Hazmat & Environment Notes Aug - Oct 2022

Hazmat & Environment Notes are prepared & edited by Jeff Simpson **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

• The Lancet: Asbestos - Malignant Mesothelioma

30 Aug 2022: The Lancet Oncology: The Silent Malignant Mesothelioma Epidemic: A Call to Action.

Malignant Mesothelioma, recognised as a new disease in the 1950s, is almost exclusively caused by Asbestos exposure and usually diagnosed decades after first exposure. The disease was initially restricted to Asbestos workers, but diagnoses after non-occupational exposure continue to surge.

When Asbestos bans were introduced in Europe and Australia, their use surged in countries where traders suggested that Chrysotile Asbestos was safe. Representatives of ten countries continue to block a 15-year-old UN motion to label chrysotile asbestos as especially hazardous.

In this Essay, The Lancet Oncology re-examine how Asbestos has silently caused a global epidemic and summarise mesothelioma carcinogenesis, prevention, and novel treatments. The role of the pro-asbestos lobby will be exemplified.

(To read this article in full you will need to make a payment)

From: www.thelancet.com/journals/lanonc/article/PIIS1470-2045(22)00269-8/fulltext

Alerted by: VTHC OHS Team OHSUorganiser@vthc.org.au

• NSW Courts: Gas fitter Charged with Manslaughter over 2016 Death of a Newborn at Sydney Hospital

22 Aug 2022: A gas contractor (Christopher Turner) allegedly responsible for the death of a newborn at a Sydney Hospital has been charged with manslaughter.

Baby John Ghanem died at Bankstown Hospital on Wed, 13 July 2016 after he was mistakenly administered Nitrous Oxide – or laughing gas – instead of Oxygen.

At the time, former NSW Health Minister Jillian Skinner said an Oxygen machine in one of the hospital's theatres had been incorrectly installed and certified by gas supplier BOC Limited.

Police will allege in court Christopher Turner failed to adhere to Australian Standards when certifying Oxygen connections at the hospital before baby John's death.

The Case returns to court on 26 Oct 2022.

From: www.news.com.au/national/nsw-act/courts-law/man-charged-with-manslaughter-over-death-of-newborn-at-sydney-hospital/news-story/0abeb547588966e690b0cbf6f971c1f0

From: www.smh.com.au/national/nsw/gas-fitter-charged-over-2016-nitrous-oxide-death-of-newborn-at-sydney-hospital-20220822-p5bbsc.html

Alerted by AIDGC What's Happening August 2022

Background: www.safework.nsw.gov.au/news/safework-media-releases/sentence-imposed-in-case-involving-tragic-nitrous-oxide-mix-up (8 May 2020)

• Increasing Combustible Dust Hazard Awareness

Dust Safety Science (DSS) projects are currently underway?

- Combustible Dust Incident Database – Use this platform to search for combustible dust fire and explosion incidents relevant to your field or in your region
- Combustible Dust Newsletter – DSS send out weekly incident updates and the latest information going on in the community
- Semi-Annual Incident Reporting – Since 2016, DSS have published semi-annual reports analyzing the materials, industries and equipment involved in combustible dust fires and explosions around the world.
- Dust Safety Professionals Network – DSS have compiled a list of available prevention and protection providers.

Articles: https://dustsafetyscience.com/articles/

https://dustsafetyjournal.com/issue1/ (July 2022)

https://dustsafetyjournal.com/issue2/ (Sept 2022)

From: https://dustsafetyjournal.com/

From: https://dustsafetyscience.com/

Founded by Dr. Chris Cloney (PEng.), Managing Director and Lead Researcher at DustEx Research (see LinkedIn for Info): *https://ca.linkedin.com/company/dustex-research-limited*

Alerted by AIDGC What's Happening August 2022

• EPA NSW: Company Fined after Pond Surface Burns

11 Oct 2022: An intense fire that saw flames emerge from stormwater drains and burn across the top of a Moorebank Pond, NSW, has seen Sphere Healthcare ordered to pay $361000 in fines and investigation costs for polluting water and investigation costs, by the NSW Land and Environment Court.

A fire broke out at the Moorebank, NSW, facility before escalating when plastic drums filled with about 31500 litres of Ethanol, used to make hand sanitiser caught alight. The drums were stacked close to a drainage system, melted and spilled into stormwater drains that then flowed to Clinches Pond Public Reserve, where blue flames were seen burning on the surface of the pond.

Environment Protection Authority (EPA) Director Metro West, James Goodwin said: "Ideally drums containing flammable liquid should be kept in a special flammable goods store with an impervious barrier to stop any spills."

"As a result of not properly containing the liquids the water contamination saw a significant number of fish and eels killed."

"The consequences of not putting in any form of spillage containment led to a very serious water pollution event that was catastrophic for the nearby pond and a clear health and safety risk for all residents living nearby."

The event occurred in July 2020 and the Land and Environment Court noted it was foreseeable and avoidable. The judge noted that Sphere Healthcare stored the ethanol close to open drains and did not have equipment to block those drains in the event of an emergency.

Following the fire, the EPA NSW ordered Sphere Healthcare to clean up its facility and Clinches Pond. Close to 1,500,000 litres of contaminated water was removed from the lake as well as a large volume of dead fish and eels. Another 250,000 litres of contaminated water was removed from stormwater pits under the facility.

"The clean-up alone cost Sphere Healthcare $450,000 - when fines and investigation costs are added, the fire has seen expenses of around $800,000."

From: www.epa.nsw.gov.au/news/media-releases/2022/epamedia221011-moorebank-company-fined-$360000-after-pond-surface-burns

• ECHA: 4,4'-Methylenebis[2-Chloroaniline (MOCA)

5 Oct 2022: Call for evidence on ECHA's Report investigating whether to initiate a Restriction on 4,4'-Methylenebis[2-Chloroaniline] (MOCA) CAS: 101-14-4. Three applications for Authorisation were submitted to ECHA.

Incorporation of MOCA in articles have been largely phased out in the EU (unless uses exempted from Authorisation continue), mainly residual amounts of the substance present in articles produced in EU/EEA.

According to the applications for Authorisations, the reported MOCA residual concentration is well below 0.1% (w/w) in the final articles produced in EU/EEA, where adequate technical measures are in place. It is unknown to ECHA if those technical measures are in place outside EU/EEA. 19 types of articles are listed in the REST MOCA Screening Draft Report (see below).

Submissions for the presence of these substances in articles to fulfil obligations under the EU's Waste Framework Directive (SCIP database) indicate however that MOCA is contained in imported articles, likely in volumes of less than one tonne of the substances annually per importer.

ECHA is of the view that there are uses of the substance in articles that have the potential to lead to human exposure from MOCA concentrations in articles used in EU/EEA. Since MOCA is a non-threshold carcinogen for which no threshold can be determined below which exposure would be safe, ECHA's view is that there may be a need to prepare an Annex XV dossier for restriction.

REST MOCA Screening Draft Report (29 Sept 22, 22 page pdf)

The Deadline for providing Input: 16 Nov 2022

From: https://echa.europa.eu/calls-for-comments-and-evidence/-/substance-rev/71101/term

- **ECHA Weekly News 24 Aug – 19 Oct 2022**

24 Aug 2022: REACH 1/ Chromium VI Authorisation (Information Session 15 Feb 2022); **2/** Investigation on Polyvinyl Chloride (Commission's request to ECHA (3 page pdf).
CLP: 1/ Consultation on harmonised classification and labelling for Penconazole (ISO); **2/** occupational exposure limits for Nitrosamines. **3/** Discussions on nanomaterials via the European Union Observatory for Nanomaterials.

31 Aug 2022: REACH 1/ Committees' opinions on restricting Dechlorane Plus available; **2/** A Regulatory Needs Report is available for a group of brominated cycloalkanes, alcohols, phosphates, triazine triones, diphenyl ethers and diphenyl alkyls (flame retardant-related substances); **3/** New substance evaluation conclusion docs are now available for **1,3-dioxolane** (CAS 646-06-0) & **1,4-Benzenediamine, N,N'-mixed phenyl and tolyl derivatives (BENPAT)** (CAS 68953-84-4).

CLP: 1/ Eight intentions to harmonise classification and labelling have been received from Sweden for:

4-isopropylbenzaldehyde; **p-cymene**;

3-(p-cumenyl)propionaldehyde;

3-p-cumenyl-2-methylpropionaldehyde;

3-(4-tert-butylphenyl)propionaldehyde;

Methyl 4-tert-butylbenzoate;

4-tert-butylbenzaldehyde; **4-tert-butyltoluene**.

IT Tools: 654 new substances added to REACH Study Results since Sept 2021 from studies related to physical-chemical properties, environmental fate and pathways, and ecotoxicology and toxicological information. See IUCLID News & REACH Study Results.

7 Sept 2022: Nine Proposals to Identify New SVHCs:
4,4'-sulphonyldiphenol (bisphenol S; BPS); Perfluoroheptanoic acid and its salts; Melamine; Isobutyl 4-hydroxybenzoate; Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations there of; Barium diboron tetraoxide; Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine & 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine (FC-770) ; 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (tetrabromobisphenol-A; TBBPA); 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene].

REACH: Modified recommendations to registrants on how to cover mutagenicity information requirements. ECHA's Member State Committee agreed to modify the approach for investigating chromosomal aberration under REACH dossier evaluation during its June 2022 meeting.
Recommendations on mutagenicity | MSC June meeting

Biocides: EFSA and ECHA guidance on the impact of water treatment processes on active substance residues in drinking water or their metabolites in water abstracted for the production of drinking water.

14 Sept 2022: REACH: 1/ France has submitted an intention to restrict the placing on the market and reuse of treated articles with creosote or creosote-related substances. 2/ SEAC's draft opinion concerning ECHA's proposal to restrict the placing on the market and use of substances containing PAHs in clay targets for shooting. 3/ Report assessing the regulatory needs for a group of hydroxyacid amides (18 page pdf).

Nanomaterials: Nanopinion guest column - How nanomaterials can bypass the blood-brain barrier (BBB) and access the brain. "Technological developments of recent years have produced a different kind of nanoparticles, those intentionally made by us for specific applications, and whilst these particles may look like their natural counterparts to the BBB, they may act differently, thus exposing the brain to unanticipated activity. This could be both good and bad."

21 Sept 2022: ECHA Committee for Risk Assessment supports the proposal to restrict cancer causing polycyclic aromatic hydrocarbons (PAHs) in clay targets for shooting. Webpage.

REACH: Reports published assessing the regulatory needs for: (Tetrahydro)furan primary alcohol derivatives and their oxidation products; Molybdenum & its simple cpds; and Caesium cpds.

Proposal to restrict substances, mixtures & articles containing medium-chain chlorinated paraffins (MCCPs) as well as other substances containing chloroalkanes with carbon chain lengths ranging from C14 to C17 with PBT &/or vPvB properties.

CLP: Consultation on harmonised classification and labelling for: barium bis[2-chloro-5-[(2-hydroxy-1-naphthyl)azo]toluene-4-sulphonate]; C.I. Pigment Red 53:1; and fluoroethylene

EC: Draft Act that would introduce new Hazard Classes as part of its revision to the CLP Regulation. Draft Regulation & Annex. Covers Endocrine Disruption, PBT/vPvB & PMT/vPvM hazards. (See separate Note in the Chemical Management Section)

28 Sept 2022: QSAR Toolbox extension broadens possibilities for animal-free chemicals assessment, to predict chemical properties, including endocrine activity.

REACH: 1/ published reports assessing the regulatory needs for: Montan, carnauba and rice bran waxes and their derivatives; and Aralkylaldehydes. 2/ Call for evidence: skin sensitising substances in consumer mixtures consultation has been extended until 31 Oct 2022.

5 Oct 2022: ECHA's Sept 2022 Biocidal Products Committee (BPC) backs the approval of **sulphur dioxide generated from sulphur by combustion** as an active substance used for disinfection of wine barrels. The BPC also concluded that **iodine and polyvinylpyrrolidone (PVP) iodine** should, in principle, not be approved in the EU as they meet the criteria for endocrine disruption.

REACH: Collecting further information for a potential restriction proposal on: 4,4'-methylenebis[2-chloroaniline] (MOCA).

Assessment of Regulatory Needs Reports published for:
Nitroalkanes. The group consists of thirty-two substances in total. Five nitroalkanes are registered, of which four are linear or branched nitroalkanes with short carbon chain (C<4) with full (article 10) registrations and one is a branched dinitroalkane with an intermediate registration.

Unsubstituted and linear aliphatic-substituted cyclic ketones. The group consists of 68 substances, out of which 32 have a full registration within REACH, 20 are intermediates, 5 are NONS, 10 are not registered and for 1 the manufacture has ceased.

Many substances in the group are present in natural oils. Beyond the use in fragrances, some are used as intermediates in organic synthesis, fungicides, solvents. Cyclohexanone is the most important industrial cyclic ketone, used in making nylons.

Inorganic Bromide salts. The group consists of 5 well-defined inorganic substances. The substances hydrolyse and in contact with water or biological fluids will release the corresponding cations (sodium, potassium, calcium, ammonium, phosphorus) and the anion bromide.

Authorisations: Uses of chromium trioxide; uses of 4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated (4-tert-OPnEO) (1/ ; 2/)

Nanomaterials: new URL for the Nano Technology Knowledge Base (NanoData): http://euon.echa.europa.eu/nanodata.

12 Oct 2022: REACH: Two restriction reports for: **4,4'-isopropylidenediphenol (bisphenol A) & other bisphenols & bisphenol derivatives** with endocrine disrupting properties for the environment; AND market, re-use & secondary use of wood treated with **creosote or related substances**.

CLP: To harmonise classification and labelling: A proposal has been submitted for calcium tetraborate; An intention has been received for 2-pyrrolidone

EC: Draft Act that would introduce new hazard classes as part of its revision to the CLP Regulation. See **Note** in **Chem Mgmt.**

19 Oct 2022: Report Oct 2022 (30 page pdf): Market Volumes of Chemicals subject to Authorisation drop by 45% in a decade.

REACH: The ECHA Committees for Risk Assessment and Socio-Economic Analysis will take an extra three months to conclude their assessment of the proposed restriction on per- and polyfluoroalkyl substances (PFASs) in firefighting foams.

The EC had asked the ECHA Committee for Risk Assessment (RAC) for an opinion on the scientific relevance of Occupational Exposure Limits for Cobalt and inorganic Cobalt Compounds. This work is ongoing and RAC is expected to adopt its opinion by the end of 2022.

EC Authorisations have been granted for uses of: **trichloroethylene** & **4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated** (4-tert-OPnEO).

CLP: Harmonising Classification and Labelling:

Six intentions for:

4-isopropylbenzaldehyde; 3-(p-cumenyl)propionaldehyde; p-cymene; 3-p-cumenyl-2-methylpropionaldehyde; Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene; Reaction products of diphenylamine with nonene, branched; p-[(diiodomethyl)sulphonyl]toluene.

Three proposals have been submitted for:

3,6-dichloropyridine-2-carboxylic acid;

undecafluorohexanoic acid and its inorganic salts;

2-methyl-2H-isothiazol-3-one hydrochloride.

OELs: Please comment on the scientific report for occupational exposure limits on **1,2-dichloropropane** and **1,2,3-trichloropropane**. Comment by **19 Dec 2022**.

Nanomaterials: Nanopinion guest column from Dr Sesha Manuguri (website). *Intelligent Material Technologies for a Sustainable.* Future! How to use processes in nature to create smart materials that can dynamically change colours in response to environmental stimuli. Our strategy relied on bringing together diverse materials such as water-soluble polymers, gold nanoparticles and DNA molecules in a symbiotic manner to create materials that are responsive to mechanical and light stimuli.

From: https://echa.europa.eu/news-and-events/e-news-archive

• HSE UK: Press Releases about Chemical Issues

19 Oct 2022: Freight Containers – Potential Worker Exposure.

Workers who open or enter the containers could be exposed to dangerously low Oxygen levels or to hazardous substances in the air which have built up as a result of limited ventilation while they are sealed.

To learn more about the potential risks to workers in their work with freight containers, the Health and Safety Executive (HSE) carried out research which involved visits to six ports and two distribution centres by HSE scientists.

Full Research Report RR1178. See separate Note below.

From: https://press.hse.gov.uk/2022/10/19/freight-containers-potential-worker-exposure/

6 Oct 2022: Chemicals Company Fined after Releasing Cloud of Chlorine Gas into a Factory on 12 June 2019.

On 12 June 2019, Wiltshire company GEA Farm Technologies (UK) Ltd mistakenly mixed an Intermediate Bulk Container (IBC) containing approximately 700 kg of concentrated sulphuric acid into a mixing vessel which already contained 1,600 litres of sodium hypochlorite solution.

The chemicals reacted releasing a large cloud of toxic chlorine gas, which CCTV footage showed as it permeated the factory and surrounding area. There was no clear evacuation plan for workers caught on-site, with several taken to hospital with breathing difficulties – fortunately no one suffered long-term effects.

An HSE UK investigation found the incident happened because a dedicated mixing plant had not been brought back into service after maintenance work, and the company had failed to introduce effective records management for the temporary manual system.

From: https://press.hse.gov.uk/2022/10/06/chemicals-company-fined-after-releasing-cloud-of-chlorine-gas-into-factory/

• HSE UK RR1178: Freight Containers Haz Atmospheres

2022: Freight Containers: potential worker exposure to Hazardous Atmospheres at ports and distribution centres.

Workers at ports and distribution centres in Great Britain (GB) routinely open and enter freight containers. Freight containers are confined spaces: they have limited or no ventilation in transit and hazardous atmospheres can build up inside.

Some hazardous atmospheres have the potential to harm workers if breathed in. For example, they may contain toxic substances such as Fumigants and Carbon Monoxide, or have dangerously low Oxygen levels. Potential harm includes asphyxiation and ill health.

This Report describes research into the potential for workers to be exposed, and control measures in use in GB. The research included a review of scientific literature, and observations and measurements made in 2017 to 2019 at volunteer sites - six ports and two distribution centres.

Measurements of the atmospheres inside freight containers at the volunteer sites found a wide range of toxic substances and low oxygen levels. The researchers identified a range of good practice control measures at the six ports.

Examples of good practice are training workers about the risks, and workers testing for hazardous substances in the atmosphere inside freight containers before entering them.

Report: *www.hse.gov.uk/research/rrpdf/rr1178.pdf (82 page)*

From: www.hse.gov.uk/research/rrhtm/rr1178.htm

• HSE UK RR1184: Electrolytic Nickel Plating Exposure

2022: Evaluation of Exposure Controls used In Electrolytic Nickel Plating in Great Britain.

3000 workers are estimated to be employed at around 450 companies in the Great Britain Surface Treatment industry who are potentially exposed to a range of carcinogens, asthmagens and skin sensitisers including Nickel (Ni) compounds.

A range of measures can be used to reduce airborne emissions from electroplating tanks and these are also likely to affect the dermal and ingestion exposure potential.

These measures vary in efficacy, cost, complexity, and ease of use. There is no clear guidance for the industry on the most appropriate and cost effective techniques.

This Report describes an evaluation of six engineering control measures that can potentially reduce exposure to Nickel compounds at Nickel plating plants. The evaluation considered airborne emissions of soluble Nickel compounds and surface contamination of the front lip of the plating tank. The research used laboratory tests on a commercially available small scale plating plant. Control measures are identified. The research found that the most effective engineering control was to use Eductors or add LEV to an air agitated tank.

Report: www.hse.gov.uk/research/rrpdf/rr1184.pdf (57 page)

From: www.hse.gov.uk/research/rrhtm/rr1184.htm

• HSE UK RR1185: Fireball Models & Data – Lit Review

2022: Fireball Mathematical Models and Experimental Data: A Literature Review.

Major accident hazard pipelines and sites, such as refineries and chemical plant, have the potential to harm people in the vicinity in the event of an unplanned release of dangerous substances. Dutyholders must implement effective control measures to prevent unplanned releases. Land-use planning law is an important extra precaution to limit the potential risk to the public.

HSE UK's advice is aimed at mitigating the effects of potential major accidents on the population in the vicinity of pipelines and sites. This advice is informed by the use of mathematical models of potential hazards. HSE UK has an ongoing research programme to assess the suitability of models used.

One of the potential hazards considered is a fireball that produces intense thermal radiation. A fireball occurs when there is immediate ignition of a release of flammable material in the event of a vessel or pipeline failure.

Model findings are being used as part of the assessment of whether the fireball models HSE UK currently uses are fit-for-purpose or whether changes would be beneficial.

Report: www.hse.gov.uk/research/rrpdf/rr1185.pdf (36 page)

From: www.hse.gov.uk/research/rrhtm/rr1185.htm

• NTP USA: Update Newsletter – Sept 22 & Oct 22

Sept 2022:

NICEATM releases ICE 3.7 of the Integrated Chemical Environment (ICE)

NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) e.g. Recent NICEATM and ICCVAM publications.

NIEHS influences national efforts to understand, solve PFAS problems e.g. Identify health effects, innovate cleanup technologies.

Making connections to reduce animal use in chemical safety testing

Oct 2022:

NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) e.g. ICCVAM 2020-2021 Biennial Report now available.

Introducing the NIEHS Division of Translational Toxicology. Formerly called the Division of the National Toxicology Program, the organization aims to improve the translational relevance of toxicology research.

Big questions on reducing animal testing tackled by panel with considered approaches to measuring progress and building confidence in new chemical safety testing methods.

From: https://ntp.niehs.nih.gov/update/2022/index.html

• IARC: Trichloroethane & four other Industrial Chemicals

16 Aug 2022: The International Agency for Research on Cancer (IARC) announced Vol. 130 of the IARC Monographs, 1,1,1-Trichloroethane and four other industrial chemicals.

Three of these agents (1,2-Diphenylhydrazine; Diphenylamine; and Isophorone) were evaluated by the Working Group for the first time. 1,1,1-Trichloroethane since the 1990s has been used mostly as a chemical feedstock in closed systems and for essential purposes, e.g. medical devices and aviation safety.

Diphenylamine, N-Methylolacrylamide, and Isophorone are chemicals with a high production volume that have diverse uses in industry, including as intermediates. 1,2-Diphenylhydrazine was primarily used as an intermediate in the manufacture of benzidine dyes, which has ceased in the USA and the EU.

The Working Group concluded that 1,2-Diphenylhydrazine, Diphenylamine, N-Methylolacrylamide, and Isophorone are possibly carcinogenic to humans (Group 2B) mainly on the basis of sufficient evidence for cancer in experimental animals. 1,1,1-Trichloroethane was evaluated as probably carcinogenic to humans (Group 2A) on the basis of limited evidence for cancer in humans (positive associations were seen for multiple myeloma) and sufficient evidence for cancer in experimental animals. For all agents, there was limited mechanistic evidence.

Volume 130 IARC webpage Free Download (381 page pdf)

From: www.iarc.who.int/news-events/iarc-monographs-volume-130-111-trichloroethane-and-four-other-industrial-chemicals/

From: https://publications.iarc.fr/611

• Canadian Chemicals Management Plan Website

Screening Assessments & Evaluations (some entries)

August 2022

The *Final Screening Assessment for Silver and its Compounds* was published. [2022-08-27]

The consultation on proposed regulations for polycyclic aromatic hydrocarbons (PAHs) in sealant products was published for a public consultation period, ending on October 22, 2022. [2022-08-24]

Summaries of the public comments received on the Federal Environmental Quality Guidelines for Siloxane-D4, Selenium, and Aluminium were published. [2022-08-19]

September 2022

The *Final Screening Assessment for Protein Derivatives and Yeast Extract Group* was published. [2022-10-01]

The proposed order adding phenol, 2-(1-methylpropyl)-4,6-dinitro- to Schedule 1 to the *Canadian Environmental Protection Act, 1999* was published for a 60-day public comment period ending on November 30, 2022. [2022-10-01]

The proposed order adding Solvent Violet 13 to Schedule 1 to the *Canadian Environmental Protection Act, 1999* was

published for a 60-day public comment period ending on November 30, 2022. [2022-10-01]

October 2022

The performance measurement evaluation for Dichloromethane (DCM) / Methylene Chloride was published. [2022-10-12]

The *Draft Screening Assessment for the Aldehydes Group* was published for a 60-day public comment period ending on December 7, 2022. [2022-10-08]

The proposed order adding TMTD (Thiocarbamates Group) to Schedule 1 of the Canadian Environmental Protection Act, 1999 was published for a 60-day public comment period ending on December 7, 2022. [2022-10-08]

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

Chemical Management

• CLP re: Endocrine Disruption, PBT/vPvB, PMT/vPvM

20 Sept 2022: EC: Draft Act that would introduce new Hazard Classes as part of its revision to the European Commission (EC) CLP Regulation. Draft Regulation & Draft Annex.
Covers Endocrine Disruption, PBT/vPvB & PMT/vPvM hazards.

Draft Delegated Regulation - Ares(2022) 6485391 (10 page pdf)

Draft Annex - Ares(2022) 6485391 (30 page pdf)

The need to insert new hazard classes and their criteria into the CLP Regulation for its adaptation to technical and scientific progress has been recognised by its inclusion as one of the primary commitments under the chemicals strategy for sustainability, which is a building block of the European Green Deal, for the protection of consumers, vulnerable groups and workers from the most harmful chemicals and for the target of zero chemical pollution in the environment.

Substances of very high concern due to their endocrine disrupting properties highlight the need to introduce new hazard classes to ensure a high level of protection for human health and the environment.

Similar experience in the identification of substances with persistent, bioaccumulative and toxic properties (PBT) and very persistent, very bioaccumulative properties (vPvB) has triggered the same need to introduce new hazard classes.

Substances having probable serious effects on the environment due to their persistent, mobile and toxic (PMT) and very persistent, very mobile (vPvM) properties also require the introduction of the respective hazard classes.

Business entities and associations were mostly not in favour of introducing new hazard classes. Those stakeholders argued that such introduction would lead to potential information overload in hazard communication, distort the level playing field of international trade, and lead to cost increases for various activities. Those stakeholders also expressed their concerns about potential overlaps of the new hazard classes with existing ones for classification and labelling, together with the concern that Regulation (EC) No 1272/2008 is not the proper means for addressing endocrine disrupting properties, which refer to a mode of action rather than a hazard. Counterarguments put forward highlighted that in fact endocrine disruptors affect various organisms in very different ways; endocrine disruption should therefore be considered as an intrinsic (hazardous) property and hence qualifies as a hazard.

Other commentators pointed to the fact that properties such as persistency and mobility are not necessarily related to hazards, i.e., they do not automatically mean that a chemical is hazardous. Some written responses from CARACAL (Competent Authorities for REACH & CLP) members, however, highlighted that the combination of specific properties, e.g., very persistent and very mobile or persistent, mobile and toxic, pose a threat to drinking water sources. Such combinations of properties increase the chances of chemicals passing through natural and artificial barriers in wastewater treatment facilities.

From the Draft Annex:

Label elements of endocrine disrupting properties for human health: Category 1, Danger, EUH380: May cause endocrine disruption in humans. Category 2, Warning, EUH381: Suspected of causing endocrine disruption in humans.

Label elements of endocrine disrupting properties for the environment: Category 1, Danger, EUH430: May cause endocrine disruption in the environment. Category 2, Warning, EUH431: Suspected of causing endocrine disruption in the environment.

Label elements for PBT and vPvB properties: PBT, Danger, EUH440: Accumulates in living organisms including in humans with long- lasting effects. vPvB, Danger, EUH441: Strongly accumulates in living organisms including in humans with possible long- lasting effects.

Label elements for PMT and vPvM properties: PMT, Danger, EUH450: Persistent substance which can pollute water resources. vPvM, Danger, EUH451: Very persistent substance which can pollute water resources.

From: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13578-Hazardous-chemicals-updated-rules-on-classification-labelling-and-packaging_en (has download links)

• EPA USA: Proposed Regs Protect from Chemical Accidents

19 Aug 2022: Proposed Rule Aims to Enhance Chemical Safety Provisions and Help Protect the USA Nation's Most Vulnerable Communities, especially those living near facilities with high accident rates, and advance environmental justice for communities that have been disproportionately impacted by these facilities.

The proposed "Safer Communities by Chemical Accident Prevention Rule," would strengthen the existing program and includes new safeguards that have not been addressed in prior Risk Management Program (RMP) rules, such as enhanced employee participation and transparency for communities on Safety Decisions.

Highlights of the proposed rule include: **a/** Providing greater protections for communities living near RMP facilities, many of which are underserved and overburdened by pollution.
b/ Emphasizing the requirement for regulated facilities to evaluate risks of natural hazards and climate change, including any associated loss of power. **c/** Promoting environmental justice through increased availability of information for fenceline communities in their requested language. **d/** Requiring safer technologies and alternatives analysis for certain facilities with high accident rates. **e/** Advancing greater employee participation and opportunity for decision-making in facility accident prevention requirements. **f/** Requiring third party audits for facilities with a bad track record of accidents. **g/** Enhancing facility planning and preparedness efforts.

Webpage for more information on the EPA USA RMP Safer Communities by Chemical Accident Prevention Proposed Rule.

From: www.epa.gov/newsreleases/epa-proposes-stronger-regulations-protect-communities-chemical-accidents

• EPA USA: Safer Chemical Ingredients List Updated

11 Aug 2022: The Safer Chemical Ingredients List (SCIL) is a list of chemical ingredients, arranged by functional-use class, that the Safer Choice Program has evaluated and determined to

be safer than traditional chemical ingredients. This list is designed to help manufacturers find safer chemical alternatives that meet the criteria of the Safer Choice Program.

In support of the Biden-Harris USA Administration's goals, the addition of chemicals to the SCIL enables further innovation in safer chemistry, which can promote environmental justice, bolster resilience to the impacts of climate change, and improve water quality. EPA USA is committed to updating the SCIL with safer chemicals on a regular basis.

The Safer Choice Standard and the Criteria for Safer Chemical Ingredients are protective and address a broad range of potential toxicological effects, including:

a/ carcinogens, mutagens, reproductive or developmental toxicants; b/ persistent, bioaccumulative and toxic chemicals; c/ systemic or internal organ toxicants; d/ asthmagens; e/ sensitizers; and f/ chemicals on authoritative lists of chemicals of concern.

Functional Use Class:

Antimicrobial Actives	Chelating Agents
Colorants	Defoamers
Emollients	Enzymes and Enzyme Stabilizers
Fragrances	Oxidants and Oxidant Stabilizers
Polymers	Preservatives and Antioxidants
Processing Aids and Additives	Skin Conditioning Agents
Solvents	Specialized Industrial Chemicals
Surfactants	Uncategorized

A downloadable spreadsheet of the

Safer Chemical Ingredients List (xls)

For the 11 Aug 2022 update to SCIL see the "Updates" tab in the Excel spreadsheet for recently added / updated chemicals.

27 chemicals added in 2022; 38 chemicals added in 2021.

From: www.epa.gov/chemicals-under-tsca/epa-updates-safer-chemical-ingredients-list

From: https://www.epa.gov/saferchoice/safer-ingredients

• WorkSafe Qld: Construction Sites Chemical Storage

27 July 2022: Safe Storage of Chemicals at Construction Sites.

A spate of near misses where aerosols stored in toolboxes have become projectiles has highlighted the issue of storing hazardous chemicals safely on construction sites.

Although storing a few hazardous chemicals (aerosols) in small containers (toolboxes) is convenient, the toolbox design may not meet the required storage conditions for these chemicals. Toolboxes protect tools from dust, moisture and humidity, but they lack appropriate ventilation (air flow) and offer no protection against damage from other tools.

The webpage includes: Tips for storing aerosols and flammable products such as spray paint, small plumbers gas torches and plumbers' glue.

From: www.worksafe.qld.gov.au/news-and-events/newsletters/esafe-newsletters/esafe-editions/esafe-construction/july-2022/safe-storage-of-chemicals-at-construction-sites

• Qld: New Workplace Coal Dust Standard

30 Sept 2022: From 1 Oct 2022, the Workplace Exposure Standard for respirable coal dust) is halved in Queensland, revised from a time weighted average of 3 milligrams per cubic metre (mg/m^3) down to 1.5 mg/m^3.

Respirable coal dust can be generated and made airborne during a number of work processes using coal, such as:

a/ breaking, crushing or milling of coal; **b/** coal combustion processes; **c/** handling and transport of coal and coal fly ash; **d/** storage/stockpiling of coal; e/ shutdown maintenance activities **e/** housekeeping & cleaning of workplaces where coal is used.

From: www.worksafe.qld.gov.au/news-and-events/news/2022/new-workplace-coal-dust-standard-commences-in-queensland

• SWA: Respirable Coal Dust WES Lowered

4 Oct 2022: Safe Work Australia (SWA) has reduced the Workplace Exposure Standard (*WES*) for respirable coal dust (containing <5% quartz) from 3 mg/m^3 to 1.5 mg/m^3.

Editor: The list of SWA Workplace Exposure Standards for airborne contaminants has been redated to (1 Oct 2022) for this one WES change. (42 page pdf | docx)

From: www.safeworkaustralia.gov.au/media-centre/news/changes-workplace-exposure-standard-respirable-coal-dust

• Worksafe Qld: Hydrogen - Working Safely

29 Aug 2022: Working Safely in a Growing Industry.

Hydrogen is a clean, renewable fuel that can be used for transport, as a power supply, and in a range of industrial processes. It has four types:

1/ Green Hydrogen – produced by the electrolysis of water powered by zero-carbon electricity (e.g. wind and solar)

2/ Blue Hydrogen – produced from fossil fuels and using Carbon Capture and Storage

3/ Grey Hydrogen – typically produced from natural gas using Steam Methane reformation

4/ Brown Hydrogen – produced from the gasification of coal.

Hydrogen is used as fuel, as a form of renewable energy storage, in margarine production, in Methanol and Hydrogen Chloride production, and in metal production. The Sector is growing rapidly & is a key part of Qld's renewable energy future.

The Queensland Hydrogen Industry Strategy (Hydrogen industry development | State Development, Infrastructure, Local Government and Planning) outlines the Qld Govt's plan to support innovation and investment. There are over 100 current and proposed Hydrogen projects in Queensland and the technology is evolving rapidly.

Also covered in the webpage:
Hydrogen and Major Hazard Facilities
Hydrogen and Manifest Quantity Workplaces
Hydrogen and Non-Workplaces
Hydrogen and Hazardous Areas
Hydrogen as a Fuel Gas

20 July 2022: Qld Govt released the 2022-2032 Qld Hydrogen Industry Workforce Development Roadmap (27 page PDF)

From: www.worksafe.qld.gov.au/news-and-events/newsletters/esafe-newsletters/esafe-editions/esafe/august-2022/hydrogen-working-safely-in-a-growing-industry

• Industrial Chemicals Environmental Mgmt Standard Information Sort on Stockholm Convention POPs

Aug-Oct 2022: The Federal Department of Climate Change, Energy, the Environment & Water (DCCEEW) is seeking information on chemicals listed on the Stockholm Convention on Persistent Organic Pollutants (POPs). Input will inform the development of scheduling decisions for managing these chemicals under the Industrial Chemicals & Environmental Management Standard (IChEMS).

Public consultation on the on Hexabromobenzene, Hexachlorobutadiene, Pentachlorobenzene and Polychlorinated Naphthalenes was 19 Aug 2022 to 19 Sept 2022.

A second round of consultation is planned for Oct 2022 for Per- and Polyfluoroalkyl substances (PFAS) listed on the Stockholm Convention: PFOS, PFHxS and PFOA related substances.

From: www.dcceew.gov.au/environment/protection/chemicals-management/national-standard

Also: https://haveyoursay.agriculture.gov.au/call-for-information-on-chemicals (HBB, HCBD, PeCB & PCN closed consultation)

• DAFF: National Environmental Mgmt Plan on PFAS

23 Sept 2022: The Heads of EPAs of Australia and New Zealand (HEPA) have released the draft per- and poly-fluoroalkyl substances National Environmental Management Plan (PFAS NEMP) version 3.0 for public consultation. This version 3.0 contains important new Guidance and Standards, which builds on version 2.0 published in 2020.

The HEPA want to make sure it meets the needs of the Australian and New Zealand environment, and communities, by continuing to provide useful, nationally consistent guidance and standards on PFAS contamination. Please note that feedback is sought on areas of text that are new and highlighted "with a light brown background", and *Not* the existing "non-highlighted" text from NEMP 2.0.

DraftConsultation Documents: https://haveyoursay.agriculture.gov.au/nemp-on-pfas/widgets/385062/documents

Consultation Draft PFAS NEMP 3.0 (206 page docx | pdf)

There are **5 Draft Supporting Documents** for PFAS NEMP 3.0

Biosolids (29 page pdf | docx)

Soil Health Investigation Levels (23 page pdf | docx)

Derivation of Ecological Guidelines for indirect and direct exposure to Perfluorooctanoic Acid (34 page pdf | docx)

Indirect Ecological Guidelines for Perfluorooctane Sulfonate (PFOS) (23 page pdf | docx)

PFOA direct Ecological Soil Guideline Value for reptiles (9 page pdf | docx)

The new Guidance focuses on 6 Priority Areas: (see website).

Before you comment, please read the Draft PFAS NEMP 3.0

Submissions close at 4pm AEDT 20 Dec 2022.

From: https://haveyoursay.agriculture.gov.au/nemp-on-pfas

• Vic: Fiskville Firefighters Redress Scheme

26 Aug 2022: People exposed to harmful levels of toxic substances at the former Victorian Country Fire Authority (CFA) training college in Fiskville will have access to financial support, with the Victorian Government to provide a redress scheme.

People who worked or trained at Fiskville, lived at or in the vicinity of the Facility or attended the Fiskville State School impacted by activities at the former Fiskville Training College site 1971 to 2015, will be among those encouraged to apply.

Consideration and advice will be given to the extent of exposure and the seriousness of illness associated with the kinds of exposure experienced. The scheme will provide mental health and medical support to participants. It will also include non-financial support such as case management and counselling.

The Fiskville Redress Scheme opened on Monday 5 Sept 2022. People can register their interest or find out more at: *www.vic.gov.au/redress-fiskville*

Email: Fiskville.Info@justice.vic.gov.au

From: www.premier.vic.gov.au/redress-scheme-fiskville-firefighters-open

Also see:

ABC News 26 Aug 2022; 27 Aug 2022 & 6 Sept 2022

www.abc.net.au/news/2022-08-26/victorian-fiskville-firefighters-pfas-redress-scheme/101374872

www.abc.net.au/news/2022-08-27/fiskville-firefighters-to-be-compensated-over-chemical-expsoure/14034600

www.abc.net.au/news/2022-08-27/fiskville-firefighters-to-be-compensated-over-chemical-expsoure/14034600

• WorkSafe NZ: Haz Substances Newsletter Oct 2022

11 Oct 2022 Updates in this edition include:

– new hazardous substances separation distances calc'n tool The calculation tool
(*Editor*: there is a Zip file that I am not prepared to unzip!)

– updated Guidance (web page) on preventing harm from Hydrogen Sulphide

– new Workplace Exposure Standards (WES) and Biological Exposure Indices (BEI) substance search tool (web page)

– carcinogens and airborne risks roadshows (10&15 Nov 2022)

– approved safe work instruments for the fumigant Ethanedinitrile (EDN) (webpage). EDN is a potential replacement for many current uses of Methyl Bromide and has been approved as a fumigant for export logs and timber.

– our newly established Compliance Certifier Reference Group. The inaugural meeting of the Group was held in July 2022, with future meetings to be held quarterly

– new learning pathway for compliance certifiers. The latest part of the learning, which launched in Sept 2022, is three specialist online eLearning modules (webpage).

Full Newsletter (Web Version) (about 5 pages)

From: www.worksafe.govt.nz/about-us/news-and-media/hazardous-substances-newsletter-october-2022/

• EPA NZ: Hazardous Substances Update: Aug/Sept

Aug 2022 Hazardous Substances Update:

Update on reassessment to extend the approvals of Diazinon, Fenamiphos and Methamidophos

11 Oct 2022 (update): Approvals for substances containing fenamiphos or methamidophos expire: 1 July 2024. The existing expiry date for diazinon approvals remains in place: 1 July 2028.

After these expiry dates, these substances will no longer be able to be imported or manufactured in New Zealand.

Sept 2022 Hazardous Substances Update:

Public and industry views on Hydrogen Cyanamide (used in the kiwi industry) Reassessment published. Submitters raised concerns including water contamination, the effects on animals, and on people working with the chemical and people living near where it is sprayed. Submissions in support of its use, include a view that Hydrogen Cyanamide is the only cost-effective option available.

Hydrogen Cyanamide Submissions Summary Report (Sept 2022, 46 page pdf)

Fluazinam call for information on how Fluazinam, a fungicide used mainly on grapes and potatoes, is used in Aotearoa New Zealand. Submissions close 14 Nov 2022.

Grounds for Reassessment of Fluazinam (Dec 2021, 5page pdf)

Aquatic Herbicides to be Reassessed: Diquat Dibromide; Metsulfuron-Methyl; Haloxyfop-R-Methyl;

Imazapyr Isopropylamine; Triclopyr Triethylamine.

The decision is based on significant new information about the effects of these substances. Call for info about product use.

Guidance for Agrichemical Containment Applications: Provides clearer direction to applicants, streamline the process, and has a standard set of controls. A Containment Approval is for a specific purpose, such as the use of a chemical as a test standard or field trials of an agrichemical. The key condition is that the substance will be contained adequately.

Tebuconazole & Propiconazole Fungicides is Re-assessed: To update their hazard classifications. Both substances are used as timber treatments, and as pesticides across a range of cereals, food crops and ornamental plants.

Subscribe to EPA NZ Haz Subs (HS) Update

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

• WorkSafe NZ: Hazardous Substances Newsletter - Oct

11 Oct 2022: Updates in the Oct 2022 Edition include:

a/ New hazardous substances separation distances calculation tool; **b/** Updated guidance on preventing harm from Hydrogen Sulphide; **c/** New Workplace Exposure Standards (WES) and Biological Exposure indices (BEI) substance Search Tool; **d/** Carcinogens and airborne risks roadshows; **e/** Approved safe work instruments for the fumigant Ethanedinitrile (EDN); **f/** Newly established Compliance Certifier Reference Group; and **g/** New learning pathway for Compliance Certifiers.

Oct 2022 Newsletter (web version)

From: www.worksafe.govt.nz/about-us/news-and-media/hazardous-substances-newsletter-october-2022/

• Product Safety AU: Lithium-Ion Batteries

13 Oct 2022: Lithium-Ion batteries have caused fires and explosions leading to property damage, serious injuries and even death in Australia and across the globe.

If a lithium-ion battery is improperly manufactured, handled, stored or disposed of, they can set fire or explode.

Products that may contain Lithium-Ion batteries include:
a/ e-bikes and e-scooters; **b/** power tools **c/** camping and gardening equipment; **d/** electronic devices such as mobile phones, laptops and smart wearables.

Lithium-Ion batteries are considered more volatile than traditional batteries due to their chemical makeup.

The risk of a Lithium-Ion battery setting fire or exploding increases if the battery isn't made properly or damaged. E.g.
a/ if the chemical makeup of the battery is contaminated
b/ if there are flaws in the physical components of the battery.

A lithium-ion battery is more likely to set on fire or explode if you:
a/ overcharge the battery; **b/** expose the battery to elevated temperatures; **c/** expose the battery to moisture; d/ store batteries close to each other.

Improper Disposal increases risks: e.g. in a way that allows puncture by heavy machinery, e.g. at garbage processing plants

Increase the safety of Lithium-Ion batteries by:
a/ buying Lithium-Ion batteries from reputable suppliers;
b/ charging and storing Lithium-Ion batteries properly;
c/ disposing of Lithium-Ion batteries appropriately.

Then Product Safety have a Do... & Don't… List.

Editor: e.g. **a/** Charge Lithium-Ion batteries on a non-flammable surface such as concrete, ceramic, and steel, away from flammable material; **b/** Allow the Lithium-Ion battery to cool after use before charging; **c/** Turn chargers off once the Lithium-Ion battery is fully charged

From: www.productsafety.gov.au/products/electronics-technology/lithium-ion-batteries

• SafeWork SA: Lead Notification Electronic Reporting

17 Oct 2022: There are two regulatory notifications to SafeWork SA in relation to Lead Risk Work:
1/ Notification of Lead Risk Work;
2/ Notification of Removal of a Worker from Lead Risk Work.

Previously, both notifications were made via email submission of the relevant completed PDF form.

From 17 Oct 2022, the pdf notification forms are no longer available on the SafeWork SA website and notification requirements will be made via submission of a completed electronic form, directly through the SafeWork SA website.

From:www.safework.sa.gov.au/news-and-alerts/news/news/2022/change-to-lead-risk-notifications

Also See the SafeWork SA Lead Risk Work webpage for info.

• AU: DSIR Action Plan for Critical Technologies

Aug 2022: AU Govt Dept of Industry, Sciences and Resources: (DSIR) Action Plan for Critical Technologies.

List of Critical Technologies in the National Interest *(19p pdf)*

The List is intended to serve as a summary of identified critical technologies that stakeholders should be aware of when undertaking their activities.

Stakeholders were provided with the opportunity to provide feedback on the inaugural List from 22 Aug to 7 Oct 2022.

https://consult.industry.gov.au/critical-technologies-2022

Critical Technology Profiles (58 page pdf) Which is a Slide Presentation and needs a large screen 24"+ screen to be read!

For information contact *TechFutures@dst.defence.gov.au*.

From: www.industry.gov.au/publications/action-plan-critical-technologies/list-critical-technologies-national-interest

***Editor*:** I found relevant Technologies to Chemical Management in this AU Action Plan. **For example:** Additive manufacturing (incl. 3D printing); Advanced Composite Materials; Advanced explosives and energetic materials; Advanced magnets and superconductors; Advanced protection; Continuous flow chemical synthesis; Coatings; Critical minerals extraction and processing; Nanoscale materials and manufacturing; Novel metamaterials; Smart materials; Biological manufacturing; Biomaterials; Nanobiotechnology; Biofuels; Electric batteries; Hydrogen and ammonia for power; Nuclear energy; Nuclear waste management and recycling; Supercapacitors.

• CSB: 2019 PES Fire and Explosion in Philadelphia Final Investigative Report Released 11 Oct 2022

11 Oct 2022: The USA Chemical Safety and Hazard Investigation Board (CSB) released its final investigative report (nn page pdf) into a massive fire and explosions at the Philadelphia Energy Solutions (PES) Refinery in Philadelphia, Pennsylvania, USA, that occurred in June 2019.

The incident occurred when a corroded pipe elbow ruptured, releasing process fluid into the refinery's Hydrofluoric Acid (HF) Alkylation Unit. During the incident, over 5,000 pounds of highly toxic Hydrofluoric Acid (HF) were released, a 38,000-pound vessel fragment launched off-site and landed on the other side of the Schuylkill River, and an estimated property damage loss of USA$750 million resulted.

Technologies are being developed that could be safer alternatives to HF Alkylation, and refiners should periodically evaluate these available Alkylation technologies.

Initiate prioritization under the USA Toxic Substances Control Act (TSCA) to evaluate whether Hydrofluoric Acid is a high priority substance for risk evaluation, and if it is, conduct a USA TSCA risk evaluation of HF and implement any identified risk mitigation requirements.

From: www.csb.gov/csb-releases-final-report-into-2019-pes-fire-and-explosion-in-philadelphia/

• CSB: 2016 Sunoco Oil Terminal Texas, Fire & Explosion Final Investigative Report Released 28 Sept 2022

28 Sept 2022: The USA Chemical Safety and Hazard Investigation Board (CSB) released its final investigative report (27 Sept 2022, 40 page pdf) on the 2016 flash fire and explosion at the Sunoco Nederland, Texas crude oil terminal, which resulted in burn injuries to seven workers.

The CSB's investigation identified deficiencies in the company's hot work policies and procedures as well as the contractors hired to execute the work.

The CSB identified three key lessons for industry:

- Proper isolation of equipment utilizing USA OSHA regulatory requirement & National Fire Protection Association's guidance

- Thorough identification and assessment of the locations of all flammables and combustibles in hot work

- A reference to the CSB's 2010 Hot Work bulletin with advises several methods for preventing hot work incidents including using alternative methods, analysing and controlling the hazards, as well as conducting effective monitoring and testing the general area for potential flammable conditions.

From: www.csb.gov/csb-releases-final-investigation-report-on-2016-sunoco-oil-terminal-fire-and-explosion-in-texas/

• CSB: Updates on 4 Chemical Incidents Investigations

3 Oct 2022: The 4 investigations addressed by the updates are:

- **Fatal Propylene Release and Explosion at Watson Grinding and Manufacturing in Houston, Texas:** The 24 Jan 2020, explosion fatally injured two employees and seriously injured two others. The event damaged hundreds of nearby homes, businesses and other structures. The explosion was fuelled by Propylene that had inadvertently been released inside an enclosed space.
- **Hydrogen Chloride Release at Wacker Polysilicon, LLC in Charleston, Tennessee:** The 13 Nov 2020, incident involved a heat exchanger that cracked and released Hydrogen Chloride (HCl) at the facility during maintenance activities. The release caused chemical burns to one contract worker. Another contract worker was injured fatally, and two others were injured seriously when they fell from an elevated structure while attempting to escape the release.
- **Fatal Double Cone Dryer Explosion and Fire at Optima Belle LLC in Belle, West Virginia**: The 8 Dec 2020, incident, which involved Dehydration of a Chlorinated Isocyanurate compound, resulted in one fatality. The CSB's update includes extensive background on the process taking place at the facility and the events leading up to the explosion and fire.
- **Fatal Liquid Nitrogen Release at Foundation Food Group in Gainesville, Georgia:** On 28 Jan 2021, Liquid Nitrogen was released from a freezer at the chicken processing facility, resulting in the fatal injuries of six employees and the serious injury of three employees and one emergency responder. The CSB's update provides an incident description, diagrams of the facility, and details about the installation of Liquid Nitrogen and operational issues.

From: www.csb.gov/csb-releases-updates-on-four-ongoing-investigations-of-chemical-incidents-in-texas-tennessee-west-virginia-and-georgia/

• CSB: Deploys Team to Ohio Fatal Refinery Incident

26 Sept 2022: The USA CSB deployed a team to investigate the accidental release event that occurred on Tuesday 20 Sept 2022, at the BP Toledo Refinery in Oregon, Ohio, USA. The incident involved an explosion and fire that resulted in two fatalities, the release of Sulfur Dioxide and Hydrogen Sulphide, and significant property damage.

From: www.csb.gov/csb-deploys-team-to-fatal-refinery-incident-in-ohio/

• USA OSHA Quick Takes e-News: Sept 2022-Oct 2022

15 Sept 2022: **1/** Confined Space Fatality: A trucking repair company was cited for Confined Space hazards after a worker inspecting a trailer died from exposure to Bleach and Chlorine Gas (8 Sept 2022). 2/ Ohio auto parts manufacturer cited for 10 USA Federal safety violations after workers battled 13 fires in 2 years in plastic moulding plant. OSHA USA found the Polyethylene material Hematite heats to create molten plastic for automotive parts catches fire in the ovens. The material is easily ignited, even by static, and difficult to suppress or put out when a fire occurs. (6 Sept 2022)

3 Oct 2022: **1/** Chemical Safety Meeting Overview of the PSM Project: Read the USA Federal Register notice for the full list of potential changes to the Process Safety Management (PSM) standard. **2/** Environmental lab faces USA$907K in fines for wilfully exposing employees to workplace carcinogen Methylene Chloride.

17 Oct 2022: **1/** Multiple Safety Violations: A metal coatings manufacturer exposed workers to nearly two dozen safety hazards including falls, chemical exposures, machine injuries, and fires at its manufacturing facility; but enacted a comprehensive safety and health program to protect workers at its Corporate headquarters. **2/** Confined Spaces Training: OSHA USA's On-site Consultation Program conducted a series of Confined Spaces safety training courses.

From: www.osha.gov/quicktakes/ (chemical issues only)

AICIS (Industrial/Cosmetic Chemicals)

• AICIS: Regulatory Notices 25 August – 21 October

From: www.industrialchemicals.gov.au/news-and-notices/regulatory-notices

25 Aug 2022: DecabromodiphenylEthane Certificate Cancelled

The Executive Director of AICIS has cancelled Assessment Certificate (CERT9258) for Benzene, 1,1'-(1,2-ethanediyl)bis[2,3,4,5,6-pentabromo- (also known as decabromodiphenylethane or DBDPE). On the grounds that the Executive Director is not satisfied that the risks to the environment associated with the introduction or use of the industrial chemical can be managed.

AICIS have also notified Australia's designated national authority for the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. This is currently the Department of Climate Change, Energy, the Environment and Water (DCCEEW). AICIS have notified DCCEEW of the severe restriction of the chemical.

See the 12 July 2022 published Assessment Statement.

From: www.industrialchemicals.gov.au/news-and-notices/decabromodiphenylethane-regulatory-action

14 Sept 2022: 6 New Chemical Assessment Statements

CA09482 Carbamic acid, *N*-[(dimethoxymethylsilyl)methyl]-, methyl ester (Use: Industrial adhesives and sealants)

CA09508 β-Alanine, *N*-(2-hydroxyethyl)-*N*-[2-[(1-oxooctyl)amino]ethyl]- (Use: Component of fighting fire products)

CA09526 Graphene (Use: Component of heat transfer fluids in automotive, computing and photovoltaics industries; Research and development) (As a liquid dispersion)

CA09525 Oils, Schinus terebinthifolius (Use: Fragrance ingredient in household and consumer products)

CA09576 2,5-Furandione, polymer with 1-alkene, α-methyl-ω-(2-propen-1-yloxy)poly(oxy-1,2-ethanediyl) and 1-alkene, alkyl amide (AACN) (Use: Diesel fuel additive)

CA09469 Heptene, tridecafluoromethoxy- (Use: Industrial cleaning solvent, carrier fluid or heat transfer fluid)

From: www.industrialchemicals.gov.au/news-and-notices/new-chemical-assessment-statements-published-14-september-2022

• AICIS: Inventory Notices 30 Aug – 21 Oct

21 Sept 2022: 6 Chemicals added to the Inventory after 5 years

Obligations to provide information apply. You must tell AICIS within 28 days **IF** the circumstances of your importation or manufacture (introduction) are different to those in the AICIS assessment.

CAS: 69012-03-9 Castor oil, polymer with Glycerol, Me Methacrylate, Pentaerythritol, Phthalic Anhydride and Styrene

CAS: 1221495-27-7 Sulfuric acid, dimethyl ester, reaction products with polyethylene-polypropylene glycol

CAS: 18777-32-7 Glycine, N-(1-oxododecyl)-, sodium salt (1:1)

CAS: 148360-81-0 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-methylpropyl 2-methyl-2-propenoate

CAS: 1613467-74-5 Cellulose, nitrate, polymer with butyl 2-propenoate, 1,1-dimethylethyl 2-methyl-2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyl 2-methyl-2-propenoate and 2-methylpropyl 2-methyl-2-propenoate, tert-Bu 2-ethylhexaneperoxoate-initiated

CAS: 1132688-18-6 Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ether with 4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluoro-1,2-nonanediol

From: www.industrialchemicals.gov.au/news-and-notices/chemicals-added-inventory-five-years-after-issue-assessment-certificate-21-september-2022

27 Sept 2022: Variation of 2 Inventory Listings following Revocation of CBI approval

Obligations to provide information apply. You must tell AICIS within 28 days IF the circumstances of your importation or manufacture (introduction) are different to those in the AICIS assessment.

CAS: 1226781-96-9 2-Propenoic acid, 2-methyl-, butyl ester, polymers with N-[3-(dimethylamino)propyl]-2-methyl-2-propenamide, 2-hydroxymethylethyl-terminated hydrogenated polybutadiene methacrylate, lauryl methacrylate, Me methacrylate, myristyl methacrylate and styrene

CAS: 219607-67-7 2-Propenoic acid, butyl ester, polymer with (chloromethyl)oxirane, ethenylbenzene and 4,4′-(1-methylethylidene)bis[phenol]

From: www.industrialchemicals.gov.au/news-and-notices/variation-inventory-listing-following-revocation-cbi-approval-27-september-2022

18 Oct 2022: Chemicals added to the Inventory five years after issue of assessment certificate

10 chemicals added to the Inventory 5 years after issue of assessment certificate.

CAS: 136210-28-1 Aspartic acid, N-[3-[[[3-ethoxy-1-(ethoxycarbonyl)-3-oxopropyl]amino]methyl]-3,5,5-trimethylcyclohexyl]-, 1,4-diethyl ester

CAS: 1962938-81-3 2-Propenoic acid, 2-methyl-, polymers with ethylene dimethacrylate, Et methacrylate and polyethylene glycol hydrogen sulfate 1-[(C11-rich C10-14-branched alkyloxy)methyl]-2-(2-propen-1-yloxy)ethyl ethers ammonium salts, potassium salts

CAS: 2097851-43-7 Carbon black, (3,4-dicarboxyphenyl)-modified, ammonium salt

CAS: 1106786-34-8 Carbon black, (3,4-dicarboxyphenyl)-modified, potassium salt

CAS: 2828426-59-9 2-Butenedioic acid (2E)-, polymer with butyl 2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid

CAS: 2830596-68-2 Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, Et acrylate-3-(trimethoxysilyl)-1-propanamine reaction products- and nonylphenol-blocked

CAS: 2836348-24-2 Soybean oil, polymer with benzoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, pentaerythritol and phthalic anhydride

CAS: 1262437-71-7 2-Propenoic acid, 2-methyl-, polymers with allyl methacrylate, 2-ethylhexyl acrylate, 2-hydroxyethyl methacrylate, Me methacrylate, polyethylene glycol hydrogen sulfate 1-[(C11-rich C10-14-branched alkyloxy)methyl]-2-(2-propen-1-yloxy)ethyl ethers ammonium salts and styrene, peroxydisulfuric acid ([(HO)S(O)2]2O2) ammonium salt (1:2)-initiated, compds. with 2-(dimethylamino)ethanol

CAS: 1262437-73-9 2-Propenoic acid, 2-methyl-, polymers with allyl methacrylate, Bu acrylate, Bu methacrylate, 2-hydroxyethyl methacrylate, Me methacrylate, polyethylene glycol hydrogen sulfate 1-[(C11-rich C10-14-branched alkyloxy)methyl]-2-(2-propen-1-yloxy)ethyl ethers ammonium salts and styrene, peroxydisulfuric acid ([(HO)S(O)2]2O2) ammonium salt (1:2)-initiated, compds. with 2-(dimethylamino)ethanol

CAS: 1190928-13-2 Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with dimethyl carbonate, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with N,N-diethylethanamine

From: www.industrialchemicals.gov.au/news-and-notices/chemicals-added-inventory-five-years-after-issue-assessment-certificate

AICIS: News and Updates 29 Aug – 21 Oct

29 Aug 2022: New Inventory & Assessment Searches from Oct 2022

New inventory features such as:

Table view – up to 50 results are displayed per page with each 'Inventory terms of listing' shown in columns

Column sorting – sort any column in ascending or descending order (one column at a time only)
Broader search – you can now also search other Inventory fields such as molecular formula, 'defined scope of assessment', 'conditions of introduction and use' and 'specific information requirements'
More targeted results - if you enter the exact name of a chemical, you will get a single result
'Begins with' search – if you type in a few characters, it will find any matches beginning with those characters
Wildcard search – this advanced search lets you use asterisks (*) to find words that start with or end with particular characters, or contain a set of characters
'Download inventory' button – a quick link to download a full list of chemicals on the inventory (updated twice a year)

The updated AICIS assessment search will offer similar features, as well as the option to sort results by each type, so you can view assessments with a health focus, an environment focus or a combination of the two.

From: www.industrialchemicals.gov.au/news-and-notices/coming-soon-new-inventory-and-assessment-searches-october-2022

1 Sept 2022: Registered Business Search – New Features

Register of Industrial Chemical Introducers: is a database of businesses that are registered with AICIS to import and manufacture industrial chemicals in Australia.

- **Sort your results** by business name or AICIS registration number in ascending or descending order
- **'Begins with' search** - type in a few characters to find matches beginning with those characters
- **Wildcard search** - use asterisks (*) to find words that start or end with certain characters, or contain a set of characters
- **More targeted results** - if you enter the exact name of a business on the register, you will get a single result

https://services.industrialchemicals.gov.au/search-registered-businesses/

From: www.industrialchemicals.gov.au/news-and-notices/new-features-registered-business-search-1-september

1 Sept 2022: Transition to AICIS Arrangements

The Administrative Arrangement currently in place for Listed Introductions will be extended. The transition period for NICNAS Exemptions will **not** be extended. AICIS are now consulting about amendments to the General Rules.

From: www.industrialchemicals.gov.au/transition-from-nicnas-to-aicis

If you introduced an Inventory-listed chemical under NICNAS and don't know the chemical identity – the Administrative Arrangement that commenced on 8 Dec 2021 will continue to apply until 30 Nov 2023.

Until 30 Nov 2023, AICIS will continue to accept:

a/ the Written Confirmation from your supplier (or whoever holds the identity of your chemical) that you would have had under NICNAS to confirm that the chemical was listed on the NICNAS Inventory and

b/ Copies of Correspondence to show that you have requested a Written Undertaking be provided for your chemical introduction to meet your AICIS record-keeping obligations.

15 Sept 2022: Latest Inventory Snapshot (as at 1 Sept 2022)

AICIS took a snapshot of all the chemicals on the Inventory on 1 Sept 2022 and published it as a downloadable spreadsheet in an Excel format (.xlsx).

The spreadsheet is not current and is not the official complete Inventory. It also does not contain links to Assessments or Evaluations and excludes chemicals that cannot be disclosed to the public because the terms are confidentially listed.

Full list of chemicals on the Inventory - 1 Sept 2022 [xlsx]

From: www.industrialchemicals.gov.au/search-inventory

From: www.industrialchemicals.gov.au/news-and-notices/available-now-download-latest-inventory-snapshot

19 Sept 2022: What does 'Significant' / 'Significantly' mean

Examples of when we use the words 'significant' or 'significantly' to describe situations where you are proposing to use the chemical in a way that is different to what we originally assessed

Various scenarios to help you understand how specific information requirements could work and how you could meet your obligations, if required.

See: www.industrialchemicals.gov.au/chemical-information/what-your-inventory-search-results-will-show/what-specific-information-requirement

From: www.industrialchemicals.gov.au/news-and-notices/what-does-significant-or-significantly-mean-specific-information-requirement

26 Sept 2022: Consultation on proposed Rules changes for chemical Introductions of 10 kg or less

These changes relate to the information an Introducer must know about their Introduction and the Records they must keep to meet their AICIS obligations.

Open for public comment until 11.59pm AEDT 11 October 2022.

Editor: Some of their information key Starting points:

The total volume of chemical introduced in a registration year is the total volume of the chemical in all products that an introducer imports and manufactures that contain the (≤10kg/yr) chemical.

The risk from introduction and use of a chemical is a function of the hazards of the chemical and the level of human and environmental exposure to the chemical.

Editor: Some of the Main Consultation points:

Eligibility criteria and exclusions would apply, to ensure that:

- appropriate information is known about chemicals being introduced; and

- higher concern chemicals could not be categorised as low risk (reported) introductions by accessing these proposed amendments.

Instead of holding a Written Undertaking from the chemical supplier, where the CAS number (if assigned) and CAS name of the chemical is confidential, the Introducer would need to know information that is more proportionate to the risk of introduction of a chemical at 10 kg or less. For example, the INCI name of a chemical would be accepted for the identity of the chemical.

AICIS are proposing these changes because:

Advice from industry indicated that a significant number of Introducers were unable to get the required information from their chemical suppliers to meet the categorisation and record-keeping requirements under AICIS before the end of the transition period on 31 August 2022.

AICIS have been "advised that if an introducer is importing lower volumes of chemicals in a registration year, it is more difficult for them to persuade an overseas supplier to provide the information that they need to meet their current obligations under AICIS, where information about the chemical is confidential or commercially sensitive. This is particularly true if there are multiple stages in the supply chain and/or if Australia's

requirements are stricter than the requirements of comparable international regulatory schemes. Introductions of 10 kg or less of chemical in a registration year will generally be lower risk introductions, based on the lower levels of human and environmental exposure."

From: www.industrialchemicals.gov.au/proposed-changes-rules-chemical-introductions-10-kg-or-less-registration-year

Editor: It is not clear to me if you have a trace hazardous CMR chemical in a product at say <50% of its lowest GHS cut-off concentration (e.g. a Reproductive Toxicity Category 1 hazard at <0.01%), whether it comes under this ≤10kg Rule change. I suggest that such a concentration will "be lower risk introductions, based on the lower levels of human and environmental exposure." Particularly for ≤10kg / year chemicals, which don't cause CMR or PBT classifications for a product formulation. They will satisfy "the criteria for none of the following hazard classes in the GHS" (i) … (ii) … (iii) …."

This needs to be explicit in the Rule, with say <50% of the lowest GHS cut-off concentration included in the Rule Section 27 (b) (i) … (ii) … (iii) ….

12 Oct 2022: Draft Evaluations open for Comment until 7 Dec 2022

AICIS have published 18 Draft Evaluations on 187 industrial chemicals. These Evaluations are listed in our Rolling Action Plan & are part of the targets set in our Evaluations Roadmap.

Download and read the AICIS Draft Evaluation Statements

List of chemicals in Draft Evaluation Statements Oct 2022 [xlsx]

1-bromo-3-chloropropane and 1,3-dibromopropane (21p pdf)

1-methoxy-4-(2-propenyl)benzene (estragole) (24p pdf)

2-Propenamide, 2-methyl- (methacrylamide) (20p pdf)

Benzene, 1,2,3,4,5-pentachloro- (PeCB) (26p pdf)

Benzene, hexachloro- (HCB) (26p pdf)

Cadmium sulfide pigments (35p pdf)

Carbamic acid, 1H-benzimidazol-2-yl-, methyl ester (carbendazim) (20p pdf)

Carbamic acid, butyl-, 3-iodo-2-propynyl ester (IPBC) (35p pdf)

Chemicals (65) that are unlikely to require further regulation to manage risks to Environment (9p pdf)

Chemicals (43) that are unlikely to require further regulation to manage risks to Human Health (10p pdf)

Glyoxylic acid (21p pdf)

Hydroquinone and p-benzoquinone (21p pdf)

Lauryl (dodecyl) sulfates (25p pdf)

Long chain (C≥10) alkyl benzene sulfonates (35p pdf)

Musk tibetene and a structural analogue (27p pdf)

Octanamide, N-Hydroxy- (22p pdf)

Polymers incorporating glycidyl methacrylate (19p pdf)

Use of aluminium in antiperspirants (25p pdf)

From: www.industrialchemicals.gov.au/news-and-notices/draft-evaluations-open-comment-until-7-december-2022

Scheduled Poisons & TGA Issues

• New TGA Website since 30 Aug 2022

On 30 August the TGA launched their new website to deliver improvements to: **a/** how the website looks and works so it's easier to find and understand the information you need;

b/ navigation and search so you can find what you need faster;

c/ follow Government best practice; **d/** move old website content to be archived on the National Library of Australia web archive - external site - TROVE site so content (back to 2003) can still be available to you if you need it. The TGA archive will no longer be available. Tips on how to search TROVE and help options are outlined on their webpage.

Type 'Therapeutic Goods Administration' into the search bar on the TROVE at: https://trove.nla.gov.au/

From: https://www.tga.gov.au/tga-website-redevelopment-2022

Editor: **For Scheduling & Committee Links go to:**

https://www.tga.gov.au/how-we-regulate/ingredients-and-scheduling-medicines-and-chemicals/poisons-standard-and-scheduling-medicines-and-chemicals/scheduling and

https://www.tga.gov.au/how-we-regulate/ingredients-and-scheduling-medicines-and-chemicals/poisons-standard-and-scheduling-medicines-and-chemicals/scheduling/public-notices-about-scheduling

Editor: Our original reasonably effective grouping of information around the Scheduling Committees, Decisions and Comment processes has been lost. I can no longer find the actual "Public Submissions on Scheduling Matters" from the above webpage!

• Poisons Standard October 2022 (SUSMP No. 37)

SUSMP No. 37 (Poisons Standard October 2022)

https://www.legislation.gov.au/Details/F2022L01257/Download

The SUSMP:

- is a record of decisions regarding the classification of medicines and chemicals into Schedules for inclusion in relevant legislation of the States and Territories;
- includes model provisions about containers and labels, and recommendations about other controls on medicines and chemicals.

https://www.legislation.gov.au/Details/F2022L01257/ac2b1c68-290f-4db9-a183-dd3b2c760495 (753 page pdf) or a docx file

Changes are detailed in the Explanatory Statement (3 page pdf and docx) supporting Poisons Standard October 2022 at:
www.legislation.gov.au/Details/F2022L01257/Download

From: www.tga.gov.au/publication/poisons-standard-susmp

That re-directs to (a very long website address!!):
www.tga.gov.au/how-we-regulate/ingredients-and-scheduling-medicines-and-chemicals/poisons-standard-and-scheduling-medicines-and-chemicals/poisons-standard-susmp-0

• Poisons Std October 2022 - Explanatory Statement

The Poisons Standard Oct 2022 repeals & replaces the Poisons Standard June 2022, principally to incorporate a number of changes to existing entries, and to include a number of specified substances in the Poisons Standard for the first time.

The Poisons Standard October 2022 also incorporates eight new substances in the Poisons Standard for the first time: Asciminib, Faricimab, Mobocertinib, Osildrostat, Pemigatnib, Vosoritide, Cyclobutrifluram and Famoxadone.

The Decisions to incorporate new substances in the Poisons Standard for the first time, and to make a small number of minor amendments and corrections (…..), were made as Delegate-Only Decisions in accordance with the Scheduling Policy Framework. These were considered sufficiently straightforward and did not require public consultation.

From the Explanatory Statement (pdf & docx) at:

www.legislation.gov.au/Details/F2022L01257/Download

From: www.tga.gov.au/publication/poisons-standard-susmp

• Public Notices about Scheduling (Initial Website)

Now at: www.tga.gov.au/how-we-regulate/ingredients-and-scheduling-medicines-and-chemicals/poisons-standard-and-scheduling-medicines-and-chemicals/scheduling/public-notices-about-scheduling

• Scheduling Delegate's Interim Chemical Decisions

21 Oct 2022. Notice of interim decisions on proposed amendments to the Poisons Standard –ACMS#38, Joint ACMS-ACCS#31, ACCS #34 meetings, June 2022 (pdf | docx)

3.1 Interim decision in relation to Helional

Proposal: Helional is used as a fragrance and flavouring agent in foods, but may be used as a precursor in the manufacture of illicit substances and may also be toxic by ingestion. The proposal is to prohibit internal use of helional except in low concentrations in therapeutic and food preparations, and place labelling and storage requirements on helional in most other preparations for external use.

New Entry: HELIONAL Appendix B, Part 3 Substances considered not to require control by scheduling.

4.1 Interim decision in relation to Dichloromethane

The Delegate has made an interim decision to not amend the current Poisons Standard in relation to Dichloromethane. Schedule 5 entry retained.

Risks: Accidental poisoning (particularly in occupational use in poorly ventilated settings) due to the substance's highly volatility & poor mixing with air. Toxicity arises from exposure to high concentrations of the chemical vapour & is dependent on duration of exposure. Prolonged exposure causes acute neurotoxic effects (such as dizziness, headache, drowsiness, poor concentration & loss of consciousness), & sometimes death.

22 written public submissions received: 17 were opposed to the proposed amendment, 4 partially supportive & one supportive.

4.2 Interim decision in relation to Ipflufenoquin (fungicide)

New Entry: **IPFLUFENOQUIN Appendix B, Part 3** Substances considered not to require control by scheduling.

From: www.tga.gov.au/resources/publication/scheduling-decisions-interim/notice-interim-decisions-proposed-amendments-poisons-standard-acms-38-accs-34-joint-acms-accs-31-june-2022

• Proposed ACCS Amendments to Poisons Standard

Consultation Period 1st -29th Sept 2022: 48 pages pdf | docx

3 Proposed amendment referred for Scheduling Advice to Joint ACMS-ACCS #32: Green Tea Extract

Proposed that a new Schedule 2 (Pharmacy Medicine) entry for Green Tea Extract in preparations for internal use, unless they are labelled with specified warning statements; or when present as an excipient in preparations containing ≤5% green tea extract

Reviews have found evidence that green tea extracts in products such as sports supplements (….) pose a risk for hepatotoxicity in consumers.

4 Proposed amendments referred for Scheduling Advice to ACCS #35:

Ethalfluralin CAS 55283-68-6 (New Entries are requested by the APVMA in Schedule 6 & Schedule 7). Ethalfluralin is intended to be used as a pre-emergent herbicide on pulse crops such as mung beans, chickpeas, and lentils.

Tigolaner CAS 1621436-41-6 (new veterinary pest control agent). New Schedule 5 entry for preparations containing ≤10% Tigolaner. Schedule 6 entry for all other preparations. (The New Entries are requested by the APVMA).

Tigolaner is in the chemical class of Bispyrazoles. It is an Acaricide and Insecticide that acts by blocking Gamma-AminoButyric Acid (GABA) gated Chloride channels in the nervous system. The proposed use of the substance is for the treatment and prevention of flea infestations, control of ticks and mites, and treatment and control of intestinal worms in cats and kittens in the form of a spot-on solution.

From: www.tga.gov.au/resources/consultation/consultation-proposed-amendments-poisons-standard-accs-acms-and-joint-accsacms-meetings-november-2022

Food Chemical Issues

• Reusable Food Container Safety: New Advice

5 Sept 2022: The Food Safety Information Council (FSIC) note that it is important to consider appropriate use of reusable food containers as they become more accepted by food retailers.

The New Advice includes: **a/** ensuring suitable containers are being selected, including not reusing containers designed for single-use; (Your container must have a sealable lid that won't leak and have removable seals for easy cleaning.) **b/** ensuring containers are cleaned thoroughly between uses; **c/** considering individual retailers' policies on types of containers accepted i.e. some retailers don't use glass or ceramic for safety reasons; **d/** not using plastic containers after they show signs of damage. (Discard your plastic container once it shows signs of wear and tear as cracks, breaks, scores in the plastic can allow contaminants to enter or make the container difficult to clean.)

From: www.foodstandards.gov.au/media/pages/foodstandardsnews/Default.aspx and select "October 2022"

• A1252: Glucoamylase from GM Aspergillus Niger (gene donor: Penicillium Oxalicum) as a Processing Aid

28 Sept 2022: This Application seeks permission for Glucoamylase from a genetically modified strain of Aspergillus Niger containing the Glucoamylase gene from Penicillium Oxalicum, as a Processing Aid in baking processes, brewing processes and starch processing. For Glucose syrups production and other Starch Hydrolysates. Generally, Glucoamylase degrade starch into D-Glucose.

Call for Submissions - 28 Sept 2022 (19p pdf | docx)

Executive Summary (2p pdf)

Supporting Doc - Risk & Technical Assessment (16p pdf | docx)

From: www.foodstandards.gov.au/code/applications/Pages/A1252---Glucoamylase-from-GM-Aspergillus-niger-gene-donor-Penicillium-oxalicum-as-a-processing-aid.aspx

• A1255: Alpha-Amylase as a Processing Aid

14 Oct 2022: Alpha-Amylase from GM Bacillus subtilis as a Processing Aid. The Application seeks approval to permit alpha-amylase sourced from a genetically modified strain of Bacillus subtilis containing the alpha-amylase gene from Thermo actinomyces vulgaris, as a processing aid in the manufacture of bakery products.

Call for Submissions - 14 Oct 2022 (8p pdf | docx)

Application (74p pdf) Executive Summary (4p pdf)

Supporting Doc - Risk & Technical Assessment (16p pdf | docx)

From: www.foodstandards.gov.au/code/applications/Pages/A1255---Alpha-amylase-from-GM-Bacillus-subtilis-as-a-processing-aid-.aspx

• A1257: Australian Native Bee Honey (For Info)

1 Sept 2022: This Application seeks to amend the Australia New Zealand Food Standards Code to include a definition, compositional requirements and requirement for a prescribed name, for honey produced by stingless bees native to Australia, from two genera that occur in Australia: *Tetragonula* and *Austroplebia*.

Executive Summary (3 page pdf)

Honey produced by Australian native stingless bees has been harvested from wild stingless bee populations by First nations people and consumed as part of their normal diet for many thousands of years. In recent decades, it has become common practice to keep these native bees species in artificial hives and extract a very small amount of honey (about 1kg per hive per year) that is in excess to the normal requirement of the bees for their survival.

Honey from Australian native stingless bees cannot currently be sold in Australia and New Zealand as it does not meet the requirements of Standard 2.8.2 – Honey (produced by the European honey bee).

From: www.foodstandards.gov.au/code/applications/Pages/A1257-Australian-native-bee-honey.aspx

• EFSA: Bees & Pesticides - Draft Guidance Update

18 July 2022: EFSA is responding to a request from the European Commission (EC) to review the Guidance document, first published in 2013, considering new scientific knowledge that has emerged in the meantime.

Public consultation: Revised guidance on the risk assessment of plant protection products on bees (Apis mellifera, Bombus spp. and solitary bees)

https://connect.efsa.europa.eu/RM/s/publicconsultation2/a0l7U0000011fdP/pc0217

Draft Guidance Document: The Guidance Document outlines tiered approach for exposure estimation in different scenarios and tiers. It includes hazard characterisation and provides risk assessment methodology covering dietary and contact exposure. The document provides also recommendations for higher tier studies, risk from metabolites and mixture.

https://connect.efsa.europa.eu/RM/sfc/servlet.shepherd/document/download/0697U0000040qdkQAA (148 page pdf)

From: www.efsa.europa.eu/en/news/bees-and-pesticides-draft-guidance-update-public-consultation

• EFSA: Training Courses on Chemical Risk Assessment & Dietary Exposure Assessment (Partners Wanted)

25 July 2022: EFSA was looking for organisations that can develop and deliver specialised training courses on specific aspects of chemical risk assessment, dietary exposure assessment, and related tools. Tender is closed. Interesting.

https://etendering.ted.europa.eu/document/document-file-download.html?docFileId=137513 (38 page pdf)

From: www.efsa.europa.eu/en/news/wanted-partners-develop-training-courses-chemical-risk-assessment-and-dietary-exposure

Agricultural Chemicals

• APVMA: Allowable Variation in Concns of Constituents in Agricultural Chemical Products

23 Aug 2022: The Agricultural and Veterinary Chemicals Code (Allowable Variation in Concentrations of Constituents in Agricultural Chemical Products) Standard 2022 is a new legislative instrument made on 9 Aug 2022 under section 6E of the Agvet Code. The instrument commenced on 16 Aug 2022.

The allowable variations for concentrations of Active Constituents of agricultural chemical products are the same as those listed in the Guideline for chemistry and manufacture requirements for agricultural chemical products. These allowable variations are already applied in the chemistry assessment of agricultural chemical products and inclusion in a standard under Section 6E of the Code gives them a more formal status.

The Standard allows for reasonable variation from concentrations in the Registered chemical product that are expected from normal variability in manufacturing processes, and in analytical methods. It does not allow the 'target', nominal, or declared concentrations of constituents to be varied from those on the Register without appropriate application to the APVMA for variation of relevant particulars of the product under an Item 12 or 14 (Schedule 6, Part 2, Clause 2.1 of the Regulations) as appropriate, even where such a change is within the allowable variations defined in the standard.

Further, this Standard does not specify a level of difference in concentrations that constitute closely similar product formulations.

From: https://apvma.gov.au/node/104066

Also see APVMA Gazette 23 Aug 2022 p30-31at: https://apvma.gov.au/node/104121

• APVMA: Review of Fipronil Insecticide

4 Oct 2022: The APVMA has published a Notice of Reconsideration to expand the scope of its review of Fipronil, a broad-spectrum insecticide used in agricultural crops and urban situations to control a range of pests, such as cockroaches and termites, and for the control of fleas and ticks in cats and dogs.

This expanded review will allow the APVMA to reassess the potential residues and trade risks related to the use of these products and consider whether labels carry adequate instructions to protect Australia's trade and the health and safety of people, animals and the environment.

The APVMA is seeking public comment on the matters being considered in the expanded scope, with submissions closing on 18 January 2023.

Fipronil had been nominated for review following reports of adverse experiences involving skin reactions in animals and humans. The reconsideration scope was limited to toxicology, worker health and safety, animal safety and adequacy of label instructions.

The APVMA has now extended the reconsideration of Fipronil to consider the risk of residues in food and to trade for agricultural products approved for use in food producing situations and associated label approvals. This extended scope will allow the APVMA to assess the internationally identified residues and trade concerns in the Australian context.

Fipronil Reconsideration – Residues and Trade

4 October 2022 APVMA Gazettes p28-30 (pdf | docx)

Review Questions - Email: Enquiries@apvma.gov.au

From: https://apvma.gov.au/node/105641

• APVMA: Procymidone Final Regulatory Decision

11 Oct 2022: The APVMA has published the Final Regulatory Decision (FRD) for the reconsideration of Procymidone, a fungicide used for the control of fungal diseases in various broadacre and horticultural crops, and ornamental plants.

The FRD for Procymidone has:

1/ Retained Procymidone as a safe and effective fungicide for use by Australian broadacre, horticulture and ornamental plant industries; **2/** Affirmed the active constituent approval; **3/** Varied and affirmed the product registrations and label approvals.

Review Questions - Email: Enquiries@apvma.gov.au

From: https://apvma.gov.au/node/105761

Also see APVMA Special Gazette 11 Oct 2022 https://apvma.gov.au/node/105861

• APVMA: New Active Constituent Dimpropyridaz

18 Oct 2022: The APVMA is considering an application for the registration of an insecticide product, containing 120g/L Dimpropyridaz, as a Soluble Liquid (SL) formulation. The product is intended for the control of aphids and whiteflies in certain vegetable crops and cotton.

Public Release Summary (10 page pdf | docx)

The APVMA has conducted a risk assessment on the product and concluded that it can be used safely.

From: https://apvma.gov.au/node/106031

Also see APVMA Gazette 18 Oct 2022 (pp 21-22) https://apvma.gov.au/node/106026

• APVMA: Vet Medicines Reg Newsletter, Oct 2022

14 Oct 2022: Some of the Topics covered are:

Changes to overseas GMP compliance assessment fee process: The APVMA has extended the implementation of the proposed changes for the overseas GMP compliance assessment fee to the commencement of financial year 2024–25, following feedback received from registration holders and through public consultation.

The proposed changes have been paused to allow the APVMA time to develop the capability needed to provide holders with greater transparency over the manufacturing site details that are held in our Register in a timely and efficient manner.

If a site of manufacture is no longer in use, registration holders may lodge a variation application to remove the site from their registration.

Interagency networking through Memoranda of Understanding: To facilitate cooperation and the exchange of information, the APVMA has established Memoranda of Understanding (MOU's) with other Australian and international government regulators in the veterinary and agricultural chemical sectors and broader chemical regulation scheme.

The APVMA has finalised 18 MOUs with a range of other regulatory bodies including the Department of Health, the Greyhound Welfare & Integrity Commission (NSW), and the Office of Chemical Safety – Australian Industrial Chemicals Introduction Scheme. This MoU was important to establish as many active constituents overlap between the AgVet and Industrial Chemical schemes.

From: https://apvma.gov.au/node/105871

• NCFH: Mapping Victorian Use of Agrichemicals

July 2022: The National Centre for Farmer Health (NCFH) & Deakin University's Centre for Regional and Rural Futures are mapping the use of Agrichemicals across Victoria in their Agricultural Chemical Use Mapping project (funded by WorkSafe Victoria).

Farmers and Farm-Workers are invited to participate in this project via an anonymous 10-15 min online survey.

This research will help to tailor education and initiatives that support farmers to continue to use agrichemicals on-farm safely.

View the July 2022 eNews (with the article on chemical usage)

Read past issues of Farmer Health eNews (back to Aug 2021)

For Information Contact: Dr Jacqui Cotton;

email: J.Cotton@deakin.edu.au

From: https://farmerhealth.org.au/help-inform-research-around-chemical-usage-on-farms

Dangerous Goods

• DR AS 3780: Storage & Handling of Corrosive Substances

25 Aug 2022: This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS 3780—2008. This document has been revised to reflect changes in regulatory requirements and control philosophies that have been refined since the publication of the 2008 edition.

Editor: A key change since the 2008 version covers the classification of corrosives under the UN GHS criteria and under the UN Dangerous Goods criteria (Appendices A & C).

Comment Closes: Thurs 27 Oct 2022.

Download the free AU AS Draft from www.standards.org.au "Public Comment", once you have registered (72 page pdf)

• Proposed UNECE Amdts to the UN Model Regs

10 Oct 2022: Check the UN DG Amendments to be discussed by the (AC.10/C.3) ECOSOC Sub-Committee of Experts on the Transport of Dangerous Goods (61st Session) 28 Nov 2022 – 6 Dec 2022 in Geneva.

As a result of decisions made by the UN Sub-Committee these Amendments are generally adopted into the ADG Code, in the next update following each release of the UN Model Regulations.

To check which issues may be relevant to your business go to:

https://unece.org/info/Transport/Dangerous-Goods/events/368910 then to Download Documents for (AC.10/C.3) ECOSOC Sub-Committee of Experts on the Transport of Dangerous Goods (61st Session) select *https://unece.org/media/documents-download/events/368910*

Some Papers that caught the Editor's Attention:

Flammable Liquids: Open-cup and closed-cup testing for the flash point (Germany & the Working group Chair on Explosives)

Transport provisions for small quantities of Environmentally Hazardous paints and printing inks (& related materials) (WCC)

Proposal to permit increased use of recycled plastics material to attain United Nations 2030 goals (ICPP, ICIBCA)

Assignment of a new UN number to Lithium battery powered vehicles (IATA) (light weight vehicles)

If you have comments on any particular paper, please email them to DKirk@ntc.gov.au by Thurs 2 Nov 2022. Where possible, please provide evidence to support your comments.

• NTC: ADG Code Full Review Information Webinar

23 June 2022 (posted on the NTC website late August 2022)

YouTube Video https://youtu.be/SDa5eJydTgI (50 min)

Read the accessible webinar notes (12 page pdf)

Read the webinar FAQs (8 page pdf)

Also accessible YouTube video with closed captions & transcript

Topic Specific Working Groups:

ADG Code Scope and Exemptions

Thresholds (small loads, placarding, segregation, etc)

Dangerous Goods List, Special Provisions and Special Provisions for Carriage

Class 1 Explosives

Incompatibility and Segregation

PPE, fire & safety equipment, emergency response

Tank & Vehicle related provisions

Rail specific provisions

Training related provisions

Other requirements

For those with a particular interest in one of these Groups consultations, contact Debra Kirk email: DKirk@ntc.gov.au, phone: 03 9236 5086, to be put in contact with them.

e.g. **Recommendation 5:** Develop a training matrix based on a training needs analysis, including discrete, task-specific training and explore the potential for a Dangerous Goods specialist advisory competency.

From:
www.ntc.gov.au/transport-reform/ntc-projects/comprehensive-review-australian-dangerous-goods-code

• NSW Dangerous Goods (Road & Rail Transport) Reg 2022

Commenced on 19 Aug 2022, replacing the Dangerous Goods (Road and Rail Transport) Regulation 2014.

The new Regulation implements the national Model Laws & e.g.

- makes changes to clarify and strengthen safety, maintenance and incident reporting requirements,
- clarifies the powers of the EPA and Safe Work NSW to make determinations related to the transport of dangerous goods by road or rail.
- 175 Prime contractors and rail operators to inform Competent Authority: (1) This section applies if a vehicle transporting dangerous goods is involved in an incident resulting in a dangerous situation. (2) As soon as practicable, and not later than 1 hour, after becoming aware of the incident, the prime contractor or rail operator responsible for the transport of the goods must notify the Competent Authority of the incident and provide the Competent Authority with the following details about the incident – (a) to (e)

Dangerous Goods (Road and Rail Transport) Regulation 2022:
https://legislation.nsw.gov.au/view/whole/html/inforce/current/sl-2022-0464

https://www.epa.nsw.gov.au/licensing-and-regulation/legislation-and-compliance/whats-new-in-law

• Vic: Dangerous Goods Act 1985 & Regs Review

Andrew Palmer KC delivered the Final Report for the Independent Review of the Vic Dangerous Goods Act 1985 and associated Regulations (Palmer Report) in January 2022.

There are 49 Recommendations which aim to modernise, streamline and enhance the regulatory framework to be more risk-based and prevention focussed.

Oct 2022: The Victorian Govt has considered the Recommendations and:
a/ Supports in full 22 Recommendations
b/ Supports in principle 15 Recommendations
c/ Requires further consideration for 11 Recommendations
d/ Notes one Recommendation.

The Vic Govt's Response & Palmer Report are available below:

Govt Response to the Final Report of the Independent Review of Dangerous Goods Act 1985 & Assoc Regs (Oct 22, 27p pdf)

Executive Summary-Independent Review-Dangerous Goods Act 1985 & Assoc Regs-A Palmer KC (Jan 2022, 10 page pdf)

Summary of Recommendations - Independent Review - Dangerous Goods Act 1985 & Assoc Regs-A Palmer KC (Jan 2022, 7 page pdf)

Final Report-Independent Review-Dangerous Goods Act 1985 & Assoc regulations-A Palmer KC (Jan 2022, 336 page pdf)

Terms of Reference (Oct 2020, 2 page pdf)

Consultation Paper - Independent Review of the Dangerous Goods Act and associated regulations (Oct 2020, 96 page pdf)

Consultation Paper Terms of Ref Questions (Oct 2020, 3p docx)

The Victorian Govt has asked WorkSafe Victoria and the Vic Dept of Justice and Community Safety to work with Victorian & Commonwealth departments and agencies to further assess the recommendations that require further review or are supported in principle. *Note: Original public comment closed 30 Nov 2020.*

Oct 2022: *Further Stakeholder Engagement is Required* (is acknowledged) to implement the supported Recommendations as well as further explore the opportunities provided by the remaining recommendations & findings of the Review.

The implementation of the Report's Recommendations will be a multi-year reform program and will be considered in phases. The Victorian Government has asked WorkSafe Victoria to collaborate with industry stakeholders, including impacted Government departments and agencies, on implementation of the recommendations under consideration and timing of associated reforms.

From: https://engage.vic.gov.au/independent-review-dangerous-goods-act-1985-and-regulations

Editor: More "specific duties" are supported in principle

• WA: Dangerous Goods Safety Guides (Aug-Oct 2022)

Safety Equipment for road vehicles transporting Dangerous Goods (Aug 2022, 7 page pdf)

Road transport of Dangerous Goods in receptacles of >500L or kg (Aug 2022, 12 page pdf)

Road transport of Dangerous Goods in receptacles of ≤500L or kg (Aug 2022, 7 page pdf)

Dangerous Goods transport documents (Aug 2022, 6 page pdf)

Route selection, vehicle stopping and bulk transfer (6 page pdf)

Dangerous Goods Safety Guide - Storage, handling and production of hydrogen (Oct 2022, 17 page pdf)

From:
www.dmp.wa.gov.au/Safety/Guidelines-guides-and-16209.aspx

• IATA 2023 Dangerous Goods Regs (DGR) Ed: 64

Order Online: Digital Copy USA$335; Print Copy USA$373 + postage. (Now Available)

From: www.iata.org/en/publications/dgr/

Significant Changes to the 64th Edition (4 page pdf)
(Provide your Business Email Address & agree to Terms of use)
https://go.updates.iata.org/l/123902/dgr-changes/hp1ljv

Some Example of the Changes

DG in Excepted Quantities 2.6 - Clarifies that a package containing Dangerous Goods in Excepted Quantities may also contain goods Not subject to the Regulations.

Classification 3.8.3.2.3 - This paragraph has been revised to clarify that substances or mixtures classified as corrosive must

be assigned to Packing Group I if the test results do not indicate a different packing group.

List of Dangerous Goods 4.2 - Addition of a new entry, UN 3550, Cobalt Dihydroxide Powder.

Reclassification of UN 1891, Ethyl Bromide, from Division 6.1 to Class 3 with a Division 6.1 subsidiary hazard.

Deletion of UN 1169, Extracts, Aromatic, Liquid and change of the proper shipping name for UN 1197, to become Extracts, Liquid, for flavour or aroma.

Appendix H - The Guidance material on development and implementation of competency-based training for Dangerous Goods has been removed from the DGR and is now posted on the IATA website as a stand-alone document, at: www.iata.org/dangerousgoods.

From: www.iata.org/en/programs/cargo/dgr/download/

• IATA Dangerous Goods Training for 62nd & 63rd Eds

The Guidance material on development and implementation of Competency-Based Training for Dangerous Goods has been removed from the DGR and is now posted on the IATA website as a stand-alone document, for the 62nd & 63rd Editions.

The 63rd edition of the Dangerous Goods Regulations includes the provisions on competency-based training and assessment (CBTA) as agreed by the ICAO Dangerous Goods Panel in DGP/27 (September 2019). There is a two-year transition period and therefore, the training provisions from the 61st edition may continue to be used until 31 December 2022.

The Guidance material on the development and implementation of competency-based training and assessment can be found in Appendix H (from this webpage).

Download the DGR 63rd Edition Appendix H - EN (36 page pdf)

From: https://www.iata.org/dangerousgoods/ and scroll down to Training at the bottom of the webpage.

Editor: There are still no training competencies (that I can find) for the professional / technical person, determining a Dangerous Goods product SDS classification, to meet the IATA training Classification requirements, as this classification function isn't included, since these persons are Not Preparing Dangerous Goods Consignments.

• WorkSafe Vic - DG Digest Newsletter

Latest Issue: 31 Aug 2022: Editor's Items of Interest are

Changing Fireworks Discharge Notification Requirements

From 1 Oct 2022: **a/** All fireworks discharge notifications must be submitted by the Pyrotechnician via myWorkSafe, WorkSafe's self-service tool. **b/** Pyrotechnician's will need to visit www.worksafe.vic.gov.au/fireworks-discharge-notification, create a myWorkSafe account and follow the steps for submitting the notification. **c/** You are required to notify WorkSafe, the relevant Fire Authority, and your Local Council. **d/** All Pyrotechnician's should also speak to the local council in advance of the display, as they might have additional requirements related to the notification period.

Vic CFA's Design Guidelines and Model Requirements for Renewable Energy Facilities (including Wind Energy, Large-Scale Solar and Battery Storage). Download the Guide from: https://www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/renewable-energy-fire-safety (see separate Note)

EPA Vic Waste Tracker system Upgrade. *Portal Dashboard:* expanded range of search and filter options to reduce the time it takes to locate waste records. *Waste Records:* improved usability for creating and updating waste records. *Waste Tracker Mobile App:* improvements will make it easier and therefore faster to complete waste records in the App. Drivers can save their vehicle details in their profile and easily insert them into individual waste records. Also see: www.epa.vic.gov.au/for-business/waste/transporting-waste/waste-tracker

USA Chemical Safety Board (CSB) releases Safety Video (11min44sec), about a Fatal Incident in 2020 at the Evergreen Packaging paper mill in Canton, North Carolina, USA. Two contract workers working in a Confined Space were killed when a heat gun fell into a bucket of flammable epoxy vinyl ester resin and caused a fire.

Victorian Dangerous Goods (Explosives) Regulations 2022 (171 pages pdf | docx) commenced on Sat 18 June 2022. They replace the Dangerous Goods (Explosives) Interim Regs 2021.

Australasian Explosives Industry Safety Group Incorporated (AEISG) has released a new AEISG Code of Practice - Storage and Handling of Solid Ammonium Nitrate, Edition 1, June 2022. (145 page pdf). Its aim is to provide a consistent Guide for the Storage & Handling of Solid Ammonium Nitrate in AU & NZ. See the separate Note in this "Dangerous Goods" Section.

From: https://comms.worksafe.vic.gov.au/dg-digest-archive

• WorkSafe Vic - Major Hazards Matters: Issue 22

21 Oct 2022 Issue 22: News for those who work, or are involved in major hazard facilities

Aug 2022: Viva Energy Refining Pty Ltd was fined $100,000 for failing to provide and maintain a safe system of work requiring employees to wear appropriate Personal Protection Equipment (PPE) when working with equipment containing Hydrofluoric Acid. The company was also fined $10,000 for failing to notify WorkSafe Vic after an employee was exposed to immediate risk when Hydrofluoric Acid leaked from a sampling cabinet.

Equipment Isolation - Lock Out Tag Out (LOTO): Over the decades, LOTO systems have evolved from tags to locks, & from multiple user isolation points to group isolations. LOTO is expected to be included with a Permit to Work.

Independent Review of the Dangerous Goods Act 1985.
The Victorian Government has released its response to the Independent Review of the Dangerous Goods Act 1985 and associated regulations (the Review) conducted by Mr Andrew Palmer KC. The Review final report has also been made public. Read more (website). (See the more detailed Note following)

MHF Regulation Basics Quiz (2 page docx): Put your Safety Case and Major Incident knowledge to the test with this short quiz below. These questions are aimed at checking the diffusivity of the way MHF information is spread at your site.

One of the **Process Safety Leadership Characteristics** of a person who leads in Process Safety Management is to understand and aim to create a culture of proactive anticipation. It is a state of unrelenting watchfulness. Supported by a culture which is curious.

An article in OHS Professional Magazine June 2022, which WorkSafe Victoria's Director Major Hazards and Dangerous Goods Simon Farrar contributed to, **"How to bridge the process safety-OHS gap" (webpage),** explores the gaps and overlaps between Process Safety and OHS. It acknowledges there are a number of important lessons professionals in both fields can learn from each other, including the importance of greater collaboration between the two disciplines.

Arc Flash Self-Audit Tool available: How to identify and control the hazards associated with arc flash management. The audit tool sets out a range of questions to assist, identify and control the hazards and risks associated with an arc flash event.

Download the Self-Audit Tool (web page) (June 2022 12p pdf)

From: https://comms.worksafe.vic.gov.au/major-hazards-archive

• AEISG: Storage & Handling of Solid Ammonium Nitrate Code of Practice

Download the **1st Edition, June 2022** Code of Practice from: *www.aeisg.org.au/aeisg-codes-of-practice/ (145 page pdf)*

The AEISG has produced this Code in order to focus exclusively on the storage and associated handling of the types of solid Ammonium Nitrate commonly used in the commercial explosives industry in servicing mines, quarries and construction in Australasia. It is recommended that new readers start with Appendices B, then A.

In this Code "AN" always means solid Ammonium Nitrate in Division 5.1 – Oxidising Substances, as tested and classified into United Nations numbers UN 1942 or UN 2067. Note that Ammonium Nitrate used in the explosives industry should be classified under UN 1942, and AEISG encourages the exclusive use of this number, BUT some international manufacturers continue to manufacture Ammonium Nitrate grades which are suitable for use in explosives under the UN 2067 number.

From: www.aeisg.org.au/aeisg-storage-and-handling-of-solid-ammonium-nitrate-code-of-practice/

Background: The Australasian Explosives Industry Safety Group (AEISG) is an incorporated association of Australasian explosives manufacturers & suppliers originally formed in 1994.

• SafeWork NSW: Safe Storage of Ammonium Nitrate

6 Oct 2022: SafeWork NSW is ***consulting*** on safety measures that will strengthen the current regulation of Ammonium Nitrate storage.

Acting Head of SafeWork, Andrew Gavrielatos said "Although there is unlikely to be an incident at an ammonium nitrate facility, international incidents such as the explosion in Beirut two years ago show that the consequences can be catastrophic when ammonium nitrate is stored too close to residential, industrial, and other public infrastructure."

"Under NSW legislation all storage of ammonium nitrate requires a licence from SafeWork NSW. Quantities of ammonium nitrate that exceed 2,500 tonnes of ammonium nitrate or 5,000 tonnes of ammonium nitrate fertilisers also require a major hazard facility licence."

"The proposal will apply to 17 current ammonium nitrate storage facilities regulated by SafeWork NSW, including eight major hazard facilities, and will include any new facilities regulated by SafeWork NSW."

Go to: www.haveyoursay.nsw.gov.au/ammonium-nitrate-safety

Comment closes: **3 Nov 2022**

From: www.safework.nsw.gov.au/news/safework-media-releases/have-your-say-safe-storage-of-ammonium-nitrate

• WA D. Goods Safety Significant Incident Summaries (SIS)

Fire in an Ammonium Nitrate Storage Shed (SIS 01/22) (2p pdf)

In October 2021, a **fire occurred in an Ammonium Nitrate (AN) storage shed** in Western Australia.

During normal operations, AN was being moved by mobile plant within the designated storage shed when there was a loss of fuel from the mobile plant, which sprayed fuel towards the hot turbo and exhaust system. The fuel caught fire and the burning fuel pooled on the concrete floor. The driver immediately manually activated the engine bay fire suppression system, exited the vehicle and used a local fire extinguisher to douse the fuel pool fires.

The impact of the fire was mitigated by the driver's quick and decisive actions in following the emergency response processes of the site operator.

Contributing factors: **a/** AN dust is highly corrosive and will corrode any bare metal components and electrical connections in mechanical plant. The mobile plant had insufficient corrosion protection on all components including sub-components that could result in a fuel release. **b/** The mobile plant or its components were not considered as safety critical, resulting in less rigorous checks on the mobile plant, including corrosion protection. **c/** The plant was not included in the maintenance management system. **d/** The engine bay fire suppression system did not activate automatically.

Further information: WA Dept of Mines, Industry Regul'n & Safety, Code of Practice: Safe Storage of Solid Amm. Nitrate

From: www.dmp.wa.gov.au/Safety/Dangerous-goods-safety-alerts-13195.aspx

• HazSim: The Growing Role for Fire Blanket Tech

Fire in Lithium batteries can only be taken out by cooling the battery cells. The plastic and organic material that burns in a car fire increases the temperature in the batteries and contributes to the spread of fire from battery cell to battery cell.

When we use our fire blanket in a car fire, all plastic and organic material is put out. Testing shows that the temperature around the battery cells decreases by half. This makes the spread of fire between the cells stop much sooner.

Since water creates short circuits in the batteries, & batteries reignite at any time, the fire blankets have become the chosen tool to deal with fire in electric vehicles. Norway is the world leader when it comes to the number of electric vehicles cars per capita. The Norway National Fire Authorities recommend the fire blanket as the standard & most effective way to handle fire in electric vehicles. 60% of fire stations in Norway have blankets.

From: www.hazsim.com/case-studies/qa-the-growing-role-for-fire-blanket-tech/

E-mail: Info@hazsim.com (Palos Verdes, California)

Alerted by AIDGC What's Happening August 2022

• CFA (Vic): Renewable Energy Fire Safety

7 Oct 2022: CFA (Vic) provides support to planning authorities, designers and operators of renewable energy facilities in relation to bushfire risk and fire safety.

Design Guidelines and Model Requirements for Renewable Energy Facilities 2022 (Version 3, March 2022) (43 page pdf) by the CFA (Vic) Specialist Risk and Fire Safety Unit, to facilitate consideration of bushfire risk and safety measures in the design, construction, commissioning and operation of renewable energy facilities, including solar facilities, wind facilities, and facilities with large-scale battery energy storage systems.

Facilities with battery energy storage systems must be designed with an ultimate goal of fire prevention. Facility Design can reduce the potential for ignition and the consequences of fire should it occur.

Global Incidents Involving Battery Energy Storage Systems (2021 & 2022)

Moss Landing, California - 21 Sept 2022

– Bloomberg Asia, Tesla Battery Fire at PG&E Site Shuts Down Iconic California Highway (21 Sept 2022)

Chandler, Arizona - 18 April 2022

– Energy Storage News, AES Investigating Cause of Thermal Runaway (4 May 2022)

– PV Magazine USA, Battery Fire at Salt River Project in Arizona (26 April 2022)

Monterey County, California - 4 Sept 2021

– RenewEconomy, World's biggest battery sidelined after "overheating" incident (14 Sept 2021)

Moorabool, Victoria - 30 July 2021

– Energy Storage News, Investigation confirms cause of fire at Tesla's Victorian Big Battery (11 May 2022)

– Victorian Big Battery Independent Report (25 Jan 2022)

– Energy Safe Victoria, Statement of Tech Findings (28 Sept 21)

Beijing, China - 16 April 2021

– International Association of Fire and Rescue Services, Accident Analysis (25 May 2021)

From: www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/renewable-energy-fire-safety

• Lithium-Ion Batteries: Fires from Electric Scooters

ABC News 17 Sept 2022: There are fears fires caused by Lithium-Ion Batteries will 'increase considerably' as popularity of electric scooters rises

There were 46 fires ignited by the common type of batteries in Queensland during the last financial year (July 21 to June 22)

From:www.abc.net.au/news/2022-09-17/qld-lithium-ion-battery-fires-risk/101428618

• Allianz: Lithium-Ion Battery Fires in Shipping

31 Aug 2022: Prevention measures are crucial to tackling risk of Lithium-Ion battery fires in shipping.

– Allianz Global Corporate & Specialty risk bulletin highlights main hazards and causes of fire if Lithium-Ion batteries in electric vehicles or cargo are not stored, handled or transported correctly following a number of incidents.

– Given the difficulties involved in extinguishing battery fires at sea companies' primary focus should be on loss prevention.

– Measures to consider include ensuring staff/crew receive adequate training and access to appropriate firefighting equipment, improving early detection systems and developing hazard control and emergency plans.

– AGCS analysis shows that fire/explosion is the 3rd cause of shipping losses over the past decade and the most expensive cause of marine insurance claims over the past 5 years.

From: www.agcs.allianz.com/news-and-insights/news/lithium-ion-batteries.html

Alerted by AIDGC What's Happening September 2022

• Recycler Fined $50K: LPG Explosion Burnt Worker

23 Aug 2022 Bendigo (Victoria) Magistrates' Court: A scrap metal recycler in Victoria has been convicted and fined $50,250 after an LPG fuel tank exploded, setting fire to a worker in September 2020.

Centre Scrap Metal, trading as Omega Metal Recyclers, was fined for failing, so far as reasonably practicable, to provide a safe workplace, by failing to provide safe systems of work, ensure the absence of risks connected to handling and storing gas, and provide information, instruction & training for workers.

The court heard the worker was using an excavator to move a fuel tank at the scrap yard in Eaglehawk, near Bendigo, when the machine's grab attachment struck the tank, causing gas to escape. The tank then exploded, setting fire to the driver and causing him serious injuries.

A WorkSafe Victoria investigation found, that no system of work was in place for moving, handling or storing LPG tanks; no documented procedure for removing gas cylinders from cars; no Safe Work Method Statement, documented procedures, information or instruction on how to decant LPG tanks; and that staff were not trained how to decant, store or handle LPG tanks.

Fuel tanks can retain residue and vapours long after the contents have been emptied and the consequences of failing to handle them safely can be catastrophic.

From: www.aihs.org.au/news-and-publications/news/recycler-fined-50250-after-lpg-explosion-burns-worker

• NSW RR: Fires on Explosives Mobile Manuf. Unit Trucks

Sept 2022: The NSW **R**esources **R**egulator recently identified 2 incidents involving fires on mobile plant that have occurred on explosives mobile manufacturing unit (MMU) trucks.

While the fires were very small and quickly extinguished, Explosives and Oxidising Agents such as Ammonium Nitrate present a high risk with potentially severe consequences in the event of being involved in a fire. The MMU fires were both at bulk explosives storage and reload facilities.

The 2 fires were related to hot surface temperature ignition, one due to a hot catalytic converter and one due to an electrical cable hot joint.

Incident 1: An amount of Ammonium Nitrate Emulsion (ANE) with a combination of combustible material such as oil and other matter had dripped off the delivery hose diffuser over time, which has built up on top of the Aluminium cover on top of the catalytic converter. The contaminated ANE product accumulated in the insulation behind the catalytic converter cover and on top of the catalytic converter. The heat from the catalytic components ignited the combustible material within the ANE product.

Incident 2: While washing an MMU in a reload facility, the operator noticed a burning smell and saw a small flame behind the battery box. The location of the positive terminal post that caught fire sat outside the protection provided by the PVC cover. The fire was caused by a broken terminal connection that provided an electrical path to the chassis. Arching caused the cable rubber boot to catch on fire.

From: www.resourcesregulator.nsw.gov.au/sites/default/files/2022-09/safety-bulletin-sb22-12-fires-occurring-on-mobile-manufacturing-unit-trucks.pdf (6 page pdf)

• NEPC Report: Scaling up Low-Carbon Hydrogen

2 Sept 2022: The UK government must capture the opportunities presented by low-carbon hydrogen and scale up its production, according to a new NEPC Report: *The role of hydrogen in a net zero energy system* (23 page pdf), published today by the National Engineering Policy Centre (NEPC).

- Hydrogen likely to play a critical role in a net zero energy system according to National Engineering Policy Centre

- The UK needs to act swiftly on hydrogen to avoid falling behind international competitors

- Report outlines key risks and uncertainties that must be addressed if hydrogen production and use is to be low-carbon

The National Engineering Policy Centre is a partnership of 42 professional engineering organisations that cover the breadth and depth of our profession, led by the Royal Academy of Engineering.

From: www.icheme.org/about-us/press-releases/government-needs-to-accept-the-engineering-realities-of-scaling-up-low-carbon-hydrogen-says-report/

Environmental Notes on Chemicals

• DCCEEW: Protecting the Ozone Layer since 1987

28 Sept 2022: The Federal Department of Climate Change, Energy, the Environment & Water (DCCEEW) News article on the "Montreal Protocol".

Thirty-five years ago, in Montreal, Canada, world leaders came together to make a landmark agreement to protect the ozone layer. The Montreal Protocol on Substances that Deplete the Ozone Layer is now considered the most successful international environmental treaty ever, and an inspiring example of global cooperation to protect life on Earth.

The Ozone problem: In the 1970s and 80s, scientists discovered the ozone layer was being destroyed by a group of manufactured chemicals, called Ozone Depleting Substances.

Chlorofluorocarbons (CFCs) were causing the most damage. And at that time, CFCs were used everywhere - in fridges, air conditioners, fire extinguishers, aerosol cans and asthma inhalers. They were also used to produce synthetic foam found in many products, from building insulation to running shoes.

On 16 Sept 1987, the countries of the United Nations agreed a plan to phase out Ozone depleting substances - the Montreal Protocol. This date is marked every year as World Ozone Day.

The Montreal Protocol now covers about 100 ozone depleting substances. Most of these are also greenhouse gases. Unfortunately, so are some of the alternatives.

Around the world, Hydrofluorocarbons (HFCs) replaced ozone depleting chemicals in many uses. While HFCs are not damaging to the Ozone layer, they are potent greenhouse gases that contribute to climate change (although not as much as the ozone depleting substances they have replaced).

In recognition of this, parties agreed to the Kigali Amendment to the Montreal Protocol, to phase down HFCs too.

Find out more about the Montreal Protocol.

From: www.dcceew.gov.au/about/news/global-cooperation-protecting-life-on-earth

• DCCEEW: Hydrogen Research, Design & Development

27 Sept 2022: The Federal Department of Climate Change, Energy, the Environment & Water (DCCEEW) News article on "Boosting the Commercial Development of Clean Hydrogen".

The new DCCEEW Report will help provide an understanding of global Hydrogen research, design and development activity around the globe, and help position Australia as a reliable and trusted supplier.

The DCCEEW Report comprises two parts: a Global Report on Hydrogen RD&D Collaboration Opportunities, as at 18 Aug 2022 (27 page pdf) and includes an in-depth analysis of the Hydrogen Research, Development and Demonstration (RD&D) priorities and activities in 10 selected countries including Germany and Japan.

Also find the Global Hydrogen RD&D Collaboration Opportunities Report on Mission Innovation's website, & News & Updates. *http://mission-innovation.net/missions/hydrogen/*
From: www.dcceew.gov.au/about/news/boosting-commercial-development-clean-hydrogen

• Two Common Substances Can Break Down PFCAs

21 Aug 2022: Scientists believe they found a solution to ripping apart human-made chemicals PFAS "forever chemicals", which don't normally occur in nature and don't break down in the environment, posing a risk to human health as well as to wildlife.

A team of scientists at Northwestern University in Illinois, USA, have found that the two compounds were able to **degrade one major type** of "forever chemical," known as PerFluoroAlkyl Carboxylic Acids (PFCAs), which contain Carboxylic Acid and are commonly found in water-resistant clothes.

Sodium Hydroxide (NaOH), also known as Lye, and Dimethyl Sulfoxide, or DMSO, a solvent that is often used in medicine to reduce inflammation and pain, are both already available in most chemistry labs around the world.

The study, published on 18 Aug 2022 in the Journal Science, informs: Instead of trying to break PFCAs' Carbon-Fluorine bonds, the strongest in organic chemistry, the scientists targeted just the charged Oxygen atoms at the end of these molecules.

Heating the PFCAs in DMSO and NaOH, the scientists essentially "decapitated" the molecule, leaving behind Fluoride, the safest form of Fluorine.

From: www.euronews.com/next/2022/08/19/two-substances-found-in-nearly-every-chemistry-lab-could-help-break-down-forever-chemicals

Low-Temperature Mineralization of Perfluorocarboxylic Acids

Perfluoroalkyl Carboxylic Acids (PFCAs) could be mineralized through a sodium hydroxide–mediated defluorination pathway. PFCA decarboxylation in polar aprotic solvents produced reactive perfluoroalkyl ion intermediates that degraded to fluoride ions (78 to ~100%) within 24 hours.

Degradation was also observed for branched perfluoroalkyl ether carboxylic acids and might be extended to degrade other PFAS classes as methods to activate their polar headgroups are identified.

From: www.science.org/doi/10.1126/science.abm8868

• Gaseous Hydrogen Injection into Natural Gas Pipelines

19 July 2022: International Journal of Hydrogen Energy.

Highlights
- Injection of Hydrogen through a T junction leads to poor mixing and high concentrations of Hydrogen on pipe walls.
- Stratification leads to higher Hydrogen concentration near upper pipe wall.
- Higher Hydrogen concentration on walls leads to the embrittlement of high-tensile steels.
- ASME B31.3 indicates that gas pressure needs to be decreased which contrasts with the energy flux constraint.

The well-documented occurrence of Hydrogen embrittlement in steels and the modelling results presented here, clearly indicate that there will be an increased susceptibility to component failure in and around hydrogen injection points. The susceptibility to Hydrogen embrittlement is a function of Hydrogen concentration and our model has revealed Hydrogen concentrations that far exceed the average dilution factors

From:
www.sciencedirect.com/science/article/pii/S0360319922025022

Editor: Since Australian Authorities are considering this, this article seemed highly relevant to be included in these Notes.

• Federal DISR: National Electric Vehicle Strategy

28 Sept 2022: National Electric Vehicle Strategy Consultation by the Federal **D**ept of **I**ndustry, **S**cience & **R**esources.

Feedback will help shape a truly national Strategy to ensure Australians can access the best transport technologies and help meet our emission reduction targets. The Strategy will aim to provide social, economic, business, health and environmental benefits. This will make sure we capture opportunities and have an orderly transition to transport electrification.

NEV Strategy Consultation Paper (18 pages [pdf] | [docx])

Electric Vehicles are defined in this paper as Battery Electric Vehicles (BEVs), Plug-in Hybrid Electric Vehicles (PHEVs) and Hydrogen Fuel Cell Electric Vehicles (FCEVs).

The Australian Government is working to develop Australia's critical minerals sector and to build downstream mineral processing capabilities. The Australian Made Battery Plan includes developing Australia's first National Battery Strategy. We are working to create a Battery Manufacturing Precinct in Queensland. They are also establishing a Powering Australia Industry Growth Centre.

Email: NEVS@industry.gov.au

Closes: 31 Oct 2022 Submission Link or

https://consult.industry.gov.au/national-electric-vehicle-strategy/submission

From: https://consult.industry.gov.au/national-electric-vehicle-strategy

• DCCEEW: Securing Supply of Diesel Exhaust Fluid

15 Sept 2022: The Australian Government is committing $49.5 Million over 4 years to increase the security of the Diesel Exhaust Fluid (DEF) market.

DEF is essential for operation of many Diesel vehicles, especially trucks. DEF reduces noxious emissions that are harmful to human health & the environment. **Technical Grade Urea** (**TGU**) is the key critical component of diesel exhaust fluid.

The funding will support a comprehensive package of measures including:

- a government-controlled stockpile of 7500 tonnes of TGU providing 5 weeks of supply beyond industry stock levels, in the event of critical supply chain failure.
- a competitive Grants Program supporting sovereign capability and projects to produce TGU domestically.
- collection of voluntary data from industry for market awareness of TGU and diesel exhaust fluid stocks.

Minister's Media Release (webpage)

Australia's Fuel Security (webpage)

From: www.dcceew.gov.au/about/news/securing-supply-diesel-exhaust-fluid-to-keep-australia-moving

• DCCEEW: National Greenhouse Emissions Data

2 Sept 2022: The Federal Department of Climate Change, Energy, the Environment & Water (DCCEEW) has launched the new National Greenhouse Accounts website (www.greenhouseaccounts.climatechange.gov.au/) to replace the public Australian Greenhouse Emissions Information System (AGEIS).

It has detailed historical greenhouse gas emissions data (since 1990), as well as emissions projections to 2030.

The National Greenhouse Accounts is the official source for tracking Australia's progress towards international emissions reduction commitments & providing information to the general public.

Australia's Climate Change Strategies at:
www.dcceew.gov.au/climate-change/strategies

National Greenhouse Gas Inventory: Quarterly updates(website)

The report estimates Australia's total greenhouse gas emissions for the year to March 2022 to be 487.1 Mt CO_2-e, up 1.5% or 7.4 Mt CO_2-e) on the previous year.

Emissions in the year to March 2022 were 21.6% below emissions in the year to June 2005 (the baseline year for Australia's 2030 target under the Paris Agreement).

Email: NationalGreenhouseAccounts@industry.gov.au

From: www.dcceew.gov.au/about/news/new-website-for-australias-emissions-data

From: www.dcceew.gov.au/about/news/australias-greenhouse-gas-emissions-march-2022-quarterly-update

• EPA NSW: 8 Billion Containers Returned

19 Sept 2022: NSW reached a major environment & recycling milestone with eight billion bottles, cans & drink cartons returned through the NSW Return & Earn return point network, since 2017, delivering $800M in refunds to the people of NSW, & helping us reduce drink container litter by a massive 52%.

All plastic containers and glass bottles returned are being given a new life and turned back into new food and drink containers to go back on supermarket shelves within weeks.

There are more than 610 Return points located across NSW, ranging from self-service machines which use the latest reverse vending technology to staffed automated depots for bulk returns.

It is set to expand to include glass wine and spirits bottles and larger containers (webpage).

From: www.epa.nsw.gov.au/news/media-releases/2022/epamedia220919-8-billion-containers-turn-from-trash-to-treasure And: https://returnandearn.org.au/

Also: https://returnandearn.org.au/exc_news/8-billion-containers/

• EPA NZ: Import Limits Reduced for HFCs Gases

7 Oct 2022: The EPA NZ has lowered import limits for Hydrofluorocarbons (HFCs), a group of harmful greenhouse gases used in heat pumps, air conditioning and refrigeration.

HFCs have a global warming potential more than 50 times higher than Carbon Dioxide.

The limit for importing HFC gases has been reduced more than 13% for 2023 (compared with 2021 and 2022) and will be decreased further every two years, in line with Ozone Layer Protection Regulations.

By 2036, consumption of the gases in Aotearoa New Zealand will have dropped by 80% compared with 2020.

This year the EPA NZ received 15 applications from wholesalers and individual businesses, requesting more than three times the amount available for allocation.

Hydrofluoroolefins (HFOs) are an alternative group of gases used in refrigeration that do not affect the Ozone layer and have minimal impact on the climate. Some businesses are already using HFC/HFO blends to help adjust to a lower amount of HFCs available for import.

From: www.epa.govt.nz/news-and-alerts/latest-news/import-limits-reduced-for-potent-greenhouse-gases/

• EC: E-Waste: Chemical Processing Without Heat

12 Oct 2022: European Commission (EC).

E-Waste: chemical processing without heat may offer efficient method of recovering metals from end-of-life products.

Over 53 million tonnes (Mt) of e-waste was generated in 2019, predicted to grow to 74 Mt in 2030. Meanwhile, new electronics include about 8% of all gold produced each year – about 250 tonnes. Current methods of recovering gold and other metals from e-waste tend to use large amounts of energy, but researchers have proposed a new chemical-processing system that can be carried out at ambient temperature and pressure.

For example, gold may be recovered from circuit boards in computers and mobile phones, random access memory (RAM) modules, and from cables and jack connectors. They broke all of these (apart from the jacks) into small 2- or 3-centimetre pieces using scissors or hammers. They also showed how a similar process can be used on powder residue from aircraft turbine blades and pulverised catalytic converters, which contain platinum and palladium group metals.

The researchers developed a method using a hydrometallurgical process, using chemical reactions in liquids. The researchers subjected all wastes to chemical attack with aqua regia (acid mixture), which dissolves gold and other metals, at room temperature. They mixed the items with acetic acid and hydrogen peroxide, together with different levels of hydrochloric acid and, to investigate optimal ratios for leaching. They also experimented with other variables such as stirring, and analysed the resulting solutions with spectrometry to determine amounts of different metals within them.

The researchers used ascorbic acid (on e-waste), copper and iron powder (on catalytic converters and turbine residue) to remove metals from the leached solution, agitating the solution at room temperature to obtain precipitates (solid product). These were digested with aqua regia and once more analysed to ascertain purity level.

The final products were relatively pure, but they noted that some residual plastic remained in gold recovered from RAM. Similarly, high levels of platinum (89%) and palladium (100%) were recovered from spent catalytic converters, and 99% of palladium from turbine residues.

From: https://environment.ec.europa.eu/news/e-waste-chemical-processing-without-heat-may-offer-efficient-method-recovering-metals-end-life-2022-10-12_en

• CEFIC: Bio-based, Biodegradable & Compostable Plastics

Sept 2022: Given their importance to modern life, EU policy aims to transform the way plastic products are designed, produced, used & recycled in the EU in its upcoming Policy Framework on biobased, biodegradable & compostable plastics.

Reducing waste and giving plastic waste new life by reusing and recycling are fundamental to ensuring a better future for the planet and build a circular economy. This is where the EU chemical industry has an important role to play. Bio-based plastics (BBP), and biodegradable and compostable plastics (BDCP), with proven environmental and climate benefits.

As plants grow, and thanks to photosynthesis, they capture and use the Carbon from the atmosphere. This “captured Carbon” is thus stored over the life span of any product made out of this biomass. Thanks to recycling this “biomass based product”-life span can be further prolonged and as long as the plastics do not degrade when recycled, It can continue to keep the carbon embedded in the material.

BBPs are fully or partially made from biological resources, rather than fossil raw materials. As such, they help reduce the use of fossil resources and the emission of greenhouse gases. BDCPs biodegrade in certain conditions, and can be produced from either bio-based or fossil raw material. In terms of benefits, they can help reduce plastic waste.

A product that is biodegradable and compostable cannot be thrown away and disposed of in the environment. Recycling should remain the preferred fate for plastics.

Cefic Position Paper on Bio-Based Plastics (4 page pdf)
Improved policies needed to stimulate the deployment of bio-based plastics as a pillar of the Green Deal ambitions of the EU.

Cefic Position Paper on Biodegradable & Compostable Plastics
(4 page pdf) Biodegradable & compostable plastics - Towards an enabling policy framework. Stimulating growth to meet the objectives of the EU Green Deal.

From: https://cefic.org/media-corner/newsroom/bio-based-biodegradable-and-compostable-plastics-can-help-europe-become-fit-for-55/

• IChEMS & Stockholm Convention Chemicals

19 Oct 2022: Australian DCCEEW (Dept of Climate Change, Energy, Environment and Water).

Under the Industrial Chemicals Environmental Management Standard (IChEMS): DCCEEW is seeking information on four chemicals listed on the Stockholm Convention on Persistent Organic Pollutants, to inform the development of scheduling decisions for managing these chemicals.

Seeking information on:

Perfluorooctanesulfonic acid & related subs (PFOS chemicals)

Perfluorohexanesulfonic acid & related subs (PFHxS chemicals)

Perfluorooctanoic acid & related substances (PFOA chemicals)

The PFOS, PFHxS, & PFOA Chemical Profiles (as pdf, docx & csv files) provide some background information.

Consultation Hub. Submissions close 14 Dec 2022.

From: https://haveyoursay.agriculture.gov.au/call-for-information-on-chemicals/survey_tools/pfos-pfhxs-and-pfoa-chemicals

From: www.dcceew.gov.au/environment/protection/chemicals-management/national-standard

• NewSci: Bacteria & Catalysts Recycle Waste Plastic

13 Oct 2022: New Scientist. The approach uses chemical catalysts to break down mixed plastic waste so bacteria can convert what’s left into desirable compounds.

Processes that convert plastic waste into useful chemicals tend to focus only on a single plastic, so it is difficult to design facilities that can cope with a mixture of plastic waste – which would be needed for a truly circular economy (New Scientist 2 Mar 2022).

The group managed to transform Polystyrene, Polyethylene Terephthalate and High-Density Polyethylene into a family of biodegradable compounds called Polyhydroxyalkanoates, which are frequently used in biomedical applications such as sutures or in repairing tendons.

The first step of the process borrows from a common industrial method which uses Oxygen and chemical catalysts to break down Carbon bonds in the mixed plastic waste, which makes the resultant compounds more digestible for the bacterium.

This process has only been demonstrated in the lab so far and will need to be shown to make economic sense in the real world,

From: www.newscientist.com/article/2342438-bacteria-and-catalysts-recycle-waste-plastic-into-useful-chemicals/

• c&en: Cobalt-Zeolite Catalyst: Propane from Polymers

5 Oct 2022: Cobalt-zeolite catalyst makes propane out of polymers. Inventors envision a solution to repurpose the most prevalent plastic waste using abundant metals

Chemical engineers at MIT have designed a cobalt catalyst that transforms polymers into propane selectively and efficiently (JACS Au, 2022, DOI: 10.1021/jacsau.2c00402). This method could provide an alternative to other proposed chemical recycling solutions that rely on more-expensive metals, such as platinum and ruthenium.

Cont.

Propane makes up more than 80% of the gaseous products formed when the catalyst breaks down polymers; which is easily converted to propylene, which can then be made into new polymers or be a feedstock for other chemical processes.

From: https://cen.acs.org/synthesis/catalysis/Cobalt-zeolite-catalyst-makes-propane/100/web/2022/10

• EPA Vic: Lemon Springs Waste, Oct 22 Update

4 Oct 2022: The cleanup of the Lemon Springs, Victoria (North West) site has now successfully uncovered 34,000 Acetylene cylinders, 26 of the 32 waste sites have been excavated and the waste removed.

The EPA Vic Lemon Springs project manager Julian Bull, says the clean up is well on the way despite the challenges involved. Rainfall has "needed to be collected from the excavated sites & treated at a purpose-built onsite plant for re-use."

"Contaminated soil continues to be treated onsite and we have used it in the backfilling of eleven of the excavated sites. So far, 14 soil stockpiles have been treated allowing the soil to be remediated to a suitable level for reuse onsite reducing the need for disposal to landfill.

EPA Vic is "also investigating the best methods for disposal of so many acetylene cylinders and recently went to tender."

The Cleanup Project is expected to be completed by mid-2023.

From: www.epa.vic.gov.au/about-epa/news-media-and-updates/media-releases-and-news/lemon-springs-update

EPA Vic has released another video showing how works continue to be conducted on the Lemon Springs illegal waste dump site in Victoria's North West. YouTube Video – Sept Update (2 min 54s with music audio & written information on screen).

The video provides aerial vision of the excavation of the site. Shot by drones, this is the second time EPA Vic has released vision of the site and clearly shows the scale of the clean up challenge.

Standards & Codes

• AU, BSI, DIN Stds – https://infostore.saiglobal.com/

Editor: The SAI Global Infostore website was closed "for routine maintenance" over the weekend and did not come back online "shortly", so I left the previous Notes Standards listed.

DIN EN 17624:2022-05: Determination of Explosion Limits of gases and vapours at elevated pressures, elevated temperatures or with Oxidizers other than air. Pub: 1 May 2022, 21 pages, hardcopy (English) $202.27, 1 user pdf $150.54.

BS EN IEC 62660-3:2022: Secondary Lithium-ion cells for the propulsion of electric road vehicles (EV) Safety requirements. This document determines the basic safety performance of cells used in a battery pack and system under intended use and reasonably foreseeable misuse or incident, during the normal operation of the EV. Pub: 10 May 2022, 34 pages, hardcopy $438.83, 1 user pdf $438.83.

• BSI & AU Draft Standards Open for Comment

BS EN 17893. Thermal road vehicles. Safety standard for temperature controlled systems using flammable refrigerants for the transport of goods. Requirements and risk analysis process 22/30438313 DC. Comment to 29 Nov 22.

From: https://knowledge.bsigroup.com/search

DR AS 3780: Storage & Handling of Corrosive Substances

25 Aug 2022: Comment Closes: Thurs 27 Oct 2022.

See under the "Dangerous Goods" Notes in this newsletter

Download the free AU AS Draft from www.standards.org.au

Standards Australia updated its process in 2021 for downloading a Draft Standard. Visitors to *SAI Global Infostore* are no longer able to download the drafts (even though most are listed in the SAI Global search list (website as above).

All drafts are now available directly from Standards Australia *www.standards.org.au* & selecting "Public Comment.

Or direct *https://standardscommunity.force.com/idppoc/s/login/* (you need to sign in first), then Select "Public Comment" for Drafts open for Public Comment.

• NZ Standards including referenced ISO & IEC Stds

IEC 62282-4-101:2022 Fuel Cell Technologies - Part 4-101: Fuel cell power systems for electrically powered industrial trucks – Safety. It deals with safety of fuel cell power systems for propulsion other than road vehicles and auxiliary power units Pub: 11 Aug 2022. 104p. hardcopy NZ$448.32+postage; pdf NZ$448.32.

ISO 17584:2022: Refrigerant Properties. This document specifies the thermophysical properties of several commonly used refrigerants & refrigerant blends. Applicable to refrigerants R12, R22, R32, R123, R125, R134a, R143a, R152a, R290, R600a, R717 (ammonia), R744 (carbon dioxide), R1233zd(E), R1336mzz(Z), R1234yf & R1234ze(E) & to the refrigerant blends R404A, R407C, R410A, & R507A. Pub: 12 Aug 2022. 994p. hardcopy NZ$311.47+postage; pdf NZ$311.47.

From: www.standards.govt.nz/latest-publications/

• NZ Draft Standards

NZ Chemical Management or Related Standards for public comment, as at 21 October 2022

DR AS/NZS 17420.1:2022 Respiratory protective devices - Performance requirements, Part 1: General

From: www.standards.govt.nz/latest-publications/

And: www.standards.govt.nz/develop-standards/commenting-on-draft-standards/joint-draft-standards/

• NFPA Codes, Reports, News

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

Current NFPA Activities News: *www.nfpa.org/Codes-and-Standards/Standards-Development/NFPA-News*

NFPA News-&-Research: *www.nfpa.org/News-and-Research*

Standards Seeking Public Development Input

For a complete listing of NFPA standards accepting Public Input, 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

Choose a document for comment from the List of NFPA Codes & Standards or filter by Development Stage for "Codes accepting Public Comment".

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

Seminars, Conferences, Info Sources

• AIDGC WA 2 Day Seminar: Perth, 15 & 16 Nov 2022

The Future of Hydrogen and Evolving Technologies.

Speaker Topics Day 1: 1/ Case Study: Hydrogen West and Hydrogen East: A national network of hydrogen refuelling stations for Australia; 2/ Developments in Hydrogen Technology: Safety Implications and the Standards Landscape; 3/ Staying on Track – Controlling Dangerous Goods on Rail; 4/ The Key to Applying Safety Distance in Hydrogen Storage and Handling; 5/ Danger from Above – Overlooked Learnings from the Victoria Big Battery (VBB) Fire and related Battery Energy Storage System (BESS) Fires; 6/ The Less Travelled Path to Hazardous Area Management;

Speaker Topics Day 2: 1/ Enabling Hydrogen: The Role of Risk Assessment in the Energy Transition; 2/ Successfully Managing the Risk of Lithium-ion Battery Storage and Handling – Case Study; 3/ Process Risk Perception and Temporary Structures with Dirt Footprints; 4/ New Technology Qualification: Novel Energy Systems using Alternate Carbon-free Fuels; 5/ Code of Practice – Storage and Handling of Solid Ammonium Nitrate; 6/ Dangerous Goods Regulatory Oversight of Hydrogen Systems.

Download the Perth Seminar 6 page pdf Here

Cost: $850; AIDGC Member Cost: $280

Enquiries: Info@aidgc.org.au

Location: Novotel Perth Langley ph: 08 9221 1200

From: https://aidgc.org.au/perth-aidgc-seminar-2022/

• DGAG Discuss / Chat Meetings 23 Nov & 15/02

Dangerous Goods Advisory Group Discuss/Chat meeting, **Wed 23rd Nov 2022** & **Wed 15th Feb 2023** will both be a combined Physical Meeting and Zoom Meeting, between **5.50pm** to initially meet up and then run between 6.10pm and 8.10pm (and tidy up by 8.30pm, at the Middle Park Community Centre Meeting Room in the City of Port Phillip, to Covid Rules). Zoom attendees join from 5.50pm.

Convenor Contact: Jeff.Simpson@haztech.com.au

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

• AIOH Annual Conference, 3–7 Dec 2022, Brisbane

Simple. Sustainable. Solutions: Registration. $2475 + GST.

Preliminary Program Link (2 page pdf) as at 27 Sept 2022.

From: www.aioh.org.au/events/listing/?e=12179

• DGO & Haz. Materials ANZ, 15-17th Mar 2023, Melb

Wed 15th-Fri 16th March 2023: Marcus Evans Dangerous Goods Operations (DGO) & Hazardous Materials ANZ 2023 Conference. Hydrogen transport and electric batteries. The future of recycled plastics materials in dangerous goods packaging. The comprehensive review of the Australian Dangerous Goods Code.

Fri 17th March 2023: Full day hands-on workshop on Emergency Response Plan (ERP) for Chemical Releases.

Conference Agenda is available (provide your email address):

From: www.marcusevans.com/conferences/dgo2023

• Chemical Hazard Communication Network, 22 Mar 2023 Discuss / Chat Physical & Zoom Meeting

Wed 22th Mar 2023 5.50pm for 6.10pm to 8.10pm AU E. Summer Time Canb, Melb, Syd, Bris.

Chemical Hazard Communication Network Discuss/Chat meeting, will be a combined Physical Meeting and Zoom Meeting between 5.50 pm to initially meet up & then run between 6.10pm and 8.10pm and chat for an extra 10-20 minutes to 8.20pm whilst we physically tidy up.

Then go for a meal after at a local Thai café.

• IChemE Training: Face-to-Face Training

www.icheme.org/career/training/face-to-face-training/
(Search On: Melbourne, Brisbane, Perth, New Zealand):

• IChemE Training: On-Line Courses

Editor: There are about 40 on-line courses are available to purchase, as on-demand recordings for the costs shown.

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

• AU GHS Classification, SDS & Label Training

William Ray at HAZCOM GHS offers a range of courses.
e.g. GHS SDS (Australia and NZ) (3 days) (4 page pdf)

Mobile: 0412 439 334, email: Will@p-ehandley-walker.net.au

From: www.p-ehandley-walker.net.au/en/

• CHCS: Advanced Preparation of SDSs

Advanced Preparation of Safety Data Sheets (EU, UK, +)
2 Sessions 14&15 Dec https://chcs.org.uk/event-4822505

Become a member of CHCS or BADGP; plus £260-£285.

From: https://chcs.org.uk/chemical-hazards-training

• UNITAR Free Online Courses (for Chemicals)

Free Self-Paced, Open Enrolment Events (Web Based).
Made available since 1 May 2022.

Risk Reduction of Chemicals

Nanomaterials Safety Course

Plastic Waste and the Basel Convention

National Implementation Plans and the Stockholm Convention on Persistent Organic Pollutants

Legislation for Chemicals Placed on the Market

Sustainable Financing of Institutional Capacity for Chemicals Control

From: https://unitar.org/

• Various Chemical Management Courses

See www.haztech.com.au for courses I am aware of:
www.haztech.com.au/hazardous-chemicals-management-training-resources-in-australia-nz/

• Society of Chemical Industry (UK) C&I Magazine

Editor: Join the SCI www.soci.org to receive a monthly copy of their excellent chemical (Science meets Business) information.

• C&EN: Chemical & Engineering News

Sign up for C&EN's weekly newsletter. An American Chemical Society Publication. https://cen.acs.org/ and go to the bottom of the page to subscribe. *Editor:* Lots of interesting developments.

Past Issues: https://cen.acs.org/magazine/all-issue.html. To access 6 C&EN online articles per month there is a free signup.

Haztech Environmental: Chemical Hazard Classifications done & reviewed. SDSs prepared & reviewed. Labels prepared & reviewed. Chemical Management & Safety Regulatory Advice & Compliance: checked for AICIS, 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 31 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. July 23 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 21st October 2022

Description of Supply
Please start my subscription to Hazmat & Environment Notes from the **Aug-Sept-Oct 2022 Newsletter**.

Subscription Costs for 5 bimonthly issues from **Sept 2022 to July 2023** are: **Circle the subscription type you want**

EMAILED to Australian destinations (Emailed as an Adobe Acrobat pdf file)	- **$110** (includes GST) (EFT, CCard)	+ Extra copy to the same group	+ **$55** (includes GST)
POSTED to Australian destinations	- $124 (includes GST) (EFT, CCard)	+ Extra **posted** copy to the same group + Extra **emailed** copy to the same group	+ $62 (includes GST) + $55 (includes GST)

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

International destinations - $106 emailed (Credit Card), (or $118# using **Int'l EFT** & a SwiftCode) (with no AU GST added)
Each extra copy to the same group + $53 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, which is particularly useful if you are late in re-subscribing.)

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 .....

ph: ..... mobile ..... email 1: .....

email 2: ..... email 3: .....

Address to: Jeff Simpson, Haztech Environmental, 18 Laurel St, Ashburton VIC 3147, Australia 21-Oct-2022-notes-prnt

Credit Card Authorisation:

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

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, Camberwell Vic 3124

Date: Description:

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