

Technical Compliance Consultants (NZ) Limited

Hazardous Substance Training – EPA Test Certifiers – Regulatory Affairs Consultants

....Compliance News....Compliance News....

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Introduction

As the holiday season looms, I find myself looking at the year behind us, mulling over the big changes.

Firstly, MBIE announced the formation of **Worksafe New Zealand** as a part of the new Health and Safety reform.

Secondly, you may have noticed **EPA's recent campaign**, attempting to increase awareness of the dangers working with hazardous substances.

As an aside, now would be a good time to look over your own **Safety Data Sheets**, EPA's cornerstone of HSNO compliance. If you don't feel they're



up to New Zealand standard, you should speak with your supplier and get them up to date.

Lastly, TCC is still going strong since I took over as Director and, as I've just recently become a **Test Certifier**, it's time to look ahead at where we can go from here.

We're on the way to **developing more tools** for you to help manage your

compliance, like our Spill Training Cards, and **more courses** to ensure everyone understands what needs to be done.

It's looking to be an interesting year ahead and together, we can make it a fantastic one.

From all of us at TCC, **we wish you a happy holiday season** and hope to see you in the New Year.

Geoff Meikle
CEO

Amendments to Storage Conditions for Aerosols

The EPA publication on the **Site and Storage Conditions for Aerosols** was amended in September 2013. This is to incorporate alternatives to the requirement for a 3 metre or more separation from the boundary of an adjacent area of High Intensity Land Use where 3000 L or more of aerosols are stored in a Hazardous Substances Location

It is now recognized in the amended document that compliance with any of the alternative scenarios in the original document provide effectively the same risk protection as the 3 metre separation allowing it to be reduced or eliminated. **Check with your Location Test Certifier** whether applying this amendment will benefit you if you store 3000 L or more of aerosols.

TESTING Emergency Response Plans

Schedule 4 of the Emergency Management Regulations sets down the trigger quantities requiring implementing an ERP. **It must be tested at least every 12 months** or within 3 months of a change of the plan or personnel.

Records of testing must be kept for at least 3 years.

It takes time and thought to test an ERP. What would be an emergency ?

We have developed a series of 6 different emergency scenarios you can choose that can be tested on your site or as a staff desk-top exercise.

And you have a record of it being tested

Give us a call. It takes 2 -3 hours and it is not that expensive !

There are about 1000 new **commercial** chemicals developed world-wide every year. Only a few are tested on human health.

New Safety Campaign Targets Chemical Hazards

The problem with chemicals that are not managed safely is that their effects are most often cumulative and long-term.

3 examples our staff have had personal experience with by losing friends to chemical hazards are; a motor mechanic (asbestos), a laboratory chemist (benzene), a tomato grower (pesticides) plus several others with likely causes.

It is a human failing in all of us that we believe that whilst these things happen to others **it won't happen to us**, or that we will simply face up to the consequences if it does - and their illnesses are not

pleasant.

"Around 150,000 workplaces (mainly small businesses) throughout New Zealand use hazardous substances. **An**

estimated 500 – 800 New Zealanders die from occupational illness every year.

Many of these deaths are caused by long-term exposure to such substances at work," said the **Chair Person of the EPA Kerry Prendergast.**

She went on to say that an EPA survey shows that only about 25% of NZ small businesses follow key safety rules when managing hazardous substances.

We make it our business to provide

advice to you, our clients, which will mitigate the risk of later-life adverse effects from the chemicals you manage. We would not expect you to be one of the workplaces that does not follow key safety rules. **If you are not sure our phone lines are always open for advice.**

The EPA Toolbox for these key rules are;

- Prepare an Inventory
 - Assess the risks
 - Use and store chemicals safely
 - Get ready for an emergency
 - Implement the controls (signs, certificates, tracking, containment etc.)
- The Tool box kit is **FREE** and we have them in stock for the asking !

Respiratory Protection

Routes of human exposure to chemicals can be orally, dermally and by inhalation. Because we may not be aware of **inhalation** of hazardous substances protection by this route of exposure **is the one most overlooked.** Respirator masks must be fitted to each individual face and checked that an air seal exists around the sides.

If you manage **hazardous chemicals that emit vapours**, you or your staff should ensure that a positive and negative pressure test is carried out each time a respirator mask is put on. This is done by sealing the filters off with the hands and sucking and blowing as you would with a snorkelling mask. Either way the seal should endure for at least 10 seconds (See the note on carcinogens on page 3)

On a lighter Note!

Einstein's Theory of Relatives !

"The probability of them visiting is directly proportional to how much you feel like being left alone."

CCID and the NZ IOC

The Chemical Classification and Information Database

that EPA maintain on their website lists the HSNO classifications and background data of all hazardous substances in NZ that have approval numbers either individually or as Group Standard approvals.

These classifications in turn form the basis for **setting the controls** that the substance comes under for

storage and handling. This will include both single chemicals and mixtures.

The NZ Inventory of Chemicals on the other hand is simply a list of all hazardous chemicals known to be present in NZ in products approved under Group Standards. In fact a chemical product with any hazardous properties under HSNO cannot be attributed to a Group

Standard if it has an ingredient that is not on the IOC list. To get it on the list is a simple notification procedure to the NZ EPA.

When the **ingredient** is in a mixture it **is not a single substance** and therefore will probably **not appear** with classifications in the **CCID**.

HSNO classifications and controls only apply to what you see in the bucket !

HSNO Exempt Laboratories.

Give us a call if you operate a laboratory and **would like an audit** of whether it complies with the **Exempt Laboratories Regulations**. We have a simple self-audit that **your lab manager can carry out themselves** or we can give you an on-site comprehensive audit to the **Code of Practice**.



A Massey University report on NZ workers exposure to chemicals known to cause cancer identified the most common as;

- Asbestos
- Benzene
- Chromium (VI)
- Formaldehyde
- Crystalline silica
- Wood dust

Eco-friendly – what does it mean ?

Many chemically based products on the supermarket shelves – especially cleaners are trying to attract buyers with an “Eco-“ “Enviro-“ or “green – “ theme. It is not uncommon to see the word “natural” pop up in the small print.

So can a **synthesised chemical** that is derived from ingredients occurring in nature also **be regarded as a natural chemical** ? The answer is probably not.

One ingredient in particular has come under a TV 3 news item under the heading “Common Shampoo ingredient deemed dangerous”.

The chemical referred to is cocoamide diethanolamine or **Cocamide DEA**. It has a smaller sister that uses monoethanolamine or MEA. Both have been reported as causing cancer in animal tests.

Whilst their synthesis starts with a coconut oil base they are not Eco, Enviro, “natural” or green.

Another difficulty is that cleaning product manufacturers mostly buy ingredients from multi-national chemical companies under trade names that give little away in terms of their ingredients even when supplied with Safety Data Sheets.

One benchmark for Eco-friendly is whether a

product has achieved the **Envirochoice NZ** approval. Toiletry products approved by them may not be formulated or manufactured with a list of ingredients that include those with known or suspect carcinogens.

Some fragrance compounds occur in nature but can nevertheless be far from eco-friendly when released in waterways or down the sewer.

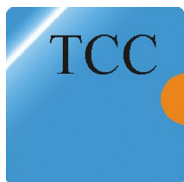
Envirochoice NZ acknowledge that **“all toiletry products have an effect on the environment. Always use the correct dose for maximum efficiency and minimal environmental impact.”**

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We're on the Web!

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The Hitchhiker's Guide to HSNO

A user-friendly guide to New Zealand hazardous substances
legislation and regulations



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The new **2013 edition** features updates to HSNO legislation and an updated section on navigating the EPA website.
\$97.50 + GST (P&P free within NZ)
Spiral bound, 112 pages, soft cover

BOOM !

On 17 April this year an explosion involving **ammonium nitrate** destroyed the *West Fertiliser* chemical plant in Texas killing 15 people and injuring over 100, many of them innocent bystanders. **Hundreds of nearby homes were destroyed or damaged.**

Approximately 240,000 kg (240 tonnes) was stored in combustible wooden bins inside a warehouse that was also combustible. It lacked fire resistant partitions and a sprinkler system. In addition potentially flammable anhydrous ammonia was stored there.

Local firefighters were not made aware of the explosion hazard stored there and were caught when the blast

occurred. 12 of the 14 killed were firemen (reminiscent of the circumstances of the Tamahere milk powder fire involving LPG where one fireman was killed and at least one other seriously injured.)

In a recently published review the US Occupational Safety and Health Agency (OSHA) found that West Fertilizer Co ;

- Had failed to train and license its forklift operators.
- Had failed to pressure-test replacement hoses on chemical tanks.
- Had improper ventilation and drainage systems.
- Had improperly stored ammonium nitrate bins.
- Had inadequate relief valves.
- Had missing labels on storage tanks.

The company was cited for not having **emergency response plans** and **inadequate fire extinguisher capacity.**

In addition several US agencies including the **OSHA and US EPA were accused** of lax laws, standards and levels of enforcement.

Would this amount of ammonium nitrate stored in NZ **be better managed under our HSNO Regulations ?**

Well, if the warehouse complies it would hopefully have **compliant signage, approved handlers** and a **Location Test Certificate**. It would also comply with Schedule 12 regarding building requirements for **storage next to high intensity land use.**

Made in China

In a previous Compliance News newsletter we noted that China is now the world's leading manufacturer of pesticides and follows not far behind in industrial chemicals. **How much represents new chemistries ?** Of **3176 patents** of all types granted by the US Patent Office to groups having a Chinese component, **only 25% were purely invented by, and assigned to Chinese indigenous firms** (New Scientist October 2013).

It seems likely that China is not yet a major player in developing new chemicals.