

Protecting the Australian Community from Chemicals

Australia needs Qualified & Competent Chemical Management Specialists & Managers

To address ongoing Chemical Management Problems from Industrial Chemicals & Domestic Chemicals (Non Haz; Haz; DG; etc)



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For Acronyms: see last slide

Protecting the Australian Community from Chemicals



Chemical Management Regulations in Australia (other than for Pharmaceutical & Veterinary Chemicals) – Federal, State & Int’l

Australian Federal Regulations cover (for example):

Industrial (& Cosmetic) Chemicals (AICIS)

Agricultural Chemicals & Pesticides (APVMA)

Domestic Use Chemicals (TGA) Food Chemicals (FSANZ)

GHS Hazardous Chemicals & MHFs (by Safe Work Australia)

Dangerous Goods (Transport) (by National Transport Comm.)

Environmental Mgmt Standard (by DCCEEW)

State & Territory Regulations cover:

Implementation of Australian Regs with local Variations

e.g. State EPA’s legislate on chemical wastes & categorisation

International (Int’l) Regulations cover (for example):

Dangerous Goods Transport by Sea & Air

Chemical Emissions / Chemical Waste Disposal

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There are no Tertiary Education Courses available to Chemical Management Specialists & Managers in Australia (other than for Pharmaceutical & Veterinary Chemicals)

Except for Dangerous Goods (Storage & Handling) Specialists, where there is additional Dangerous Goods & Chemical Management knowledge to their science and engineering degrees / diplomas that the AIDGC members & WA DG Consultants can be assessed for.

Even these competencies are not mandatory for consultants or businesses working with Dangerous Goods.

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There are some Chemical Management related conferences and seminars that occur each year, but these are not a substitute for tertiary education courses in chemical management, as they don't address the scope & depth of knowledge needed:

e.g. AIOH (for Occupational Hygienists)

ACTRA (for Toxicologists)

RACI (for Chemists)

ACLCA (Aust. Contaminated Land Consultants Association)

ALGA (Australasian Land & Groundwater Association)

Engineers Australia (with some seminars)

AIDGC Annual Conference in Sydney

A Commercial Dangerous Goods Conference in AU

ECHA (in the EU) holds Chemical Conferences & has Podcasts

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There is a major problem to re-setup Tertiary Education Courses for Chemical Management Specialists & Managers in Australia (other than for Pharmaceutical & Veterinary Chemicals)

There are no experienced tertiary education specialists with the scope & depth of Chemical Management knowledge that is needed in Australia!

We are now expected to self-train ourselves in the chemical management knowledge our Businesses / Authorities need us to be competent in.



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Other ways to remain aware of Chemical Management information that Specialists & Managers in Australia need to be know.

Hazmat & Environment Notes (5 issues / year for AU & NZ)
(prepared by Jeff Simpson, Haztech Environmental)

Or subscribe to website information updates for **every** Govt / Authority / Association / Standards relevant to your business.

Or become a member of an Industry / Speciality Association which provide regular newsletters with chemical management information: e.g. Chemistry Australia; Accord; AIDGC; AIOH; ACTRA; RACI; ACLCA; ALGA.

e.g. AIDGC (focusses on Dangerous Goods Management)

& Chemical Management Networking Groups: e.g. DGAG, CHCN

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Some Chemical Incidents resulting from poor Chemical Management knowledge

What has Happened where
General / Technical Managers
& Specialists / Consultants,
*in Business and
in Authorities,*
have **NOT** been competent



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3 Chemical Management Prosecution Examples

From “WorkSafe Victoria Prosecution Result Summaries”
www.worksafe.vic.gov.au/prosecution-result-summaries-enforceable-undertakings (then filter for “Dangerous Goods” & “Exposure to Chemicals”)

- 7 July 2023: Business storing & transporting general freight & storing mixed classes of packaged Dangerous Goods.
- 30 June 2023: Chemical waste recycling company.
- 23 Aug 2022: Company that operates an oil refinery.

Categories of Failure (in the above 3) included:

Failure to provide information, instruction, training or supervision;

Inexperienced employee;

Failure to provide a safe working environment;

Failure to provide a safe system of work.



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- **Record Fine: \$525,000 (in 2009)**

Esperance Port, WA

Lead Contamination (in 2006 & 2007)

Lead Carbonate ore was transported in bulk in sealed trucks, **but then** put on a conveyor **open to the wind** at the port!

The required classification Division 6.1 TOXIC was not picked up by either Magellan Mines or Authorities, until the incident was investigated!

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A recent Chemical Incident in Victoria resulted from poor Chemical Management knowledge

- **Chemical Waste taken for “disposal” was allowed by chemical industry General Managers, who did not ensure the EPA Regulations were complied with.**
- **The cleanup of the Chemical Waste Warehouses (in Melbourne) and Chemical Waste Sites in Western Victoria has now cost in excess of \$200M!**

***Comment:* Tertiary level Chemical Management Courses for Specialists & Managers would have probably avoided this massive cleanup cost!**

Roadmap - Protecting the Australian Community from Chemicals



ISSUE

- Australian chemical management systems fail to ensure industry is equipped to handle, store and distribute chemicals in a way which Protects Workers, the Community and the Environment

PATH

- A co-ordinated Federal approach to align existing programmes and new objectives
- Suitably qualified staff in controlling bodies to regulate industry and support worksites.
- Nationally recognised training programmes which focus specifically on chemical management & risks

OUTCOME

- Safer workplaces
- Reduction in Environmental Impact
- Reduction in overall cost to the community and business

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- **Now Difficult to get Chemical Management Specialist input into Acts, Regs, Stds, etc**

Chemical Management Specialists were always relatively few in Australia over the decades to 2010.

BUT in recent years it is **now a major problem** getting Chemical Management Specialists with the necessary knowledge & expertise to provide input into updating Acts, Regulations, Standards, Procedures, etc.

e.g. on Dangerous Goods (Storage & Handling)

e.g. on the ADG Code (which in future is expected to be based on the UN ADR with agreed AU variations)

(ADR - Agreement concerning the International Carriage of Dangerous Goods by Road)



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Why aren't there any Tertiary Education Courses?

- **We had two undergraduate courses with a Chemical Management focus in Melbourne from the mid 1990s to 2005.**
Degrees in Hazardous Materials Management at Deakin University & Victoria University of Technology
- **We used to have one Post Graduate course in Sydney until 2010** at the University of NSW School of Risk and Safety Sciences
- **BUT since 2005 we need 30 students per topic per year, & these numbers sustained each year, to enable a course to be re-set up.**
- **BUT we don't have any lecturers in Chemicals Management!**
There are very few persons who have the necessary industry background, nor having a Diploma, Degree, Masters or a PhD in Hazardous Chemicals Management, from any University or TAFE in AU.

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Some Chemical Management Assessment / Training is available for Technical Managers & Specialists

- **AIDGC:** Assessment for each Class of Dangerous Goods for Specialists who provide consulting advice.
- **WA DMIRS:** Assessment of Dangerous Goods Consultants
- **IMDG Code Mandatory Training** now includes SDS writers who classify chemicals as Dangerous Goods (but the courses don't actually train in classification! Just how to understand the IMDG Code)
- **Writing SDSs & Labels for Chemicals** courses.
- **Workshops on Hazardous Area Locations and Explosive Hazardous Areas Training** by: www.eptech.com.au/
- **ICHEME Training:** icheme.org/career/training/online-courses/
- **UNITAR Online Courses (for Chemicals)** <https://unitar.org/>

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**We need recognised tertiary education courses:
The Community ASSUMES we have such courses**

- Would you be happy to use a Chartered Accountant, Certified Practising Accountant, or Tax Agent who did not need a qualification in their particular area of financial regulation and did not need to keep their qualification current on a regular basis?
- In the same way, the general community just ASSUMES we are required to do similar competency maintenance in the area of chemical management.



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The Benefits of recognised tertiary courses:

- If the Specialist & General Manager in Industry and in an Authority are required to be tertiary qualified in chemical management and to regularly maintain their competence, then all staff they work with are also likely to get chemical management right.
- Companies & community will be better protected.
- For existing tertiary courses, which already focus on chemical knowledge, additional key chemical management course subjects **must** be required.

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Alerting Chemical Issues to All Staff

So it is not just the Specialist & Manager who know

For **all** chemicals, processes, their issues and possible scenarios that might occur in your company.

1. A Chemical Safety Assessment should be done and a simple document maintained.
2. Then there needs to be a clear link for each assessment, to relevant staff and related staff, to ensure Chemical & Process Alerts are distributed.
3. Quality system tracking the Process, Documentation & Alerts have actually happened & been forwarded.

Note: Don't wait for an incident to discover that Chemical & Process Alerts did Not get through to staff!



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What next?

- Please alert the issue: **“The AU Community needs competent Chemical Management Specialists & Managers in Industry & in Authorities”**, to your:
 1. Federal and State politicians
 2. Federal and State Authorities
 3. Emergency Response Organisations
 4. Industry, Technical & Professional Associations.
 5. Universities & TAFEs
 6. Industry Training Providers
 7. The Media (such as News & Current Affairs)

Please *also* copy into: Jeff.Simpson@haztech.com.au



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The Key Actions we need to occur are:

1. Federal and State politicians need to alert relevant Ministers & Government Depts managing chemicals.
2. Federal and State Authorities, (such as Safe Work & Environment Protection agencies) must consider their need for chemical management specialists & managers.
3. Emergency Response Organisations need to share their chemical management concerns (e.g. Batteries)
4. Industry, Technical & Professional Associations: What specialist chemical management knowledge is missing?
5. Universities, & TAFEs & Industry Training Providers: How to provide specialist chemical management courses?
6. The Media: Need to alert the AU population that chemical management knowledge in Australia is NOT adequate.

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Urgent Action Must be Taken ASAP

- While we are being Alerted to act, we all must take **Action As Soon As Possible.**

e.g. The current chemical management specialists are getting old and retiring. These Specialists are needed to ensure any re-setup tertiary courses are comprehensive and effective.

e.g. The archived Degree courses in Chemical Management at Deakin University and Victoria University of Technology, and the Masters course at the University of NSW, need to be recovered before their course information & content details are lost.



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Competent Chemical Management Specialists & Managers

- Protect the Community

**- Improve your organisation's safety & sustainability
with effective Chemical Management**

Thank You

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Picture at left: Pineapple Sage – a garden herb

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(Supported by colleague's inputs)

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Acronyms

Non Haz – Non Hazardous Chemical (to current Regs)

Haz – Hazardous Chemical (to current Regs)

DG – Dangerous Goods

MHF – Major Hazard Facility

SDS – Safety Data Sheets (for chemicals & chemical products)

AICIS – Australian Industrial Chemicals Introduction Scheme

APVMA – Australian Pesticides & Veterinary Medicines Authority

AIDGC – Australasian Institute of Dangerous Goods Consultants

CHCN – Chemical Hazard Communication Network

DCCEEW - Dept of Climate Change, Energy, Environment & Water

DGAG – Dangerous Goods Advisory Group

DMIRS – WA Dept of Mines, Industry Regulation and Safety

ECHA – European Chemicals Agency

FSANZ – Foods Standards Australia & New Zealand

IMDG – International Maritime Dangerous Goods

TGA – Therapeutic Goods Administration

UNITAR – UN Institute for Training & Research