxic (PBT) and very persistent and very bioaccumulative (vPvB) substances, respectively.

They are: 2-Methoxyethyl Acetate CAS 110-49-6

Tris(4-Nonylphenyl, branched and linear) Phosphite (TNPP) with ≥ 0.1% w/w of 4-Nonylphenol, branched & linear (4-NP)

2,3,3,3-Tetrafluoro-2-(Heptafluoropropoxy)Propionic Acid, its salts and its Acyl Halides (covering any of their individual isomers & combinations thereof) [See separate Note above]

4-tert-Butylphenol CAS 98-54-4

From: https://echa.europa.eu/-/four-new-substances-added-to-the-candidate-list

• ECHA: Plastic & Rubber Granulates containing PAHs

18 June 2019: The Committee for Risk Assessment (RAC) adopted and the Committee for Socio-economic Analysis (SEAC) agree on one restriction proposal.

To restrict the use of granules and 'mulches' used as infill material in synthetic turf pitches and in loose forms on playgrounds and in sports applications. The basis for this dossier is a concern for human health resulting from the current concentration limits for Polycyclic Aromatic Hydrocarbons (PAHs) in End-Of-Life tyre (ELT)-derived rubber infill granules used in synthetic turf pitches. The primary concern is to address risks to individuals playing and performing sports activities (e.g. football) on artificial turf pitches with rubber granules (rubber crumb) made of recycled tyres. (5 page pdf)

From: https://echa.europa.eu/-/echa-s-committees-conclude-on-one-restriction-and-10-harmonised-classification-and-labelling-opinions

• ECHA: Artificial Turf Pitches & Microplastics

25 July 2019: The granular infill material that is typically used in Artificial Turf Pitches is understood to be an 'intentionally-added microplastic', but neither ECHA nor the European Commission are proposing that these pitches should be closed.

The ECHA March 2019 Restrictions Proposal addresses a wide range of uses of intentionally added microplastics. In

the framework of the public consultation, further information has been requested on the use of granular infill material in synthetic turf in order to assess the implications and the possible need for a derogation.

As these pitches are a substantial source of microplastics to the environment (estimated loss of between 18000 and 72000 tonnes of microplastics per year in the EU (335 page pdf 23 Feb 2018)), ECHA is gathering information on the socio-economic impacts (costs and benefits) of phasing out microplastic infill material. Socio-economic costs could arise, for example, from the need to use alternative infill material on existing pitches such as cork, coconut fibre, olive cores or other alternative materials.

ECHA is also gathering information on the effectiveness of technical measures to prevent the loss of infill material from artificial turf pitches into the environment.

ECHA's scientific committees also recently adopted opinions on a proposal to further reduce the maximum permissible content of certain polycyclic aromatic hydrocarbons (PAHs) in infill material, because of the potential risk to human health. (75 page pdf 17 Sept 2018)

From: https://echa.europa.eu/-/restriction-proposal-for-intentionally-added-microplastics-in-the-eu-update

• ECHA Guideline: NMP Solvent Restriction Advice

17 July 2019: A new ECHA Guideline is available for industrial users of 1-Methyl-2-Pyrrolidone (NMP) to help them comply with the substance's Restriction requirements. The Guideline is needed because this is the first Restriction of its kind that is based on Derived no Effect Levels (DNEL).

NMP is a reproductive toxicant (may damage the unborn child), it causes serious eye and skin irritation and it may cause respiratory irritation.

NMP is used as a solvent or surface deposition medium during manufacturing and is therefore a critical substance for various industries producing batteries, semiconductors, fibres, pharmaceuticals and wire coatings. NMP users in these sectors will have to comply with the restriction by 9 May 2020. For NMP used in wire coatings, the deadline is 9 May 2024.

The general approach described in this guideline can also be applied to other Aprotic Solvents similar to NMP, such as DMF and DMAC.

Editor: Aprotic Solvent is a chemical which cannot donate a Hydrogen atom. (from Wikipedia)

How to comply with REACH Restriction 71, Guideline for users of NMP (1-Methyl-2-Pyrrolidone), July 2019 (41 page pdf)

From: https://echa.europa.eu/-/advice-on-how-to-comply-with-nmp-restriction

• ECHA Authorisation List: 4 Phthalates

10 July 2019: ECHA has submitted a recommendation to the European Commission to amend Authorisation List (Annex XIV of REACH) entries by adding the Endocrine Disrupting properties of four Phthalates.

Once the Commission decides on the amendment, some previously exempted uses will require Authorisation.

bis(2-ethylhexyl) phthalate (DEHP) (204-211-0, CAS117-81-7)

benzyl butyl phthalate (BBP) (EC 201-622-7, CAS 85-68-7)

dibutyl phthalate (DBP) (EC 201-557-4, CAS 84-74-2)

diisobutyl phthalate (DIBP) (EC 201-553-2, CAS 84-69-5).

They were identified as substances of very high concern (SVHCs) due to Endocrine Disrupting properties with effects on human health. DEHP was also identified for its effects on the environment.

These four Phthalates had already earlier been identified as SVHCs (in 2008 and 2009) and subsequently added to the Authorisation List in 2011 and 2012 due to their classification as Toxic for Reproduction.

From: https://echa.europa.eu/-/endocrine-disrupting-properties-to-be-added-for-four-phthalates-in-the-authorisation-list

• ECHA Persistent Organic Pollutants: Work Starts

15 July 2019: Under the revised EU POPs Regulation, ECHA has new tasks working on scientific, technical and administrative tasks to identify and regulate Persistent Organic Pollutants (POPs). These substances remain in the environment, bioaccumulate through the food chain, and pose a risk to the environment and human health. Due to their intrinsic properties, they can be transported across long distances, far from the locations where they have been produced or used.

The POPs Regulation bans or severely restricts the production and use of persistent organic pollutants in the European Union. The Agency will support the identification of new POPs substances. It will also act as an interface for reporting duties on implementing the regulation.

In 2020, ECHA will integrate data on POPs to its chemicals database. POPs are regulated worldwide by the Stockholm Convention and the Aarhus Protocol. These pieces of legislation are implemented in the European Union by the POPs Regulation.

- List of Substances subject to the POPs regulation
- List of Substances proposed as POPs

From: https://echa.europa.eu/-/echa-starts-work-on-persistent-organic-pollutants

• EPA NZ: Hazardous Substances Update

Editor: I've included the issues that caught my interest:

June 2019 Edition #189:

1/ Synthetic Pyrethroids Reassessment Update

Nine of the 11 Synthetic Pyrethroids to be reassessed are on our priority chemicals list. The synthetic pyrethroids included are: alpha-cypermethrin, bifenthrin, bioresmethrin, cyfluthrin (including beta-cyfluthrin), cyhalothrin, cypermethrin, deltamethrin, fenvalerate, lambda-cyhalothrin, permethrin and tetramethrin.

The call for information closed on 1 March 2019, and a total of 516 individual responses were received. These responses are being reviewed & collated prior to preparation of an application to reassess these substances being publicly notified.

2/ Paraquat Reassessment Update

Information in the 18 submissions received by the 30 April 2019 is being evaluated. A number of submitters indicated they wish to be heard at the two-day hearing, provisionally scheduled for **11 and 12 September 2019** in Wellington.

3/ Methyl Bromide Reassessment

Stakeholders in Methyl Bromide Reduction Inc lodged an application to reassess Methyl Bromide, used in quarantine and pre-shipment fumigations. This application will follow a modified reassessment process. This will be a publicly notified application and so submissions on the application have been invited (see July 2019 Update below for details).

18 July: The Application opened for public submissions.

4/ Reminder: Hydrofluorocarbon Permits

Applications for special permits to import new bulk HFCs closed on 1 July 2019, and close on 1 Sept 2019 for grandparented permits.

From 1 Jan 2020 all imports, transhipments and exports of specified HFCs will require a permit from the EPA. Permits must be applied for in 2019.

5/ New Zealand Inventory of Chemicals (NZIoC) Updated

Most Group Standards require every hazardous component to be listed in the NZIoC. This information is then made available in a database on the EPA NZ website. The June 2019 update includes substances notified between December 2017 and February 2019.

Search the NZIoC

6/ Updated Chemical Pesticides Data Requirements

The data requirements for NZ EPA Applications for new chemical pesticides containing active ingredients have now been updated.

Access the revised document - changes are highlighted in yellow.

Data requirements for Hazardous Substances applications (docx)

No significant new information is required compared to previous versions. Changes provide more accurate/specific information on what type of data is required or conditionally required on either the active ingredient or the formulation containing it. Changes are in Section 5 Transport in environmental media and Section 6 Ecotoxicological studies.

July 2019 Edition #190:

1/ Reassessment of Methyl Bromide

Submissions are open on a reassessment of the fumigant methyl bromide. Submissions close at 5pm on 29 Aug 2019.

Stakeholders in Methyl Bromide Reduction Inc (STIMBR) applied for a reassessment of the approval for Methyl Bromide.

Methyl Bromide is used as a fumigant in the quarantine and pre-shipment treatment of logs, produce, flowers and other goods. It is also used for the treatment of potato wart.

EPA NZ are processing this application as a modified reassessment. This means that the reassessment will only consider specific aspects of the approval, such as the required controls. The approval to import or manufacture Methyl Bromide cannot be revoked in this type of reassessment.

Read the Application documents & submission guidelines at:

www.epa.govt.nz/public-consultations/open-consultations/reassessment-of-methyl-bromide/ and

www.epa.govt.nz/database-search/hsno-application-register/view/APP203660

2/ HSNO Enforcement (Regime) Report 2018

See separate Note following.

3/ Requirements for Cosmetics (see EPA NZ website)

Microbeads in your cosmetic products may be covered by the Microbeads Ban (from 7 June 2019) to prohibit manufacture or sale of affected products.

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

• EPA NZ: Fire-Fighting Chemicals Grp Std Update

August 2019: The NZ Fire-Fighting Chemicals Group Std regulates the import, manufacture, use, storage and disposal of fire-fighting chemicals. It currently prohibits fire-fighting foams containing PFOS (Perfluorooctane Sulfonic Acid) and PFOA (Perfluorooctanoic Acid).

The proposed amendments add further restrictions on fire-fighting foams containing Fluorinated Alkyl Sulphonate organic compounds (PFAS chemicals).

These amendments follow our recent national investigation into the storage and use of legacy fire-fighting foams containing PFOS and PFOA at various locations throughout New Zealand.

Investigation into fire-fighting foams containing PFOS (34p pdf)

This consultation is expected to start around the **end of August 2019** and will become available on:
www.epa.govt.nz/public-consultations/open-consultations/

From: www.epa.govt.nz/public-consultations/upcoming-public-consultations/

Chemical Management

• Workplace Exposure Std Drafts: Release Schedule

15 July 2019: Safe Work Australia is evaluating the *Workplace Exposure Standards for Airborne Contaminants* to ensure they are based on the highest quality, contemporary evidence and supported by a rigorous scientific approach.

The anticipated schedule for public comment is now available on Safe Work Australia's website.

The next scheduled release is 30 August 2019 and will contain draft evaluation reports and recommendations for Acetaldehyde to Benzoyl Chloride.

Release 1: Silica, Crystalline & Coal (Respirable Dust): April 2019 (complete)

Release 2: Acetaldehyde to Benzoyl Chloride: 30 Aug 2019

Release 3: Benzoyl Peroxide to e-Caprolactam: 13 Sept 19

Release 4: Caprolactam to Clopidol: 27 Sept 2019

Release 5: Coal Tar Pitch volatiles to Dichloroacetylene: 11 Oct 2019

Editor: I will include later Releases in later Notes newsletters.

Subscribe to the Chemical Exposure Standards email list, plus select other Safe Work Australia issues to be alerted to.

From: www.safeworkaustralia.gov.au/media-centre/news/workplace-exposure-standards-release-schedule-and-opportunities-comment-draft

• AU WHS Laws: Consultation Reg Impact Statement

24 June 2019: Recommendations of the 2018 Review of the Model WHS Laws. Safe Work Australia published the Final Report of the 2018 Independent Review on 25 Feb 2019.

The Review identified some areas where stakeholders are experiencing confusion or consider the laws to be overly complex. The Review's final report made 34 recommendations to address these issues.

Recommendations that caught the Editor's attention:

- including gross negligence as an element of the Category 1 offence, and
- introducing an industrial manslaughter offence.

Consultation closed on the 5 Aug 2019.

The documents are still downloadable.

- Recommendations of the 2018 Review of the model Work Health & Safety (WHS) laws (2018 Review, 196p). pdf | docx

- A Consultation Regulation Impact Statement (21 June 2019) (59 pages) was prepared to seek feedback on the impacts of implementing the recommendations & alternatives. pdf | docx

From: www.safeworkaustralia.gov.au/media-centre/media-release/consultation-ris-recommendations-2018-review-model-whs-laws

• AU Model Code of Practice: First Aid in the Workplace

8 Aug 2019: To provide adequate First Aid Facilities in the workplace, it includes information on first aid kits, procedures, facilities and training for first aiders. 25 pages pdf | docx

The update removes references to specific first aid courses which are no longer current. It now includes guidance on how to select an appropriate First Aid Course.

From: www.safeworkaustralia.gov.au/doc/model-code-practice-first-aid-workplace (July 2019)

• RR1137: Working in Hypoxic Atmospheres Health Risk

2018: UK Health and Safety Executive Research Report RR1137 A health risk assessment of working in hypoxic atmospheres (46 page pdf)

Hypoxic Atmospheres - those in which the ambient Oxygen level is lower than normal – may be specifically generated in some workplaces, particularly for fire prevention. Such atmospheres potentially present a health risk to workers who are required to enter the hypoxic space. This report reviews the impact of hypoxia on human physiology, behaviour, and cognitive function, in order to provide information about the potential occupational health risks arising from working in hypoxic atmospheres.

The available evidence suggests that hypoxic environments in which the levels of Oxygen are greater than 15% but below 21%, are safe for most healthy, fit individuals. However, prior to entry into such environments, risk assessments should be performed to cover: the working environment; the work and tasks undertaken; and the worker.

From: www.hse.gov.uk/research/rrhtm/rr1137.htm

• EPA NZ: Updating Haz Subs Classification System

The EPA NZ are proposing to update the current HSNO Act classification system to a recent version of the Globally Harmonised System of Classification and Labelling (GHS).

The current HSNO classification system is based on a pre-published version of GHS. This version is 18 years old, so is out-of-step with the way hazardous substances are classified overseas.

This consultation is expected to start in October 2019 at: www.epa.govt.nz/public-consultations/

From: www.epa.govt.nz/public-consultations/upcoming-public-consultations/

• EPA NZ: Chemical Modernisation Changes

27 June 2019: The EPA NZ will be "updating the hazardous substances classification system, replacing the hazardous substances database, and chemicals reassessments."

Classification System: The EPA NZ "will transition our chemical classification system to the most up to date GHS and develop a new hazardous substances database to support it, by mid 2021."

Reassessments: Under the HSNO Act, "once a chemical (substance) is approved the approval remains in place with the same controls until it is reassessed. NZ has about 9,000 approved substances. Substances can also be approved under Group Standards, which cover a wide range of chemicals."

EPA NZ "have established a new team whose sole responsibility is undertaking reassessments, including reviewing group standards. That team has already established a Priority Chemical List which forms the basis for our reassessment work.

Reassessments are resource intensive in terms of staff and funding. With current staffing and funding, we can only manage one or two reassessments each year. EPA NZ are seeking further funding to advance this work.

Compliance: "Increased hazardous substances compliance monitoring and enforcement have been made possible since changes to the HSNO Act came into effect in Dec 2017. Our recent investigation into the illegal storage and use of PFOS in firefighting foams was undertaken with these new powers."

From: EPA's Statement of Intent 2019-2023 (27 page pdf)

At: www.epa.govt.nz/news-and-alerts/latest-news/epa-sets-out-its-ambitions-for-environmental-leadership/

• NZ HSNO Enforcement (Regime) Report 2018

27 June 2019: The NZ Health and Safety at Work reform came into effect on 1 Dec 2017, changing the enforcement regime for hazardous substances significantly. Enforcement undertaken in workplaces under the NZ HSWA requirements now falls outside the scope of the NZ HSNO Act.

The reform changes not only affect the enforcement undertaken by NZ WorkSafe but also the scope of NZ HSNO enforcement by all other agencies. For example, Councils can address the risk of hazardous substances under the NZ Resource Management Act 1991 (RMA) through enforcement of a single set of rules relating to discharges, rather than utilising both the rules under the NZ HSNO Act that relate to bulk storage of hazardous chemicals and the discharge rules included in the district plan under NZ RMA.

Much of the work on managing hazardous substances at the border is under the Customs and Excise Act 2018 rather than under the HSNO Act.

There is an overlap between fire legislation and the HSNO Act. The new Fire and Emergency New Zealand Act 2017 provides the Fire and Emergency Service with all the powers needed to manage hazardous substances emergencies, without having to use their powers under the HSNO Act.

From: Full HSNO Enforcement Report 2018 (25 page pdf)

From: www.epa.govt.nz/news-and-alerts/latest-news/hsno-enforcement-report-2018-released/

Editor: It is interesting to see how NZ enforcement operates.

• ECHA's Chemicals Database: Major Updates

3 July 2019: The properties of concern section in the Infocards has been extended & the search possibilities for substances based on these properties has been extended.

The current regulations and regulatory activities section has been restructured and the different regulatory lists are now

laid out by legislation in expandable blocks, with explanations why the substances are on key lists.

The Infocard integrated help system has been updated with extensive explanations and links to more information.

There are also new quick links to key datasets for each substance, giving users a faster way to browse through more data-rich datasets, such as the Brief Profiles, REACH registered substance factsheets, the Classification and Labelling (C&L) Inventory, biocides data and the public activities coordination tool (PACT).

The advanced search has also been extended and restructured, allowing new search possibilities. For instance, the advanced classification and labelling search now also covers Seveso Directive data.

https://echa.europa.eu/information-on-chemicals Links to:

Cross regulation activities, other data, and data from previous legislation

REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation

Editor: Registered Substances Factsheets takes you to the Registered Substances (Database) – see next Note

CLP - Classification, Labelling and Packaging

BPR - Biocidal Products Regulation

PIC - Prior Informed Consent Regulation

POPs - Persistent Organic Pollutants Regulation

CAD / CMD - Chemical Agents Directive and Carcinogens and Mutagens Directive

From: https://echa.europa.eu/-/major-update-to-echa-s-information-on-chemicals-database

• ECHA Registered Substances (Database)

10 Aug 2019: This Database contains 22378 unique substances and contains information from 95908 dossiers.

Some of the information on registered substances may belong to Third Parties. The use of such information may therefore require the prior permission of the third party owners. Please consult the *Legal Notice* for further information.

Please note that information on chemical properties of registered substances is directly accessible via eChemPortal www.echemportal.org/echemportal/index.action

From: https://echa.europa.eu/information-on-chemicals/registered-substances

• ECHA to Scrutinise all REACH Registrations

24 June 2019: The Commission will propose an amendment to REACH to raise the current 5 % minimum target for compliance checks to 20 % of Registration Dossiers in each tonnage band. This means checks for about 30 % of all Registered Substances. The increased target is part of ECHA and the Commission's joint action plan to address the lack of compliance in Registration Dossiers and encourage industry to improve their safety data on chemicals.

ECHA's aim is to screen all Registration Dossiers submitted by the 2018 deadline: by 2023 for substances registered over 100 tonnes per year and by 2027 for substances in the tonnage band 1-100 tonnes per year. The agency will also check the compliance of at least 30 % of substances, making sure that this check is done for all substances where more information is needed. These include, for example, substances with hazardous properties, or where more data needs to be generated to conclude a potential risk. Similar substances will be assessed in groups to gain efficiency and ensure that proposals for further regulatory action are consistent.

From: https://echa.europa.eu/-/echa-to-scrutinise-all-reach-registrations-by-2027

• California's Proposition 65 and Online Sales

As of 7 August 2019, 1026 notices of intent to sue the online retailer Amazon have been recorded since 2000 on California's Justice Department 60-day notice database, for claims that products it sold violate California's chemical exposure Warning Law, Proposition 65. The database also shows 309 Notices have been filed against Target and 176 against Walmart, CVS has 137 and Costco 76.

The law requires businesses to provide warnings, typically in the form of labels or signs, for exposure to chemicals that cause Cancer or Reproductive harm. California maintains a *list of chemicals* it has determined present these effects, which currently holds around 900 substances.

https://oehha.ca.gov/proposition-65/

The Current Proposition 65 List dated 28 June 2019 as a pdf file (22p), Excel file, CSV file. Plus a Searchable Database.

Searchable Proposition 65 Chemical Database

There were Amendments to the Proposition 65 law in Aug 2018, which updated how Warnings are to be provided. *www.p65warnings.ca.gov/new-proposition-65-warnings*

The updated Warnings are intended to:

- Make Warnings more meaningful and useful for the public
- Reduce "over-warning" in which businesses provide unnecessary Warnings for the content of a product, rather than exposure to a chemical
- Give businesses clearer guidelines on how and where to provide Warnings

Note: On its website, Amazon does provide information on the law and how to provide compliant warning labels.

www.amazon.com/gp/help/customer/display.html?ie=UTF8&nodeId=3234041

From: https://chemicalwatch.com/80812/amazon-has-faced-more-than-1000-prop-65-intent-to-sue-notices

• USA EPA: Updated Chemical Review Tool

1 Aug 2018: The USA EPA is continuing its commitment to transparency by making additional information about new chemical notices available to the public on USA EPA website.

Visitors to the updated Chemical Review Status Tracker can view and search monthly updates for any active Pre-Manufacture Notice (PMN), Significant New Use Notice (SNUN) and Microbial Commercial Activity Notice (MCAN) of interest by case number.

It is important to note that this tool will continue to keep confidential business information confidential.

Visitors to the site will also be able to download a spreadsheet with a list of all active cases and each case's status. Previously, the USA EPA only presented the number of cases in each step of the review process without identifying case numbers.

From: www.epa.gov/newsreleases/epa-announces-updated-chemical-review-tool

• CSB: Fatal Gas Well Blowout Final Report

12 June 2019: The CSB released its final investigation report into the blowout that fatally injured five workers at the Pryor Trust gas well located in Pittsburgh County, Oklahoma. The CSB's final report identifies a lack of regulations governing onshore drilling safety as well as shortcomings in safety management systems and industry standards utilized by the industry.

The CSB's report determined that the cause of the blowout and rig fire was the failure of two preventive barriers that were intended to be in place to stop a blowout.

From: www.csb.gov/csb-issues-final-report-into-fatal-gas-well-blowout/

• CSB: 2014 Incident at DuPont La Porte Facility

25 June 2019: CSB released Final Investigation Report (166 page pdf) into the fatal November 2014 Methyl Mercaptan release incident at DuPont La Porte Facility that killed four workers; The Final Report cites numerous safety deficiencies.

The CSB investigation revealed a long chain of failures which resulted in this fatal event, including deferring much needed process improvements; improvements that could have prevented the toxic release.

From: www.csb.gov/-csb-releases-final-report-into-fatal-2014-incident-at-dupont-la-porte-facility-final-report-cites-numerous-safety-deficiencies/

• Hazard Communication: USA & Canada Compared

Aug 2019: This update to the USA Hazard Communication Standard (HCS) will provide a common and coherent approach to classifying chemicals and communicating hazard information on labels and safety data sheets.

Joint OSHA/Health Canada Comparison of Labelling Requirements for Hazardous Products
(6 page pdf Label Comparison for Shipped Containers)

Joint OSHA/Health Canada Guidance on Regulatory Processes for Hazardous Products in the Workplace.
(1 page pdf Regulatory Processes)

Joint OSHA/Health Canada Guidance on Labeling Pictogram for Hazards Not Otherwise Classified (HNOC), Physical Hazards Not Otherwise Classified (PHNOC) and Health Hazards Not Otherwise Classified (HHNOC).
(3 page pdf Hazards Not Otherwise Classified)

From: www.osha.gov/dsg/hazcom/

• USA OSHA Quick Takes e-News: June 19-Aug 19

21 June 2019: **1/** Information on common hazards and solutions for the pyrotechnics industry.

9 July 2019: **1/** Ohio Manufacturer Cited for Exposing Workers to Respiratory, Chemical, and Other Hazards. 2/ Two Companies Cited After Fatal Fire at Pennsylvania Natural Gas Processing Plant.

17 July 2019: **1/** Georgia Distributor Cited for Chemical and Forklift Hazards

8 Aug 2019: **1/** Chemical Hazards: A transit service provider was fined $188,714 for exposing workers to chemical, as well as fire and forklift hazards. 2/ Chemical Safety: Newly developed guidance compares the USA's and Canada's regulatory process and labelling of hazardous chemicals in the workplace. *Editor:* Also see separate Note above.

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

NICNAS (Industrial Chemicals)

• NICNAS Chemical Gazettes

Chemical Gazette July 2019 (goes to the initial webpage)

Chemical Gazette August 2019 (goes to the initial webpage)

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

• NICNAS Registration: Renew by 30 Aug 2019

30 July 2019: To continue to import or manufacture industrial chemicals in the next NICNAS Registration year, you must renew your Registration by Fri 30 August 2019 to avoid a late fee. *Editor:* Note that 31 Aug 19 is a Saturday.

From: www.nicnas.gov.au/news-and-events/news-and-notices/news-and-notices-content/nicnas-registration-renewal-due-31-august-2019

• NICNAS Fees & Charges for 2019-2020

30 July 2019: The full costs of administering NICNAS are recovered through fees and charges paid by industrial chemical importers and manufacturers.

Some Examples:

Registration Level A to $99,999 Intro Value	$200
Registration Level B to $100K to $499,999 Value	$550
Registration Level C to $500K to $4,499,999 Value	$2,515
Registration Level D to $5M+ Intro Value	$24,640

Certificate Applications

Standard Assessment (STD)	$19,890
Limited Assessment (LTD)	$14,230
Polymer of Low Concern (PLC)	$6,590
Applic'n for Extension of Assessment Certificate	$6,070
Self-Assessment Application Non-Haz Chemical	$12,350
Self-Assessment Application Non-Haz Polymer	$11,510
Polymer of Low Concern Self-Assess Applic'n	$4,500
Variation of Schedule Data Requirements	$3,140
Nomination of Foreign Scheme	$8,590
Exempt Information	$1,210

From: www.nicnas.gov.au/fees

• New Exempted Chemicals Reported 2018-2019

6 Aug 2019: New chemicals satisfying requirements are exempt from the notification requirements of the legislation. A summary of the exemption categories and their criteria for use is provided in Table 1 on the NICNAS webpage.

≤100 kg Cosmetic exemption

≤100 kg Non-cosmetic exemption

≤1% Non-hazardous cosmetic exemption

≤100 kg Research and development exemption

Transshipment exemption

Number of Exempted Chemicals Introduced

A total of 12,767 new chemicals were reported during 2018-19 as being introduced under the exemption provisions during the previous registration year. This includes 4095 chemicals reported (out of 7508 chemicals introduced at up to 10kg) as being introduced at up to 10 kg for which no chemical name or other details were provided. The distribution of all reported chemicals among the five exemption categories is shown in

Figure 1 on the NICNAS webpage. The largest, the ≤100 kg Cosmetic Exemption had 6122 chemicals, then 1348 ≤100 kg Non-Cosmetic Exemption chemicals, and 983 ≤1% Non-Haz Cosmetic Exemption chemicals.

Of the Non-Cosmetic Use chemicals for which full details were reported (identity & use category), surface coatings, education, research & development and printing represent the most common use categories shown in Figure 2 on their webpage

254 Organisations provided information on Exempt Category Chemicals. 54% of reporting organisations reported ≤10 chemicals being introduced under the exemption provisions. 7% of reporting organisations reported >100 chemicals.

From: www.nicnas.gov.au/notify-your-chemical/Annual-reporting/New-chemicals-reported/new-chemicals-reported-2018-2019

• IMAP Tranche 27 Existing Chemical Assessments

28 June 2019: Tranche **27** of the **I**nventory **M**ulti-tiered **A**ssessment and **P**rioritisation (IMAP) framework for existing chemicals are open for public comments until **23 Aug 2019.**

For Tranche 26 (March 2019) I missed that there was around 700 Chemicals with Tier I Health Assessments at:
www.nicnas.gov.au/chemical-information/imap-assessments/imap-assessments/human-health-assessments

Editor: Please allow time for the website to load.

Editor: Please Note that Tier 1 Health Assessments include Site Limited chemicals which can have significant hazards and use only by highly trained specialist workers.

Tranche 27 Existing Chemicals include:

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

Editor: Please allow time for the website to load.

Editor: Please Note that Tier 1 Health Assessments include Site Limited chemicals which can have significant hazards and use only by highly trained specialist workers.

84 Chemicals with Tier II Health Assessments at:
www.nicnas.gov.au/__data/assets/excel_doc/0014/40820/Tier-II-HH-summary-all-tranches-published-28-Jun-2019-updated-final.XLSX

- 34 HCIS Classifications are proposed to be amended:

e.g. Four Allyl Esters of Acetic Acid Ethers;
Two Organostannane compounds;
Two Ethoxylates of Aliphatic Alcohols (>C6);
15 Industrial use Lead by-products;
Two Tetramethylammonium Hydroxides & Pentahydrates.

- 1 Chemical is proposed for Tier III Health Assessment:

1,2-Benzisothiazol-3(2H)-one, compound with 1,2-Ethanediamine, CAS 38521-29-8

- 6 Chemicals are proposed to be SUSMP chemicals:

Four Allyl Esters of Acetic Acid Ethers;
Two Ethoxylates of Aliphatic Alcohols (>C6)

5 chemicals under Tier III Health Assessment
www.nicnas.gov.au/__data/assets/excel_doc/0015/40821/Tier-III-HH-summary-all-tranches-published-28-Jun-2019-updated-final.XLSX 5 Lead Acetates

CAS: 1335-32-6; 301-04-2; 546-67-8; 6080-56-4; 51404-69-4

181 Chemicals with Tier 1 Environment Assessments
www.nicnas.gov.au/__data/assets/excel_doc/0016/40822/IMAP_Environment_Tier_I_summary-all-tranches-28-Jun-2019.XLSX

9 Chemicals with a Tier II Environment Assessment
www.nicnas.gov.au/__data/assets/excel_doc/0017/40823/IMAP_Environment_Tier_II_Summary_all-tranches-published-28-Jun-2019-PC-Updated.XLSX

Alkanes, C14-17, Chloro- CAS: 85535-85-9 also known as Medium Chain Chlorinated Paraffins (MCCPs)
H400 Very toxic to aquatic life;
H410 Very toxic to aquatic life with long lasting effects.

Any further evaluation of this substance will focus on reducing uncertainties regarding the environmental exposure resulting from industrial uses of substances containing MCCPs in Australia, the persistence of MCCPs in the soil and sediment compartments, and whether MCCPs meet the Annex D criteria of the Stockholm Convention on Persistent Organic Pollutants.

1,2-Benzisothiazolinone Preservatives
(H400 H410) CAS: 2634-33-5; 58249-25-5; 38521-29-8.

Octylisothiazolinone Preservatives & Industrial Biocides
(H400 H410) CAS: 26530-20-1; 64359-81-5.

Dehydroacetic Acid Preservatives
(H402) CAS: 520-45-6; 16807-48-0; 4418-26-2

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

• The New Industrial Chemicals Scheme: Questions

31 July 2019: Questions that caught the Editor's attention.

Can I still introduce industrial chemicals on the Inventory?

Yes, you can still introduce industrial chemicals on the new Inventory if you meet the terms of listing and you've registered with us. We'll migrate every industrial chemical currently on the Inventory to the new Inventory. They'll have the same terms of listing with an improved format.

I only import naturally occurring chemicals, not industrial chemicals.

You can keep importing your naturally occurring chemicals IF they meet the definition under the old law. You don't need to register these chemicals with AICIS.

Will AICIS continue doing risk assessments of chemicals on the Inventory, like in IMAP?

AICIS will still be assessing the risks of industrial chemicals on the Inventory. We'll be doing this using our new evaluation power. This allows us to evaluate any industrial chemical using a flexible and responsive process. We'll publish the outcomes of our evaluations online.

Will it be easier for me to introduce lower risk chemicals than it is now?

For chemicals NOT on the Inventory (**unlisted introduction**), the process will change. You will need to work out whether your introduction is very low risk, low risk or medium-high risk for human health and the environment using the guidance and criteria that we'll publish.

If your introduction is very low risk you:

- can import or manufacture your chemical without telling us beforehand (provided you're already registered with us)
- will have to tell us some basic information at the end of the first year you introduce
- will have record keeping obligations and we may ask you to provide these records in an audit

If your introduction is low risk you:

– can import or manufacture your chemical (provided you're already registered with us) as soon as you have submitted a pre-introduction report detailing your chemical and your introduction circumstance such as quantity and use

– will have record keeping obligations and we may ask you to provide these records in an audit

How are chemicals listed under the new scheme?

As is the case now, AICIS will list a chemical on the Inventory 5 years after it is assessed. Certificate holders will still be able to apply for an early listing.

AICIS will only add assessed chemicals to the Inventory. This will usually be chemicals categorised in the Assessed introduction category.

If your chemical can be introduced in another category (Exempted or Reported) but you want it listed, you'll be able to ask AICIS to assess it.

AICIS will continue to protect confidential business information in the way AICIS lists some chemicals. This means AICIS can't publish certain information about the chemical and its terms of introduction. If you can't find your chemical or its terms on the Inventory you will have to contact AICIS to check if it is one of these confidential listings.

How will the new scheme balance business confidentiality but still provide transparent information to the public?

One aim of the new scheme is to provide more meaningful and accessible information about a chemical to anyone who is interested. We've revised how we'll present our information to the public on the website. From 1 July 2020, we'll provide summary information about our assessments referred to as Assessment or Evaluation Statements. These statements will be linked to the Inventory listing and include information about the risks to health and the environment and any risk management measures and conditions we recommend.

IF the name of the chemical has been granted protection as confidential business information. In these cases the name of the chemical will be replaced by a masked version of the chemical name – known as an AICIS Approved Chemical Name – AACN. An AACN provides protection by masking certain parts of the chemical name but still provides transparency to the public regarding the type of chemical being introduced.

There will no longer be a confidential Inventory, but if AICIS grants protection of CBI for an introducer, information on an Inventory listing will be masked or be more general in nature.

From: www.nicnas.gov.au/New-scheme-1-July-2020/ask-a-question-about-the-new-scheme

Scheduled Poisons

• Public Submissions on Proposed Amendments

9 August 2019: *Editor: Comment on Chemicals only.*

Paracetamol (referred to the Joint ACMS-ACCS #24)

- NSW Poisons Information Centre (2 page pdf)

The NSWPIC opposes the addition of Paracetamol to Schedule 6 of the Poisons Std as a treatment for animals.

The NSW PIC alone received 2778 calls regarding deliberate self poisoning with single ingredient Paracetamol products in 2018. Paracetamol is potentially toxic in doses greater than 200 mg/kg or 10g (whichever is less) requiring investigations & potential antidote treatment due to the risk of hepatotoxicity. Approval of a veterinary formulation of Paracetamol in Schedule 6 would allow purchase of a product of undefined strength / concentration with no restrictions on sale.

Should Paracetamol be deemed appropriate for animal treatment in Australia, we suggest it be placed in Schedule 4 along with other analgesics for animal use.

Public Submissions on proposed amendments referred to the ACCS #21

Polymer in Durazane 1500:

- Accord Australasia (3 page pdf)

Proposal to create a new Schedule 6 entry for "POLYMER IN DURAZANE 1500 for use in coating wipes" with associated Appendix E & Appendix F entries.

The chemical name and CAS number for this substance are available in the proposal so the S6 entry should be:

"Cyclosilazanes, di-Me, Me Hydrogen, Polymers with di-Me, Me Hydrogen Silazanes, Reaction Products with 3-(Triethoxysilyl)-1-Propanamine (CAS number 475645-84-2) for use in coating wipes."

N-Methyl-2-Pyrrolidone:

- Accord Australasia (3 page pdf)

Proposal to amend the Schedule 6 entry for N-Methyl-2-Pyrrolidone to capture cosmetic preparations containing ≥ 2% of the substance.

It is our understanding that while this substance is not currently included in the Annexes to the EU Cosmetics Regulation, it is included in the provisional list of CMRs which are expected to be added to Annex II (prohibited) in the near future.

Salts and derivatives should be specifically excluded from the Schedule entries to avoid inadvertently capturing other substances. There are various other Pyrrolidone substances used as cosmetic ingredients, but these do not have the same risks to human health that have been identified for N-Methyl-2-Pyrrolidone.

MCPB:

- Nufarm Australia Limited (5 page pdf,)*

The interim decision taken by the TGA is to not amend the poison schedule of MCPB from Schedule 5 to Schedule 6. The rationale for this decision (as published on the TGA website) is solely based on the eye irritancy of two MCPB formulations, not taking into consideration the second criteria for which a threshold was crossed according to your Scheduling Policy Framework (oral toxicity).

Both the MCPB Acid and MCPB Sodium formulations demonstrated moderate levels of oral toxicity which meet the criteria for a Schedule 6 chemical.

From: www.tga.gov.au/scheduling-submission/public-submissions-scheduling-matters-referred-acms-26-accs-24-and-joint-acms-accs-21-meetings-held-march-2019

Food Chemical Issues

• 25th Australian Total Diet Study for Trace Chemicals

30 June 2019: The results of the 25th Australian Total Diet Study (ATDS) again demonstrate the safety of the Australian food supply.

88 foods (sampled over two seasons - Autumn (May 2013) and Summer (Feb 2014)), were tested for 226 Agricultural and Veterinary chemicals and four metals: Arsenic, Cadmium, Lead and Mercury.

Estimated dietary exposure to the insecticide Prothiofos exceeded the ADI for some population age groups. FSANZ informed the APVMA which subsequently worked with industry who voluntarily changed the way Prothiofos is used to ensure that risks for Australian consumers are acceptably low.

For metal contaminants, all detections were below the maximum levels set in the Food Standards Code and consistent with international levels.

Estimated dietary exposure to Methyl Mercury (through the consumption of fish) exceeded the provisional tolerable weekly intake for children aged 2 to 5 years. The risks in this case are balanced by the known benefits of fish consumption. FSANZ has published consumer advice to manage dietary exposure to Mercury while highlighting the health benefits.

Full Report: www.foodstandards.gov.au/publications/Pages/25th-Australian-Total-Diet-Study.aspx

Full June 2019 Report (69 pages) [word | pdf]
Appendices (248 pages) [word | pdf]

From: www.foodstandards.gov.au/consumer/chemicals/Pages/25th-Australian-Total-Diet-Study.aspx

• A1169: Enzyme alpha-Glucosidase Processing Aid

20 June 2019: The enzyme alpha-Glucosidase is derived from a genetically modified (recombinant) strain of the fungus Trichoderma Reesei. Permission is being sought to use the enzyme to produce biochemicals, such as: Monosodium Glutamate, Organic Acids, Potable Alcohol, Isomalto-Oligosaccharides and other Sweeteners and Lysine.

Comment closed: 30 July 2019.

Call for Submissions (69 pages) (pdf | (word)

Application by Dupont Australis (21 pages) (pdf)

Support Doc 1 – Risk & Tech Assessment (16p) (pdf | word)

From: www.foodstandards.gov.au/media/Pages/Call%20for%20submissions%20on%20enzyme%20processing%20aid.aspx

And: www.foodstandards.gov.au/code/applications/Pages/A1169.aspx

• A1180: Natural Glycolipids as a Preservative in Non-Alcoholic Beverages

13 June 2019: To permit the use of Long-Chain Glycolipids from Dacryopinax Spathularia (Natural Glycolipids) as a preservative in Non-Alcoholic Beverages at use levels ranging from 2 to 100 ppm.

Reason: Natural Glycolipids is a new food additive and involves an assessment of the risk to public health and safety of moderate complexity.

Natural Glycolipids (CAS No: 2205009-17-0) is a natural mixture of long chain glycolipids obtained via fermentation of glucose by the edible jelly fungus Dacryopinax spathularia, also known as sweet osmanthus ear. The major components of Natural Glycolipids are three structurally-related glycolipid congeners. The producer organism (strain MUCL 53181) is a wild-type strain without any genetic modification (non-GMO).

Natural Glycolipids has prominent antifungal effects against common yeasts and moulds and can be used to prolong shelf life and guarantee the microbiological quality of beverages.

Executive Summary (13 May 2019, 2 pages) (pdf)

From: www.foodstandards.gov.au/code/applications/Pages/A1180.aspx

• A1182: Glucose Oxidase from Trichoderma Reesei as a Processing Aid (Enzyme)

27 June 2019: To approve a Glucose Oxidase enzyme preparation from Trichoderma Reesei for use as a Processing Aid in cereal based products (baking) and egg processing.

Reasons: Seeking permission for a new source microorganism for a permitted enzyme.

Executive Summary (4 pages) (pdf)

From: www.foodstandards.gov.au/code/applications/Pages/A1182.aspx

• P1010: Formulated Supplementary Sports Foods

27 June 2019: Proposal P1010 has been formally prepared (14 June 2019) following a request from the Ministerial Forum on Food Regulation in October 2018 to review Standard 2.9.4 – Formulated supplementary sports foods. This request follows a round table on sports supplements convened in July 2018 by the Australian Government Department of Health on behalf of the Food Regulation Standing Committee (FRSC) (*https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/sports-sup-roundtable*)

Sports Supplements Roundtable – Report on Discussions and Next Steps, Aug 2018 (15 pages) (pdf | docx)

Editor: This Report has a very interesting range of presentations, issues and options for Sports Supplements.

Administrative Assessment Report (2 pages) (pdf) | (word)

Stage 1 (start June 2019) will inform the project scope and issues for the proposal. It will comprise a situational analysis including the trade, sale, education and use of FSSF by various sectors including industry, the sports and broader community and government. Stage 1 will also examine the operation of ANZ food/supplemented food/therapeutic good regulatory context for sports products including the food medicine interface.

Stage 2 (start June 2020) will involve development of revised arrangements for regulation of sports food.

From: www.foodstandards.gov.au/code/proposals/Pages/P1010.aspx

Agricultural Chemicals

• APVMA: Chlorpyrifos - Proposed Removed Uses

24 June 2019: APVMA proposed decision to remove **home and garden uses** of Chlorpyrifos products. The Proposed Regulatory Decision (PRD) (Special AgVet Chemicals Gazette, 27 pages) to suspend all domestic & home garden products with Chlorpyrifos after 28 days is the result of a comprehensive review of the chemical's environmental &

health impacts. *Then late 2019:* Proposed regulatory decision on critical uses for agriculture, biosecurity, & on permit.

The APVMA is currently consulting (to 22 Sept 2019) on agricultural, biosecurity, and permitted use patterns, and Chlorpyrifos products can continue to be used in agricultural settings or under permit only if used according to label instructions.

More information about the PRD, including the list of affected products, disposal advice, alternatives, and consultation details, can be found on the APVMA website.

Reconsideration of Chlorpyrifos: **Residential Exposure Assessment & Risk Characterisation Report** - June 2019 (29 pages): (pdf | docx)

Reconsideration of Chlorpyrifos: Supplementary **Environment Assessment Report** - June 2019 (81 pages): (pdf | docx)

Reconsideration of Chlorpyrifos: **Toxicology Update** - June 2019 (130 pages): (pdf | docx)

Hazards: 1/ Exposure to Chlorpyrifos at levels that result in detectable inhibition of blood Cholinesterases is a serious neurodevelopmental and neuro-behavioural developmental health hazard for humans. 2/ The use of the products in a residential setting, including application to turf at rates that exceed 850 g ac/ha poses an unacceptable risk to birds;

Send Submissions to: Chemical Review, APVMA, PO Box 6182, Kingston ACT 2604, Phone: +61-2-6770-2335 Email: chemicalreview@apvma.gov.au

From: https://apvma.gov.au/node/50106

• APVMA: Spray Drift Policy Update

25 July 2019: The APVMA has released stage one of an update to our 2008 spray drift policy, Operating Principles in Relation to Spray Drift Risk, following consultation with industry and stakeholders.

The updates to the policy are designed to be more flexible and easily adapted to new technologies. The new approach provides a set of tools for calculating spray drift and setting of buffers.

The key changes of the New Policy includes:

- clearer guidelines on how regulatory acceptable levels and buffer distances are calculated in spray drift risk assessment manuals
- clearer and more consistent labelling instructions
- new buffer guidelines for bystander areas, pollinators, natural aquatic areas, vegetation areas & livestock areas
- use of the AgDISP model to determine standard downwind deposition curves for boom sprayers & aircraft
- use of European drift data for downwind deposition curves for vertical sprayers
- the development of a set of tools to generate buffer & label instructions.

Spray Drift Mgmt Website: https://apvma.gov.au/node/10796

From: https://apvma.gov.au/node/52191

• APVMA: FAISD Handbook Update 2/2019

11 July 2019: The APVMA has released edition 2/2019 of the **First Aid Instructions, Safety Directions, Warning Statements and General Safety Precautions for Agricultural and Veterinary Chemicals (FAISD)** handbook, approved as of 30 June 2019. (214 pages) (pdf | docx)

Some of the recently amended substances include: 2-Butoxyethanol; Benzalkonium Chloride; Glutaraldehyde; Glyphosate (Potassium, Mono-Ammonium and Monomethylamine Salts); MCPA (Ethyl Hexyl Ester); Methylated Soybean Oil; Piperonyl Butoxide; Quaternary Ammonium Compounds except when separately specified.

Amendments should be reflected in the labelling of Ag & Vet Chemical products as soon as possible.
Revised labels will need to be approved by the APVMA.

From: https://apvma.gov.au/node/51341
And: https://apvma.gov.au/node/26586

• APVMA Active Constituent: Benzovindiflupyr

18 June 2019: An Application for the approval of a new agricultural active constituent, Benzovindiflupyr, for use as a fungicide in agricultural products.

Common Name: Benzovindiflupyr; CAS Name: N-[9-(Dichloromethylene)-1,2,3,4-Tetrahydro-1,4-Methanonaphthalen-5-Yl]-3-(Difluoromethyl)-1-Methyl-1H-Pyrazole-4-Carboxamide; CAS No: 1072957-71-1; Minimum Purity: 960 g/kg; Formula: $C_{18}H_{15}Cl_2F_2N_3O$; MW: 398.2 g/mol; Chemical Family: Pyrazole Carboximide fungicide; Mode of Action: Inhibition of mitochondrial complex II respiration acting on the enzyme succinate dehydrogenase. Mainly a preventative fungicide with limited curative activity.

The APVMA has evaluated the chemistry aspects of Benzovindiflupyr active constituent (physico-chemical properties, identification, manufacturing process, quality control procedures, batch analysis results and analytical methods) and found them to be acceptable. The APVMA has completed a toxicological evaluation of Benzovindiflupyr.

The APVMA has considered the toxicological aspects of Benzovindiflupyr, and concluded that there are no toxicological concerns to the approval of this active constituent.

The Scheduling Delegate made a delegate-only decision to include Benzovindiflupyr in Schedule 6 of the Poison Standard, with an implementation date of 1 February 2019

Impurities of toxicological significance are not expected to occur in Benzovindiflupyr as a result of the raw materials and the synthetic route used. The APVMA is satisfied that the proposed importation and use of Benzovindiflupyr would not be an undue toxicological hazard to the safety of people exposed to it during its handling and use.

Submissions (now closed): Director Chemistry & Manufacture, Scientific Assessments & Chemical Review Program, APVMA. Phone: 02 6210 4701. Email: Enquiries@apvma.gov.au

From: Ag&Vet Gazette, 18 June 2019 p16-17
From: https://apvma.gov.au/node/49816

• BAYER Global: 107 Glyphosate Safety Studies

28 March 2019: The 107 Bayer-owned Glyphosate safety studies submitted to the European Food Safety Authority (EFSA) are now available to the public.

This has occurred as part of Bayer's science-based discussion with regulators around the globe, the international research community, as well as with consumers on the safety profile of Glyphosate.

Bayer Transparency Platform: To April 2019, Bayer has published information on 28 active ingredients on its transparency website, with more to come.

Glyphosate Safety Studies:
www.cropscience-transparency.bayer.com/en/safety-results

then select the Active Substances down arrow, then select Glyphosate. The studies are grouped under 3 areas:

- Active Substance: Glyphosate
- Formulation: 360 g/L Glyphosate acid
- Glyphosate active substance and formulation: Access to full Bayer-owned study reports

Then for every document that you want to download you need to agree the Terms and Conditions for Access. The selected document then downloads as a pdf.

This is in addition to the Bayer Transparency Platform 7 *Dec 2018 publication of 318 Glyphosate safety study summaries* submitted under the EU Substance Authorization process for Plant Protection Products. This includes studies on residues and metabolism (18), environmental fate (32), toxicology (180), and ecotoxicology (88) on the active substance as well as representative formulations.

Access has now been enabled to all the related in-depth Glyphosate safety studies to which Bayer wholly owns the rights. Note: Due to legal restrictions, Bayer cannot release the Glyphosate studies conducted and owned by Third Parties.

FAQ: www.cropscience-transparency.bayer.com/en/FAQ and select "FAQ about Glyphosate Safety Studies"

From: https://media.bayer.com/baynews/baynews.nsf/ID/More-Bayer-owned-glyphosate-safety-study-reports-accessible-Monsanto-integration-continues

• GLP (USA based): The Current State of Pesticides

The Genetic Literacy Project (GLP) (USA based) has published a six-part series on the current state of pesticides headed: *Pesticides & Food: It's not a Black or White Issue*

This 6 Part Series discusses concerns surrounding pesticides and illuminates the complexity & challenges involved in decision-making regarding current and future pesticide use.

- In **Part 1** *Has Pesticide Use Decreased:* GLP explores why looking solely at pesticide use by weight does not fully illustrate how pesticide use has changed over time.
- In **Part 2** *Have Pesticides Improved:* GLP explores changes in pesticide toxicity and environmental impact over time, highlighting where there is room for improvement.
- In **Part 3**, *How Dangerous is Glyphosate:* GLP compares the toxicity of a pesticide - Glyphosate – to other common pesticides to give context to a polarized issue.
- In **Part 4** *How Organic Pesticides compare to Conventional Pesticides:* GLP compares toxicity between common synthetic and organic pesticides and highlights the complexity and variability in pesticide options.
- In **Part 5** on *Soil Health:* GLP provides an example of how organic farming can sometimes include less sustainable environmental practices.
- In **Part 6** (Feb 2019) on *Pesticide Residues:* GLP addresses the concern that conventional produce contains unsafe levels of pesticide residues and the common belief that organic produce is safer and healthier.

Part 6: Pesticide Residues—Something to Worry About?

See the webpage for information, where GLP discusses Organic Produce compared to Conventional Produce.

From: https://geneticliteracyproject.org/2019/02/06/pesticides-and-food-its-not-a-black-or-white-issue-part-6-pesticide-residues%E2%80%95something-to-worry-about/

Alerted by the Growcom Infopest News email, 6 Aug 2019.

Editor: I've included these perspectives for your evaluation.

Dangerous Goods

• AU Emergency Response Guide (Available)

The AU Emergency Response Guide (AERG) 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.

The AERG may be used as an optional alternative to the Initial Emergency Response Guide (HB:76). Duty holders should decide which Guide best suits their specific need

Approval number V19-03 was issued by Worksafe Victoria and the approval was given national effect by the Competent Authorities Panel decision number CA2019/120.

The AU ERG is available to download free of charge from the National Transport Commission Dangerous Goods webpage:

www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/ scroll down & click on the title.

Australian Emergency Response Guide Book 2018
(386 page 2.1Mb free web pdf file) or in the Publications.

Note: A Press file for printing hardcopies is also available from the NTC on request to:
Enquiries@ntc.gov.au Att'n: Legislative Maintenance

Note: Modified copies are not approved emergency information.

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

• Risk Assessment: D.Goods Transport & Road Tunnels

19 June 2019: Project to investigate the Risk assessment of Dangerous Goods Transport through Road Tunnels, which is being run by AUSTROADS.

"The most common approach to transporting dangerous goods is on roads however, this can be contentious, especially when navigating through sensitive infrastructure such as bridges and tunnels or when the route is near schools or hospitals."

"The report recognises that the transport of dangerous goods carries some inherent risk but that banning dangerous goods from tunnels can shift this risk to other areas that may increase the overall risk profile and have an economic impact."

"The report provides an approach for road managers to compare the societal benefits of using a road tunnel or another surface route across a complete journey. It provides information on the application of design methods to reduce risks."

Editor: * To access Austroad documents everyone needs to create an account with a log in name and a password.

Dangerous Goods in Tunnels: Literature Review AP-R589-19 (13 June 2019, 26 page pdf*) documents the results of an extensive literature review involving international and local studies and methodologies, trial reports, and media.

Dangerous Goods in Tunnels: Application and Methodology AP-590-19 (13 June 2019, 22 page pdf*) documents the framework and considerations to be applied in undertaking the dangerous goods risk assessment.

Free Webinar on Thurs 12 Sept 2019, 1pm-2pm AEST for an overview of this study by the report author Bruce Dandie and project manager, Nigel Casey. **No charge but**

registration essential. If you can't make the live session, **register**, and a link to the recording will be sent. Register now!

From: https://austroads.com.au/latest-news/assessing-the-risks-of-transporting-dangerous-goods-in-tunnels

• CASA Dangerous Goods Regulations Amendment

7 Aug 2019: Civil Aviation Safety Regulations (CASR) Proposed Changes to Part 92 - Consignment and Carriage of Dangerous Goods by Air (PP 1902OS).

CASA would like your comments on the detailed policy before it is drafted into Regulations.

Editor: Areas that caught my attention:

- a proposed new Subpart on the reporting of Dangerous Goods accidents, incidents and occurrences

- an expansion of the Dangerous Goods training requirements for group F employees, the inclusion of a new group G employee and a provision for Dangerous Goods Instructors Under Supervision to deliver CASA approved training courses

- options for smaller commercial operators to conduct their own case-by-case risk assessments for certain Dangerous Goods without seeking CASA permission – removing red tape.

Policy Proposal (PP) 1902OS (85 page pdf)

Consultation - Proposed changes to the Dangerous Goods Rules – amendment to CASR Part 92 – PP 1902OS
(13 page pdf | docx)

Consultation Closes: 5 Sept 2019

Contact: Flight Standards Branch: ph: 131757

Email: RegulatoryConsultation@casa.gov.au

Please note: CASA can no longer offer the option to upload files because of the potential risk of malware.

From: https://consultation.casa.gov.au/regulatory-program/pp1902os/consult_view/

• NZ Draft: Transport of Dangerous Goods on Land

1 Aug 2019: NZ Draft Standard DZ 5433 (Committee P5433) (157 page pdf). Transport of Dangerous Goods on Land. NZS 5433.1&2:2012 Transport of Dangerous Goods on land, Part 1: Technical information and Part 2: List of Dangerous Goods was published in 2012.

The intent of this revision is to reflect changes in industry practice, new technologies, and expand on or reduce existing requirements within the standard to allow the standard to be more practical.

In addition to seeking feedback on the whole draft standard, the P5433 committee are also seeking feedback on key changes outlined in the brief in the front cover of the draft standard. Comment closes 27 Sept 2019.

The key changes in the draft standard are summarised:

1. Removal of majority of the international technical content from the current standard and instead incorporating the material by reference.

2. Aligning land transport requirements with maritime and coastal transport requirements.

3. Inclusion of content relating to lithium batteries/cells and hazardous wastes

4. Inclusion of more content relating to Class 7 Radioactive materials

5. Inclusion of more content relating to wastes and asbestos

https://shop.standards.govt.nz/docserv/drafts/DZ_5433_PC.pdf

From: NZ Draft Stds - https://www.standards.govt.nz/

***Editor:* I also noticed in 5.3 Special Marks** - Packaging, IBCs, freight containers, portable tanks, and vehicles transporting dangerous goods shall be identified with special marks to indicate handling precautions or hazards that are not represented by other labels, marks, or placards.

(d) In the case of Class 8 corrosives of Packing Groups I and II, additional marks with the words **'strong acid'** or **'strong alkali'** should be used; and

C5.3: The (NZ) creation of the new special marks – 'strong acids' and 'strong alkalis' – is not currently recognised in the (NZ) Dangerous Goods Rule but is instead regarded as new industry practice.

Figure 10 – Examples of special markings for strong acid and strong alkali

Editor: Under dim conditions these Marks are not easily read!

• Emergency Information Panels in Draft NZ Std DZ5433

Draft NZ Standard DZ 5433 (Committee P5433) (157 page pdf). Transport of Dangerous Goods on Land has:

9.3 Emergency Information Panel

9.3.1 For bulk carriers and tanks, including portable tanks, tank trailers or tank semi-trailers, road tank vehicles or rail tank wagons, the class label/placard may be combined with an emergency information panel.

9.3.2 An Emergency Information Panel shall contain:

UN number; Hazchem Code, see Appendix A;

24-hour emergency contact number, see 6.4.1.

Optionally, if not displayed elsewhere, the emergency information panel should contain the product name, the class placard, and special marks, such as the environmentally hazardous substances mark.

9.3.3 Examples of Emergency Information Panels are shown in Figures 18 and 19. An example of a directory board for use with mixed loads is shown in Figure 20.

Editor: It is being questioned by some organisations in Australia if the EIPs are really still needed in Australia on IBCs and Bulk Bags. Maybe AU should harmonise with NZ?

Even A3 EIPs mean larger DG marking, contact information, and the Hazchem Code (which otherwise needs looking up).

Please send any ideas to Jeff.Simpson@haztech.com.au.

• RR1129: Buncefield - Dispersion of the Vapour Cloud

2018: UK Health and Safety Executive Research Report

RR1129 - Buncefield Investigation: Dispersion of the Vapour Cloud (64 page pdf)

The Buncefield explosion on 11th Dec 2005 resulted in widespread damage to the surrounding area and huge fires involving large oil fuel tanks. Liquid petrol, released from a large storage tank that overfilled, formed a dense, low-lying vapour cloud that spread across the site and neighbouring areas before igniting. Following the incident, HSE sponsored a large programme of experimental and modelling research

to investigate the technical issues involved and develop methods of analysis. Previous HSE Research Reports (RR718, RR908 and RR936) described research on the explosion event, vapour cloud formation, and liquid flow.

This Report (RR1129) examines the dispersion of the flammable vapour cloud. Images of the visible mist from security camera records are analysed and Computational Fluid Dynamics (CFD) simulations of dense gas dispersion are presented and compared to observations including burn damage. The modelling showed that the vapour cloud dispersion behaviour under zero wind speed conditions is affected significantly by terrain and obstacles.

From: www.hse.gov.uk/research/rrhtm/rr1129.htm

From: www.hse.gov.uk/research/rrhtm/1101-1200.htm

• NSW Explosives Act: Statutory Review

19 July 2019: The NSW Explosives Act 2003 (external link) regulates the control and handling of explosives and explosive precursors (chemicals which can be used to make explosives) in NSW.

Section 38 of the Act requires that the Act be reviewed to determine whether its policy objectives remain valid and its terms remain appropriate for securing those objectives.

A discussion paper (external link) (18 page pdf) has been prepared that sets out the background to the Act, its scope and its main elements, which asks questions about each of these and the issues arising from them.

Note: The Regulation is not currently under review; and it is anticipated that the Regulation will be reviewed in 2020.

Comment closes: 16 Aug 2019.
Email to: Explosives@finance.nsw.gov.au

From: www.nsw.gov.au/improving-nsw/have-your-say/statutory-review-of-the-explosives-act/

• WA DMP: SSAN D. Goods Waste - Info Sheet

July 2019: Security Sensitive Ammonium Nitrate (SSAN) Dangerous Goods Waste - Information Sheet (3 page pdf)

This Information Sheet provides information on the safety, security and regulatory requirements of Security Sensitive Ammonium Nitrate (SSAN) Dangerous Goods waste.

This info sheet is **particularly for those who are not routinely involved** with SSAN and may be unaware of their responsibilities.

From: www.dmp.wa.gov.au/Dangerous-Goods/What-is-happening-16169.aspx

• EPA NSW Fine: Petrol Tanker Crash at Seaforth

6 Aug 2019: EPA NSW has fined Toll Transport Pty Ltd $2000 following a petrol tanker crash at Seaforth last year.

On 17 Oct 2018 the tanker collided with a rock wall under Ethel St Bridge on Manly Road after a collision with a car, disabling the prime mover.

EPA NSW Director Hazardous Materials, Asela Atapattu said a $2000 Penalty Notice was issued for the way a contractor engaged by Toll Transport responded to the crash.

"We understand that Fire and Rescue NSW asked Toll to control the situation and recover the dangerous goods. Toll engaged a contractor to manage the situation. We allege the contractor failed to evaluate the situation correctly and didn't obtain the equipment and resources to perform the recovery in a timely manner." Under the law, Toll is responsible for the actions of its contractor.

From: www.epa.nsw.gov.au/news/media-releases/2019/epamedia190806-toll-transport-fined-for-northern-beaches-incident-after-crash

• Worksafe NZ: Guide to Gas Cylinders

July 2019: This recently updated detailed Guide is intended to assist and guide any person, group or organisation that is involved in, or intends being involved in, the importation, manufacture, supply, filling, storage, handling or periodic testing of gas cylinders and fittings.

Guide to Gas Cylinders *(100 page pdf)*

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

• WorkSafe NZ: Location Compliance Certification

20 Aug 2019 Closing Date: For NZ Health & Safety at Work (Hazardous Substances—Location Compliance Certification for Classes 2 to 6, & 8) Performance Standard 2019

NZ Compliance Certifiers check compliance with specific regulatory requirements to ensure Hazardous Substances are safely used, handled, stored or manufactured. Compliance certifiers issue NZ Compliance Certificates where the NZ Regulations specify that one must be obtained.

Feedback is welcomed from individuals, businesses and industry associations.

Email to: car.compliance@worksafe.govt.nz

Health and Safety at Work (Hazardous Substances—Location Compliance Certification for Classes 2 to 6, and 8) Performance Standard 2019 (50 page pdf)

Environmental Notes on Chemicals

• WA: Hydraulic Fracture Stimulation Plan Approved

8 July 2019: Implementation of the Government's response to the Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia.

An independent Scientific Inquiry was carried out to understand the risks associated with extracting petroleum products using Hydraulic Fracture Stimulation and to protect the State's environment from those risks. On 12 Sept 2018, the Inquiry handed its Report to Government.

The Plan was approved by WA Govt on 8 July 2019 & outlines the required changes and actions that need to be undertaken.

Implementation Plan: (July 2019, 31 Page pdf)
www.hydraulicfracturing.wa.gov.au/implementation-plan/

Some of the key actions of the Plan include lifting the Hydraulic Fracturing moratorium on existing onshore petroleum titles, banning Hydraulic Fracturing within 2000m of gazetted Public Drinking Water Source Areas, in national parks, the Dampier Peninsula and iconic natural heritage areas, as well as the requirement for Traditional Owner and private landowner consent prior to Hydraulic Fracture production.

Other actions in response to the Inquiry include referring all Hydraulic Fracture Stimulation exploration and production proposals to the EPA WA, as well as strengthening current regulations to ensure high health, safety and environmental protection standards.

From: www.hydraulicfracturing.wa.gov.au/

• EPA Vic: Waste Transport Certificates

2 July 2019: Waste Transport Certificates are required under the Regulation to track the movement of Prescribed Industrial Waste (PIW) from 'cradle to grave'.

It is the responsibility of the waste producer, transporter and receiver to ensure that an accurately completed waste transport certificate accompanies each load of PIW unless (specific conditions apply).

Old Publication IWRG821.2.pdf (4 page pdf)

As at 1 July 2019, this publication is being updated.

For information about waste transport certificates see:

www.epa.vic.gov.au/portal-help/help-with-your-interaction/waste-transport-certificates

From 1 July 2019 EPA Vic will no longer accept paper Waste Transport Certificates for the movement of Prescribed Industrial Waste (PIW) in Victoria. Duty holders will be required to submit waste transport certificates electronically via the EPA Vic Interaction Portal.

From: www.epa.vic.gov.au/our-work/publications/publication/2019/july/iwrg821-2

• EPA Vic: Mammoth Mixed Waste Clean Up at Lara

8 Aug 2019: The EPA Vic has been working for months on the complex task. The final removal of an estimated 320,000 cubic metres, or hundreds of tonnes, of mixed waste may take up to three years.

It is not just the sheer size of the stockpile that is challenging, it is the mix of construction and demolition waste, including timber, concrete, bricks, plaster, glass and ceramics, and the fire and contamination hazards the stockpile can still present if it is not carefully managed.

This operator has left a mess at the site bigger than anything we have previously seen in the state for this kind of waste. This will be a long and complex clean up to deliver.

EPA Vic is establishing a site office and will have staff working onsite to monitor conditions while the project is under way. The Victorian Government has committed $30M to start the removal of the huge waste stockpile, and EPA Vic and the Victorian Government will continue to pursue the duty holder for the costs associated with the clean up.

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2019/august/08/team-prepares-for-a-mammoth-clean-up-at-broderick-rd-lara

More information on the Broderick Rd Lara clean up at: www.epa.vic.gov.au/our-work/current-issues/broderick-road-recycling-epa-response.

• WorkSafe Vic: Update on Waste Chemical Sites

13 July 2019: The WorkSafe-led taskforce overseeing the removal of waste chemicals in the northern suburbs will clear another site in Campbellfield. Initially assessed by the EPA Vic earlier this year. It was assessed as containing mostly industrial waste.

Recently, WorkSafe Vic has stepped in to make the site safe after recent inspections revealed that a significant amount of Dangerous Goods were also present.

From: www.worksafe.vic.gov.au/news/2019-07/taskforce-clean-additional-dangerous-goods-site

• EPA Vic: Campbellfield Fire Site Clean Up Notice

1 Aug 2019: The EPA Vic Clean Up Notice was issued to the Administrators of Bradbury Industrial Services, which went into voluntary administration on 9 July 2019.

Bradbury was operating a chemical treatment facility at the site when the fire took hold.

The EPA Vic Clean Up Notice requires the removal of all chemical drums and containers and liquefied petroleum gas tanks by 20 Sept 2019; and also requires the removal of all structures and wastes from the site by 1 Nov 2019.

EPA Vic is now satisfied that the submitted Waste Removal and Clean Up Plan can be put in action to remove any risks to human health and the environment that currently exist at the site. EPA Vic's Notice formalises the actions required by the consultants to remove all of this waste and to take it to a facility that is licensed to receive it.

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2019/august/01/epa-issues-clean-up-notice-for-site-of-campbellfield-fire

• EPA Vic Meeting: Illegal Chemical Dumps, near Kaniva

23 July 2019: EPA Vic holds an information open house at the Kaniva Shire Hall on Tues 30 July, to discuss the illegal waste dump site south of Kaniva, Victoria.

EPA Vic has informed there is no contamination to the groundwater nor other safety risks.

EPA Vic has spent several months at the 1400 acre property 15km south of Kaniva, Victoria searching out buried illegal chemical waste dumps. Using its precautionary powers, EPA Vic conducted investigations of the site including a first ever use by an Australian Regulator of ground penetrating radar using drones. The inspections to date have located 20 underground dump sites.

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2019/july/23/kaniva-community-meeting

• Accepting Industrial Waste without an EPA Vic Licence

8 July 2019: The Seymour Magistrates' Court heard the company Nagambie Resources Ltd (Nagambie Resources) had allowed electronic waste and spent bleaching earth (a by-product from producing vegetable oil) to be dumped on site during periods in 2014 and 2015.

When EPA Vic officers attended the site in late 2016, they observed two stockpiles of soil that were 40m long, 8m wide and 3m high and leaching an oil substance.

A stockpile of black glass, plastic and circuitry boards measuring approximately 35m by 10m was also found, which Nagambie Resources had tried to bury.

EPA Vic has issued Nagambie Resources with a Clean Up Notice to remove all e-waste and treat all contaminated soil by 2020. Magistrate David Faram said it was a significant breach and he found it difficult to understand why Nagambie Resources had accepted the waste in the first place. "These decisions have come at a huge cost and that cost will continue." Mr Faram ruled the company was doing all it could to rectify its offending and did not impose a conviction.

"While the company claimed it was only storing the waste, it didn't have a licence for that either," EPA Vic CEO Dr Cathy Wilkinson said. "E-waste has the potential to leach chemicals, including lead, into the ground which is a risk to environmental and public health."

Under EPA Vic's new legislation, which will take affect from 1 July 2020, repeat illegal waste dumping will face potential jail time and the maximum fines and penalties will significantly increase. https://beta.epa.vic.gov.au/new-laws

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2019/july/08/storage-deal-was-fools-gold

• EPA Vic: E-Waste Compliance started 1 July 2019

3 July 2019: From 1 July 2019, E-Waste must not be put in your household bin, but taken to a collection point. E-Waste can then be processed to recover valuable metals & materials which can be harmful to the environment if left in landfill.

E-waste (www.epa.vic.gov.au/Ewaste) is anything with a plug, battery or power cord that is no longer working or wanted.

From: www.epa.vic.gov.au/about-us/news-centre/news-and-updates/news/2019/july/03/e-waste-compliance-switched-on

• OECD Webinar: Risk Reduction Initiatives for PFAS

Free Webinar on **Risk Management of PFAS in Canada, 15 May 2019** (YouTube Video 31m 14s) (*Editor:* now accessible)

The PFAS Webinar series brings world experts together to share vital information and best practices regarding PFASs.

Slides:

- Risk Reduction Initiatives for Per- and Polyfluoroalkyl substances in the United States (17 slides)
- Risk Management of Per- and Polyfluoroalkyl substances in Canada. (20 slides)

Past June 2018 Webinar: Presentation of the New Database of Per- and Polyfluoroalkyl Substances (PFASs)
(YouTube Video 30m 45s)

From: www.oecd.org/chemicalsafety/portal-perfluorinated-chemicals/webinars/

• Assessment of Waste Exports from AU in May 2019

In May 2019, exports of waste-derived materials to China were mostly recovered paper and cardboard (79%). India's were 56% metals and 33% paper and cardboard. Those to Bangladesh and Indonesia were dominated by scrap metals. Malaysia's were 37% metals and 22% paper and cardboard. Thailand's were 49% metals and 45% paper and cardboard.

Waste Export Summary - May 2019 (*5 page pdf | docx)*

From: www.environment.gov.au/protection/waste-resource-recovery/publications/waste-export-summary-may-2019

Editor: There are a very interesting graphs included for waste exports since July 2017 to various countries & types.

• Australian Halon Management Strategy (AHMS)

2019: While Halon is no longer used in the majority of applications where previously it was considered important for fire protection, it continues to be used in a number of sectors such as maritime and aviation. For example, viable Cargo Bay alternatives to halon are not expected to be included in aircraft production for some time. The AHMS describes Australia's framework to manage Halon stocks so that supplies of used Halons are available for these and other essential uses into the future. (8 pages pdf | docx)

From: www.environment.gov.au/protection/ozone/publications/australian-halon-management-strategy

• Thorium-based Nuclear Power – An Update

Wikipedia 5 Aug 2019: According to proponents, a Thorium Fuel Cycle offers several potential advantages over a Uranium Fuel Cycle - including much greater abundance of Thorium on Earth, superior physical and nuclear fuel properties, and reduced nuclear waste production.

However, development of Thorium power has significant start-up costs. Proponents also cite the lack of easy weaponization potential as an advantage of Thorium, while critics say that development of Breeder Reactors in general (including Thorium reactors, which are breeders by nature) increases proliferation concerns. As of 2019, there are no operational Thorium reactors in the world.

From:
https://en.wikipedia.org/wiki/Thorium-based_nuclear_power

Editor: It is many years since I last checked where Thorium-based molten Thorium Fluoride Nuclear Power is up to.
As I understand, the Chinese want a working Thorium reactor by 2025, with smog issues pushing it's need.

Standards & Codes

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

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

AS ISO 14040:2019: Environmental Management - Life Cycle Assessment - Principles and Framework. Pub: 18 June 2019, 20p, pdf (Personal Use): $140.14; Hardcopy: $155.71.

AS ISO 14044:2019: Environmental Management - Life Cycle Assessment - Requirements and Guidelines. Pub: 17 June 2019, 43p, pdf (Personal Use): $200.81; Hardcopy: $223.13.

ISO 11907-1:2019: Plastics - Smoke Generation - Determination of the Corrosivity of Fire Effluents - Part 1: General Concepts and Applicability. Pub: 12 July 2019, 6p, pdf (Personal Use): $60.00; Hardcopy: $66.66.

AS/NZS 4024.1302:2019: Safety of Machinery - Risk Assessment - Reduction of Risks to Health from Hazardous Substances Emitted by Machinery - Principles and Specifications for Machinery Manufacturers. Pub: 29 July 2019, 9p, pdf (Personal Use): $103.41; Hardcopy: $114.90.

ISO 7203-1:2019: Fire Extinguishing Media - Foam Concentrates - Part 1: Specification for low-expansion foam concentrates for top application to water-immiscible liquids. Pub: 1 July 2019, 42p, pdf (Personal Use): $249.46; Hardcopy: $277.18.

ISO 7203-2:2019: Fire Extinguishing Media - Foam Concentrates - Part 2: Specification for medium- and high-expansion foam concentrates for top application to water-immiscible liquids. Pub: 1 July 2019, 41p, pdf (Personal Use): $249.46; Hardcopy: $277.18.

ISO 7203-3:2019: Fire Extinguishing Media - Foam Concentrates - Part 3: Specification for low-expansion foam concentrates for top application to water-miscible liquids. Pub: 1 July 2019, 39p, pdf (Personal Use): $249; Hardcopy: $277.

• Draft Stds – https://infostore.saiglobal.com/

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

DR2 AS 2927:2019: The Storage and Handling of Liquefied Chlorine Gas. Pub: 2 Aug 2019, 85 pages, pdfs (Networkable / Personal Use): Free; Hardcopy: $49.95.
Comment closes 13 Sept 2019.

Key changes from the previous standard include:
(a) Incorporation of a requirement for a management of change process for chlorine facilities. (b) The use of calculated risk-based separation distances that are related to land or facility use. The latter change enables the impact (or credit) of risk mitigation measures to be readily understood. (c) A clearer detailing of the requirements for storage only facilities, including transit areas.

AS 1940:2017/Amdt 1:2019: The Storage and Handling of Flammable and Combustible Liquids. Pub: 6 Aug 2019,1 page, pdfs (Networkable / Personal Use): Free; Hardcopy: Free. Comment closes 13 Sept 2019.

Change: Clause 5.3.3(f) Delete the words 'In addition to the LAH, they' in the first sentence and insert 'In addition to the LAH, Category 6 tanks filled from ship to shore, from a refinery, or similar high volume transfers,'.

ISO/DIS 21583: Firework Displays - General Guidance.
Pub: 1 Aug 2019, 20p, pdf (Personal Use): $91.57; Hardcopy: $101.75. Editor: Please comment within 4 months.

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.

• NZ Draft Stds - https://www.standards.govt.nz/

DZ 3640:2019 (58 page pdf) (Comment on new changes only) Preservation of Timber and Wood Based Products. The key changes are summarised on the first two pages. Comment closes 23 Aug 2019.

DZ 5433 (Committee P5433) (157 page pdf). Transport of Dangerous Goods on Land. NZS 5433.1&2:2012 Transport of Dangerous Goods on land, Part 1: Technical information and Part 2: List of Dangerous Goods was published in 2012.

See the Note under "Dangerous Goods"

https://shop.standards.govt.nz/docserv/drafts/DZ_5433_PC.pdf

• NFPA Codes, Reports, News

Newly Published NFPA Codes

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

Hazardous Materials Reports

From: www.nfpa.org/News-and-Research/Data-research-and-tools/Hazardous-Materials

Latest Report: Influence of Particle Size and Moisture Content of wood particulates on Deflagration Hazard (2019, 51p pdf)

NFPA News: now only appears accessible by being emailed.
http://ebm.cheetahmail.com/r/regf2?a=0&aid=272412627&n=210

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

• AIOH WA Meeting: Breaking Bad Down Under, 26 Aug

Jessica Murdoch, Chemist, WA Forensic Science Laboratory will share interesting case studies and examples that highlight the varied roles forensic chemists play in the investigation, analysis and remediation of clandestine drug laboratories in Western Australia. Plus latest AIOH news.

Networking, food & drinks before and after the presentations.

Mon 26 Aug 19, 5-8pm, Non Members $40. Click to register.

Please register by 23rd Aug 2019.

From: www.aioh.org.au/email/96e3aed3-98ae-4301-be81-0c01068c647a/f1c3af55-e42e-454b-a85c-c4fc0cb98d3a

• ACTRA 2019 Annual Scientific Meeting 29-30 Aug 2019

Reproductive/Developmental Toxicology & Risk Assessment – Advances & Practice. Held at: Oaks on Market, in Melbourne.

Dr Paul Foster, recently retired Chief of Toxicology at the USA National Toxicology Program will be the Keynote Speaker.

A Draft Program is available for both the CE Day and ASM.

Fees: https://clems.eventsair.com/QuickEventWebsitePortal/actra-asm-2019/welcome/ExtraContent/ContentPage?page=3

From: https://clems.eventsair.com/QuickEventWebsitePortal/actra-asm-2019/welcome Non member: $790 (ASM&Dinner)

Via: https://actra.org.au/

• AIOH Vic Meeting: Occ. Hygiene & Newcrest Mining

Drew Duddy, Principal Advisor Occupational Hygiene, Newcrest Mining, shares some of her experiences and challenges whilst working as the Principle Occupational Hygienist for Newcrest Mining.

Tues 3 Sept, 5:30pm for 6pm start. At: Newcrest Mining, 600 St Kilda Rd, Melb Vic 3004. Cost: $15 Non-Members.

Click to register Questions to: Theresa.Walsh@rmit.edu.au

From: www.aioh.org.au/email/17bfc701-364b-41f9-b8b9-b9e951cbd4d5/f1c3af55-e42e-454b-a85c-c4fc0cb98d3a

• AIOH Seminars: Diesel Emissions, Mgmt, Control

Seminars: Perth 6 Sept; Sydney 16 Sept; Melbourne 17 Sept; Brisbane 18 Sept; possibly Townsville 19 Sept.

Covering practical & relevant information across key areas:

Occurrence of diesel emissions; Health effects of diesel emissions; Exposure Standards for emissions; Sampling & analytical methods; Control of diesel emissions exposure; The future for diesel emissions. *Non Members $522.50*

From: www.aioh.org.au/email/31b706ad-6451-4b22-80bf-6f5c49fdc405/f1c3af55-e42e-454b-a85c-c4fc0cb98d3a

• Fundamentals of Process Safety, Melbourne

Melbourne, 7-11 Sept 2019

For staff 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/7-11-october-2019-australia/ ***(Melbourne)***

• HAZOP Leaders & Team, 10-12 Sept 2019, Melb

Melbourne, 10–12 Sept 2019: This revamped integrated course provides effective, realistic training for HAZOP team members and leaders using examples drawn from a range of industry sectors.

As well as presentations covering all the essential aspects of the method, you will participate in workshops on HAZOP for continuing processes, sequential operations and computer-controlled plant. You will also learn more about the relationship between HAZOP and other hazard identification methods and hazard studies.

Cost: Non-Members $4040, IChemE Members $3515.

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

From: www.icheme.org/career/training/courses/hazop-study-for-team-leaders-and-team-members/10-12-september-2019-australia/

• Webinar: D.Goods Transport & Road Tunnels

Thurs 12 Sept 2019, 1pm-2pm AEST. Webinar for an overview of this Dangerous Goods in Tunnels study by the report author Bruce Dandie and project manager, Nigel Casey. **No charge, but registration essential.**

Register now! If you can't make the live session, **Register**, and a link to the recording will be sent.

From: https://austroads.com.au/latest-news/assessing-the-risks-of-transporting-dangerous-goods-in-tunnels

• AIDGC Aerosol Workshop 12 Sept 2019, Sydney

The Storage & Handling of Aerosols **Workshop** is at Ryde Eastwood Leagues Club, West Ryde is organised by the AIDGC. The Workshop details are from the AIDGC at: http://aidgc.org.au/news-events/. Cost $150 (non-members)

Registration (preferably by late Aug 2019)

• AIDGC D.Goods Conference, 13 Sept 2019, Sydney

The AIDGC Dangerous Goods **Conference**:
Modern Warehousing of Dangerous Goods in Mixed Classes, at PARKROYAL, Darling Harbour, Sydney. Details:

http://aidgc.org.au/news-events/ Cost $850 (non-members)

Registration (preferably by late Aug 2019)

• Chemeca 2019: 29 Sept - 2 Oct 2019, Sydney

Theme for 2019: **Engineering Megatrends & the Elements.**

"How will the significant challenges facing the world today, the emerging megatrends in engineering and our roots as a discipline in manipulating and combining the fundamental chemical elements drive the development of the next chemical engineering paradigm?" Technical Program (5stream,12p pdf)

Full non member Registration - $1519 (Welcome & Dinner)

Website: www.chemeca2019.org/

• DGAG Meeting, Port Melbourne, 9 Oct 2019, Melb

Dangerous Goods Advisory Group meeting, **Wed 9th Oct 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.

http://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, email me at: Jeff.Simpson@haztech.com.au.

• Hazards Australasia 2019, 13-14 Nov 19, Brisbane

Hazards Australasia 2019 will share best practice, latest developments and lessons learned in Process Safety, promoting a continuous focus on improving process safety performance. Non Member Cost $1470 (by 11 Oct 19).

Many Themes are relevant to managing chemicals safely.

Draft Technical Program (2 streams, 5 page pdf)

From: www.icheme.org/career/events/hazards-australasia/

• Laboratory Mgmt Conference, 11-13 Nov 2019

"Change Management in an Agile World"

For laboratory managers, laboratory designers and architects.

Rosehill Gardens, Sydney. Workshops 11th Nov $700. Conference (2d) $1100 with lunch & the networking function.

www.scienceindustry.com.au/index.php/news/almc2019/speakers

www.scienceindustry.com.au/index.php/news/almc2019/programme

Science Industry Australia. Ph: 61 3 9872 5111; email: AdminSIA@scienceindustry.com.au

From: www.labmanagers.org.au/ and

www.scienceindustry.com.au/index.php/news/almc2019

• LabCon 2019: 27-29 Nov 2019, Melbourne

A Conference specifically for Laboratory Technicians, organised by Laboratory Technicians' Association of Victoria.

Brochure: https://ltav.org.au/wp-content/uploads/2019/08/LABCON-Registration.pdf (16pages)

Manager: ph: 0419-805-362 Email: pcs@cogroup.com.au

Cost (non-member) incl. dinner $450
Friday Tour or Chemwatch Workshop (non-mem): $340

From: https://ltav.org.au/labcon/

• AIOH 2019 Conference, 30 Nov-4 Dec 2019, Perth

The Power of Many: Recalibrate-Resynergise-Rebrand.

The Conference Theme recognises: United we can harness our collective power to achieve better worker health outcomes.

Reg'n Brochure: www.aioh.org.au/static/uploads/files/aioh-2019-conference-registration-brochure170719-wfjnjgvubvbz.pdf (30p)

At the Crown, Perth. Continuing Education on Sat/Sun. Conference Mon-Wed. 3 Dinners. Cost: $1900 non-member. $2475 Late (from 1 Oct 19) non-member. Registration Link:

From: www.aioh.org.au/aioh2019/aioh-2019-conference

• IChemE Training – On-Line Courses

Editor: The on-line course examples below are available to purchase as on-demand recordings for the costs shown:

An Introduction to HAZOP 2 CPD Hrs £149 + VAT
An Introduction to LOPA 3 CPD Hrs £199 + VAT
Creativity for Chemical Engineers 4 CPD Hrs £235 + VAT
Confined Space Entry 3 CPD Hrs £199 + VAT
Dust Explosions 4 CPD Hrs £235 + VAT
Dust Explosion Risk Reduction 4 CPD Hrs £235 + VAT
Mentoring for Chemical Engineers 4 CPD Hrs £235 + VAT
Runaway Reactions 3 CPD Hrs £199 + VAT

Plus several other relevant on-line courses.:

From: www.icheme.org/career/training/online-courses/

Haztech Environmental: Chemical Hazard Classifications done & reviewed. SDSs prepared & reviewed. Labels prepared & reviewed. Chemical Management & Safety Regulatory Advice & 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 29 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.

Hazmat & Environment Notes" publication times are approx: end March, early June, mid Aug, mid Oct, and early Dec.
Renewals are notified with your last issue. The date of your last issue of your subscription will be given on the top right corner of the envelope label, e.g. Aug 20 or normally in the Subject of the Email in which you receive the Hazmat Notes pdf file.

Haztech Environmental | 18 Laurel St | TAX INVOICE
ABN: 27 630 291 348 | Ashburton, VIC 3147 | Date 12th August 2019

Description of Supply
Please start my subscription to Hazmat & Environment Notes from the next **Aug-Oct 2019 Newsletter**.

Subscription Costs for 5 bimonthly issues from **Sept 2019 to July 2020** are: **Circle the subscription type you want**

*** Please Note:** Due to the new AU complexities of extra charges when paid by Credit Card (CC), I have simplified to one amount & no charges.

EMAILED to Australian destinations (Emailed as an Adobe Acrobat pdf file)	- $100 (includes GST) (EFT, CC, Cheque)	+ Extra copy to the same group	+ $50 (includes GST)
POSTED to Australian destinations	- $112 (includes GST) (EFT, CC, Cheque)	+ Extra **posted** copy to the same group + Extra **emailed** copy to the same group	+ $56 (includes GST) + $50 (includes GST)

Note: The above prices include a 10% Australian Goods & Services Tax (GST) for the supply.

International destinations - $96 emailed (Credit Card), (or $108# using Int'l EFT & a SwiftCode) (with no AU GST added)
Each extra copy to the same group + $48 emailed (CC or Int'l EFT using a SwiftCode) (with no AU GST added)
 # International EFT cost assumes you are using a SwiftCode, where there is a Bankcharge of $12 taken from the Haztech Env'l account.

(A 2 year length of subscription can also be accepted.)
Enclosed is an EFT notification, credit card or cheque authorisation payable to "Haztech Environmental" for your subscription.

Total Price Including GST (GST only applicable in Australia) **Payment Sent $__ __ __.__ __**

Please keep a copy of this **tax invoice** for your records.

Name ..... Position .....

Company Name .....

Address ..... Post Code .....

Tel Nr ..... Mob Nr ..... Email 1 .....

Email 2 ..... Email 3 .....

Address to: Jeff Simpson, Haztech Environmental, 18 Laurel St, Ashburton VIC 3147, Australia 12/08/2019notes-prnt

Credit Card Authorisation:

Please debit my (circle one) VISA / MASTERCARD Account for: $ .....

Card Number: ..... Expiry Date: ...../.....

Cardholder's Name:

(as on card) .....

Signed: Date: .....

Electronic Funds Transfer or Cheque to: Haztech Environmental BSB 033106 Account 125988, Westpac, Ashburton Vic 3147

Date: Description:

Please email to advise your EFT to: Jeff.Simpson@haztech.com.au International EFT: use Westpac SWIFT code WPACAU2S