

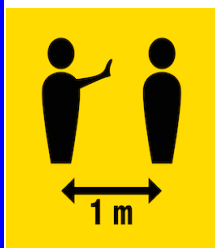
Alcohol Based Hand Sanitiser Danger



A transport company employee using an approved, alcohol-based sanitiser was seriously burned when he touched a metal surface before the product had dried, discharging built-up static electricity

The ethanol flame is invisible while burning on the skin. To avoid accidental ignition, ensure hands are completely dry after using sanitiser, before touching any source of ignition such as cigarette lighters, naked flames (e.g. BBQ), etc.

In order to be effective, hand sanitisers must contain at least 60% alcohol. Wherever possible, hand washing with soap and water, hot or cold, for at least 20 seconds (sing 'Happy Birthday' twice!) provides adequate protection against the Covid-19 virus. Use a moisturizer afterwards to maintain healthy skin.



As we transition to a less restrictive, but possibly more challenging Level Two environment, business operators will need to implement additional personnel protection measures for staff and visitors, arising from constraints applying to their operation.

NZ Inc. has done remarkably well to reach this point in restricting the incidence of Covid-19 cases, thanks to the commitment by almost everybody to complying with containment measures, both socially and in business operations.

Facing the difficult task of adapting to future social and economic circumstances, the SMEs generating 35% of New Zealand's economy and almost 40% of jobs, will require major ongoing support for the foreseeable future. Those in tourism, hospitality, education, transport and retail will find it extremely difficult to transition to alternative employment, perhaps resulting in a greatly reduced income. Almost 55% of New Zealanders now receive some form of government support.

The Budget includes relief measures such as free retraining beginning 01 July, together with extending the vital wages subsidy to mid July. Not trusting employers to implement the necessary and pragmatic performance criteria risks further frustrating SMEs struggling with job losses involving experienced staff, further impacting operations. While many administrative functions can continue off-site, the potential absence of the Competent Chemical Handler(s) can cause major operational and compliance complications.

The loss of experienced employees means extra care must be taken to ensure those assuming additional duties are upskilled in unfamiliar tasks, such as emergency preparedness and spill training. Level Two allows on-site training, providing necessary safeguards are in place and suitably protected trainers are willing to travel.

Our 0800 CHEMCALL® subscribers enjoy the peace of mind from access to 24/7 advice enabling the successful management of a chemical incident, often without involving emergency services.

We are delighted with the innovative approach individual members are taking to switch production to high demand products in short supply - hand sanitisers being the leading example. It has also become apparent that swapping distilling liquor for sanitisers requires safe facilities and activities, not readily verifiable without physical site assessments. Members and non-members alike are benefiting from the accurate and comprehensive chemical management expertise and compliance advice your Association is providing to everyone playing their part in overcoming this devastating pandemic.

Level Two requires businesses to update and implement their Covid-19 management plan, appropriately resourced and promulgated to employees, contractors and visitors, as necessary.

Resuming operations will require SMEs to undertake the necessary upskilling, together with providing the appropriate PPE, especially for those in contact with chemicals. Most importantly, such measures must be supervised and adjusted as may prove necessary.

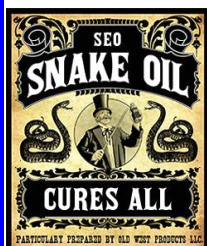
Remember the requirement to maintain a record of contact details for staff, site visitors and customers. A record of contact for visitors to a retail operation, e.g. shoppers, is not required.



Given the limited compliance visits (except for priorities such as food preparation), WorkSafe NZ is progressively providing comprehensive material, including a model Covid-19 management plan, together with explanations regarding the measures required to operate safer sites: [Covid-19 Safety Plan](#).

The site also explains the approach to enforcement, including the employer's responsibility to ensure facilities already certified, remain so. Recognising the inability to locally renew this certification, the operator should carry out a visual inspection and continue to operate until a Certifier is available.

NB. Certifiers cannot renew certificates without a physical inspection. They can however, provide a **Temporary Conditional Certificate** valid for up to three months, provided they personally issued the existing certificate. The Certifier may request evidence such as photographs and documentation in support of a request to issue a Conditional Certificate.



Beware of False Covid-19 Cures

Regulators are warning global online entrepreneurs not to falsely claim their products either cure Covid-19 or prevent infection.

There is no approved antidote for the virus; despite the race by global scientists to develop a vaccine (together with a 100% accurate, affordable, self-administered Covid-19 testing kit), it is likely years away.



Mis-information regarding Covid-19 is rife, not only throughout social media, but also in mainstream media looking for fresh 'clickbait'. The now infamous advice to use household cleaners for personal hygiene continues to generate calls seeking our advice, along with how to identify counterfeit and possibly dangerous personal hygiene products. Other erroneous advice includes using carcinogenic chemicals such as ethylene oxide to clean face masks. Irrational claims the Internet is a source of Covid-19 have led to arson attacks on cell phone towers.

Social media platforms have agreed to make obviously inaccurate posts less accessible by requiring an extra click to source that information. Removal of such nonsense would be more sensible.



Meanwhile, rigorously observing personal hygiene measures and maintaining physical distancing of at least one metre is a pragmatic response to avoid a disastrous return to the greater controls now being reapplied in countries we benchmark ourselves against.

At home, schools and workplaces, frequent use of soap and water is a safe and practical alternative to expensive hand sanitisers.

As more people return to workplaces, please don't hesitate to contact us with your chemical safety requirements: info@responsiblecarenz.com.



Home Grown Covid-19 Sanitising Initiatives

We applaud the commitment of our Members and Partners who not only continue to safely manage their chemical inventories during these uncertain times, but also demonstrate innovative changes to new products: **ZOONO**[®] a product which destroys the Covid-19 virus on hard surfaces, is being widely welcomed as an effective preventative measure. The innovative 'Zoono' antimicrobial coating is a refinement of a surface coating used by pig and poultry farmers to meet strict food hygiene requirements on a variety of surfaces. The virus cannot penetrate the coating, which remains effective for up to 28 days.



Face Masks by 3D Printers

Several inventors are manufacturing Covid-19 PPE on their home 3D printers. Wellington based Weltec tutor Frank Beinersdorf has provided his code to 200 volunteers, who have successfully made and delivered 16,500 face masks at a cost \$6 - \$7 each, providing pharmacists, dentists, supermarket staff and healthcare workers with superior protection.



New Zealand researchers are seeking to identify a Covid-19 vaccine. World leaders are proposing an agreement to ensure Covid-19 vaccines will be available free to all under the auspices of the WHO which has protocols and precedents, e.g. the Salk vaccine. Innovation such as this highlights the low output of science graduates, particularly Chemists, specialising in researching our own unique scientific challenges, requiring our brightest talent. Covid-19 will hopefully focus attention on this issue of great concern to our industry.

Companies such as RCNZ member Uroxsys and others seeking to supplement the supply of hand sanitiser are grappling with multiple information sources and even conflicting advice, lacking time to research. We are successfully obtaining answers to your unique queries, by personally approaching struggling government agencies.

Hand Sanitiser Production

Switching manufacturing capability to making hand sanitisers means producers must ensure their formulation is safe, as well as effective. A hand sanitiser must meet the stringent criteria in the EPA Cosmetics Group Standard, particularly the limits prescribed in the Schedules to the Group Standard, to safeguard the user from acute illness and long-term chronic ailments.

Every sanitiser product being applied to the skin requires careful chemistry throughout the manufacturing process. Two critical aspects of hastily developed products have come to our attention:

Pure Ethanol

In choosing a distillation process to produce the required ethanol in lieu of procuring a pure product from a third party, manufacturers must ensure the ethanol contains no trace of methanol due to an impure or incomplete distillation process.

Quaternary Ammonium Compounds (Quats)

Quats are potent disinfecting chemicals commonly found in wipes, sprays and household cleaners. They are used as active ingredients in hand sanitisers; however an excessive concentration will destroy bacteria that support skin growth and nourishment.

During the lockdown period, a strong bathroom surface cleaner with Quats active ingredients was supplied to an essential service call centre as an all-surface cleaner, resulting in many severe skin reactions requiring hospitalisation. The Cosmetics Group Standard found on the EPA website provides comprehensive information about safe concentrations for use in products routinely applied to human skin. The key requirement is identifying the correct percentage of each ingredient, because a non-hazardous product will not be subject to the Cosmetic Group Standard.

We recommend all manufacturers ensure they comply with this guidance throughout the entire production process, especially the requirement for a compliant SDS and product label. For the right answer every time, call us: +644 499 4311.



The Outlook Beyond 2020

A successful economic and business future requires a sound, long-term, apolitical national strategy, together with the competent execution of a comprehensive plan reflecting the contributions of specific industry sectors. This is best achieved with a small, National Crisis Team of experts in their respective disciplines, including each political party to avoid unhelpful politicking, until we settle into our 'new normal'. Hopefully, our offer to contribute on behalf of the chemical industry will be accepted.

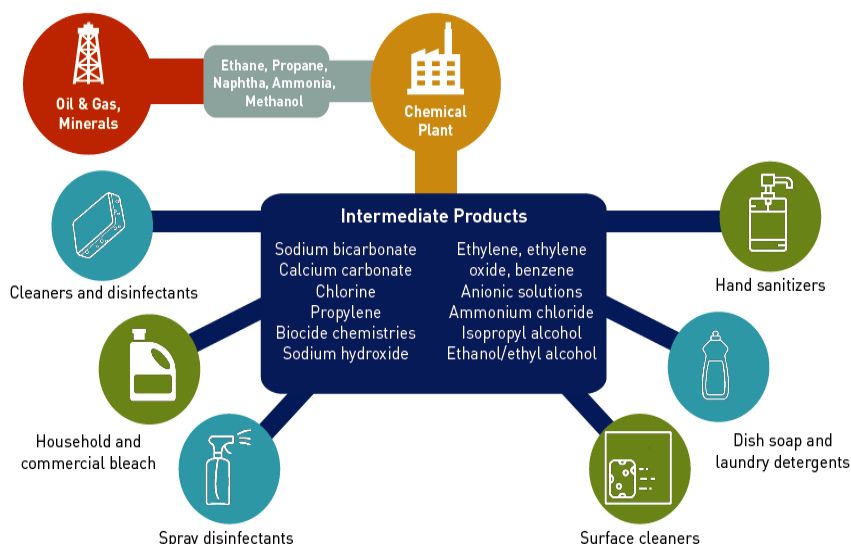
Government cannot and should not attempt to do everything; a combination of sound, science-based, specialist industry advice and common sense is the best antidote to prevent confusion. Let's remain pragmatic and considerate, as we collaborate in successfully addressing this unique challenge.

In short dear readers, we have a long journey ahead; but science and Chemistry in particular, will prevail. Continue to add value to your operation by utilising our expert advice.

Chemistry Provides Solutions (sending a socially distanced hug of appreciation to our ACC colleagues)

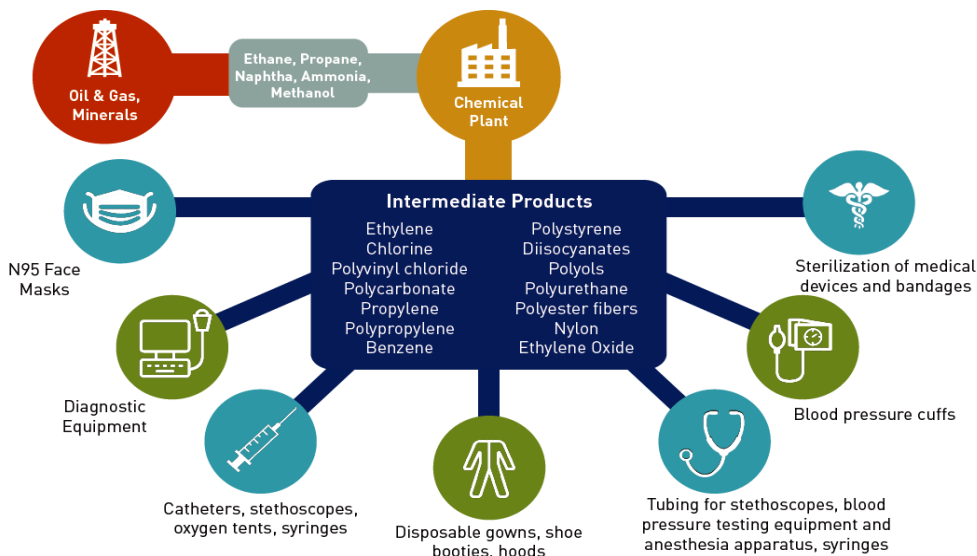
CLEANING AND DISINFECTION

Chemistry contributes 75% of the value of material inputs in cleaning compounds.



MEDICAL EQUIPMENT

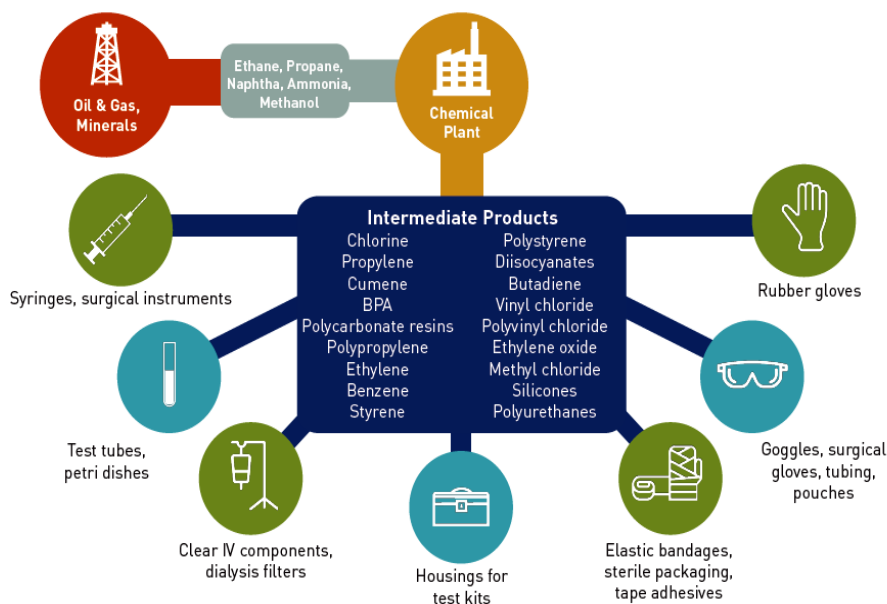
Chemistry contributes 27% of the value of material inputs used to make medical equipment.



MEDICAL SUPPLIES



Chemistry contributes 25% of the value of material inputs used to make medical supplies.



Chemistry vs Covid-19

How Persistent is the Coronavirus? Scientists have found that the virus can survive for lengthy periods outside the human body, remaining viable in the air for several hours and on hard surfaces for days.

Viability of Virus in the Air: It is still able to infect people for at least three hours, in the form of fine, floating particles. However, 50 % of virus particles lose their function after about 60 minutes and their viability reduces to 12.5% at the end of the third hour.

Plastic and Stainless Steel: The virus was detectable after three days. Half life: at least six hours, 49 minutes for plastic and five hours 38 minutes for stainless steel.

Cardboard: The virus was not viable after 24 hours. Half life: about three and a half hours.

Copper: The shortest survival time is four hours until it became inactive. Half life: 46 minutes.

Good reasons to continue to disinfect the examples you encounter.

Be Smart: Safe Restart

Re-starting Chemical Production
Facilities Post COVID-19 Restrictions



Kiwi chemical manufacturers will find this advice helpful (courtesy American Chemistry Council):

As a result of the Covid-19 pandemic, many chemical production facilities around the world have shut down for extended periods and experienced limited production capabilities, or low staffing. As companies begin re-opening, it is critical that facility operators conduct pre-startup safety reviews and take into account the unique circumstances at many sites due to this pandemic.

In the chemical industry, it is common for individual processes to be shut down for a variety of reasons including maintenance, inspection, retrofit, upgrading, etc. It is uncommon for an entire plant to be shut down and even less common for it to shut down for weeks, potentially without staff onsite conducting preventative maintenance and inspections.

It is important to note that a significant number, likely the majority, of chemical incidents occur during startup¹. Process safety incidents are five times more likely to occur during startup than during normal operation².

¹ US Chemical Safety Board, Safety Digest: CSB investigations during startups and shutdowns

² Based on US data

Prior to restating any process, consider conducting a pre-startup safety review to assess hazards which may exist due to changes that may have occurred during the shutdown period. A pre-startup safety review can help companies evaluate any additional impacts due to complications associated with complete shutdown that might impact startup procedures of any or all processes. For example, auxiliary systems normally not concurrently in shutdown may only come online for a short time prior to individual processes being restarted.

Some examples of impacts to auxiliary and production processes that might need to be considered include:

- Outstanding preventative maintenance due.
- Outstanding inspections due.
- Issues with lubrication systems.
- Loose fittings and equipment that may have become purged or de-inventoried.
- Corrosion.
- Compressed air systems, especially moisture accumulation.
- Utility reliance (electricity, water, steam).
- Safety system functionality including fire protection systems.
- Gas detection functionality.
- Bypassed or disabled alarms and notifications.
- Instrumentation stuck open/closed due to non-use.

Exercise caution when performing startup operations; consider conducting assessments to determine when equipment is ready for operation and give priority to restarting those operations with life safety functions, such as fire protection devices. Safe restart procedures will vary by company and often involve great detail, but some general elements a company might include within its safe restart approach are outlined in the four steps below:

Document 'As Found' State Of Operations:

- Record the current state of processes and include enough detail for each process to understand where chemicals are being stored, the environmental conditions they have experienced, potential corrosion, valve positions, etc.
- Address deviations between the assumed state of operation in historical startup plans and current state and consider amending the plans accordingly.
- Many process safety events occur due to process lines left open. To reduce the risk of an incident, consider walking process lines and examining open-ended lines, drains and vents during a pre-startup safety review.
- Identify outstanding maintenance and inspection items and assess the impact to restarting plans.

Create or Revise a Startup Plan

- Pre-startup safety reviews may need to be adapted or revised based on current conditions. The plan may need to detail the order in which restart activities will occur.
- In particular, identify and address any outstanding maintenance and inspections, as appropriate.

Review Training/Drilling Needs

- In some instances, refresher training on startup procedures may be beneficial. Discuss restart plans in pre-startup meetings that may include operations, maintenance and engineering teams.
- Consider the need to drill restart procedure in order to address last minute questions and/or amend the plan as needed.

Proceed With Caution

- Identify pre-defined hold points and determine if all supporting systems (auxiliary, utility, safety) are in order before proceeding to the next step in the startup plan.
- Consider adding an officer who has the duty of monitoring the startup process, with the authority to stop the process should any unanticipated deviation occur.

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Review of CHEMCALL® Incidents

Our 0800 CHEMCALL® emergency 'hotline' continues to receive many product-related queries (see 'Beware of False Covid Cures'), together with

requests for advice. We are obviously pleased to respond, but kindly respect the **emergency only** nature of this popular emergency advisory service

Eye Injuries

Effective first aid requires continuous irrigation (minimum 15 minutes) of eyes contaminated with a chemical. Eyewash stations allow 'used liquid' to run to waste. Our CHEMCALL® advisors warn against plastic 'eye socket' shaped cups, which have the potential to increase eye damage. They should be removed from first aid kits (where possible) and replaced with continuous running fresh water stations, or large bottles of water/saline solution. Correct eye irrigation guidance is provided with our advice.

Unsafe Chemical Handling

- A spill from a punctured IBC was contained by placing the IBC on an emergency bund tray – containing waste oil. Luckily, the IBC product was not highly reactive when mixed with oil.
- Staff at an agrichemical outlet responded effectively during a chemical spill without outside support – a testament to good training.
- A visitor to a mechanical workshop drank brake fluid stored in a Coca Cola bottle, suffering severe internal injury.
- A pallet of car batteries were dropped and shattered, releasing contents which reacted on the ground.
- A pallet of 20 litre pails of blended Hydrogen Peroxide and Peroxyacetic Acid burst open as they dropped from a forklift at speed; the highly volatile and corrosive oxidiser splash-burned the driver, who was not wearing eye protection. Many bystanders suffered burning throats.
- A large chemical container fell from a truck, spilling a white chemical into the drain. The caller approached the container to read the label, only to find themselves unable to breathe.
- Four buried containers were unearthed and damaged, causing a Phosphorous explosion.
- A specimen jar was dropped in a school lab, releasing Formaldehyde and necessitating the evacuation of a wing of the school. Good emergency planning ensured a well-rehearsed evacuation.
- The increasing popularity of small, battery-powered vehicles such as e-bikes and scooters has resulted in these items traded online being packaged for delivery with no indication of the lithium batteries within.

A recommendation has been made to the NZTA regarding a review of the transport of electric vehicles, e-bikes and scooters. Presently, the requirement to identify the presence of batteries has yet to be included in both the DG and HS Regulations, posing a risk to the transport sector. Responsible Care NZ has drawn this to the attention of the NZTA for inclusion in the pending review of the Land Transport DG Rule.

Faulty Packaging

- An agrichemical container inside a courier van split open, releasing its entire contents and contaminating the courier van.
- An IBC containing Hydrogen Peroxide swelled in logistics storage, creating the risk of a chain reaction.

And finally, some feedback from a grateful CHEMCALL® caller (personal details deleted to protect privacy):

"Thank you for your help today, Ken. Greatly appreciated. Managed to see my GP straight away. They PH tested my eye - numbed it and flushed it with saline. Put some yellow dye in it, then checked with blue light for any burns. No burns and all the chemical is gone, just abrasions on the cornea. Given an eyepatch and antibiotics, with a follow up eye test on Monday. Your help was wonderful. Again thank you. Kind regards".

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MS-011 Standards Committee Work on AS NZS 60079.10.1

Creation of a supplement to accompany the direct text adoption of IEC 60079-10-1; explanation and further guidance regarding each of the clauses from IEC 60079-10-1. The supplement would include:

- Incorporating examples from AS/NZS 60079.10.1:2009 Annexe ZA, including any corrections and explanations to assist in the use of the examples.
- Introducing new examples for arising industry needs, such as refrigeration systems using flammable refrigerant gases, landfill gases, LPG refuelling and road tankers.
- Updates for co-ordination to other Standards such as AS1940.
- Incorporation of AS/NZS 60079.10.1:2009 Annex ZB.
- It is proposed that this supplement be supplied as a 'set' with the next edition of AS/NZS 60079.10.1 which is proposed as a direct adoption from IEC 60079-10-1. The direct text adoption of IEC 60079-10-1 would be submitted as a separate proposal once the supplement is progressed further.

Tanks supplying fuel to combustion engines and burners must be fabricated in steel. The revised Standard AS1692-2006 now excludes the use of other metals, including alloys.



New Partner

A warm welcome to our new Partner **Counties Manukau Health**. Comprising eight healthcare facilities encompassing specialist treatment, mental health, maternity services and specialist units for children and the elderly, Counties Manukau Health (CM Health) provides health and disability services to an estimated 512,000 people in Auckland, Waikato and Hauraki District.



Our Members

Corteva Agriscience (formerly Dow Agriscience) has been recognised with a prestigious Environmental Leadership in Business award for improvements to its chemical storage area, ensuring contaminated storm water cannot pollute the adjacent Herekawe Stream and coastal waters. Congratulations to Corteva staff for demonstrating their commitment to local environmental protection and enhancement, ranging from cleaning up litter to improving the quality of local waterways and walking tracks, thanks to a policy reflecting the Responsible Care® ethic of 'beyond compliance' throughout all its operations.

Has Anyone Seen HS Phase Two?

Your Association continues to press for commencement of the promised comprehensive review of our ailing national chemical management regime. Results of the proposed update of the HSNO Classification framework, including the Globally Harmonised System (GHS) Revision 8, are expected shortly. The just completed update of our DG Land Transport Standard and DG Transport Rule now requires the long overdue Phase II review of the Hazardous Substances regime which has served us well, but needs a comprehensive review to ensure our performance standards remain fit for purpose.

We believe the Phase II review of the HS Regulations is best accomplished by a joint working group, rather than continue with piecemeal tinkering which does not address core industry concerns such as the faltering Certification system, together with the requirement for specialist training. Sound, pragmatic regulations which are also user-friendly and performance-based, are required to support education, training, compliance and enforcement.



It is critical to restore business confidence in a process which is now increasingly risk-averse. We must collectively identify the best options to achieve the intended outcome, instead of increasingly confusing and costly regulations delivering various interpretations, a public demand for accountability and prosecutions when incidents occur.

Industry stands ready to contribute our collective international and local expertise.



Site Assessments Save Time and Money

Increasing queries arising from varying interpretations of prescriptive regulations confirms the benefit of a Responsible Care NZ site chemical safety assessment by one of our experts. This informal, cost-effective site visit addresses your chemical management issues, assessing compliance and offering solutions to outstanding concerns. The independent report confirms the chemical management status of your operation, including the need for specialist training and verifying certification requirements.

Once present Covid-19 constraints allow, talk to us regarding a trouble-free journey to and beyond compliance: call +644 499 4311.

Hazardous Waste Management

Successfully managing hazardous waste is a community concern, demonstrated by lawsuits against local authorities responsible for products expected to be recycled or repurposed, that are now either stockpiled or landfilled, because they cannot be exported, processed or utilised in a state of the art 'waste to energy' facility. Singapore and Sweden are examples of internationally admired, environmentally conscientious societies, replacing landfills with modern waste to energy plants consuming industrial and household waste with emissions well below UN guidelines.

One such suitably located facility served by road and rail could accommodate New Zealand's trash for years; for a graphic description of what is technically and aesthetically possible, see this National Geographic article 18 February 2020 <https://www.nationalgeographic.com/magazine/2020/03/how-a-circular-economy-could-save-the-world-feature/>. Given the government's commitment to emulating the environmental purity of our Scandinavian role models, it is disappointing that our experts are not actively evaluating such options.

Meanwhile, polluting stockpiles of chemicals, tyres, plastic and hazardous waste await a pragmatic solution.



Clean up of Huge Northland Chemical Dump

The Whangarei District Council is tendering for the remediation of the failed Sustainable Solvents site at Ruakaka, Northland. The owners have ignored numerous enforcement orders and ineffective enforcement action for several years and the facility is now considered an 'Orphan Site'.

Requiring the removal of an estimated 1m litres of solvents and industrial chemicals, together with remediation of heavily contaminated ground water and soil extending well beyond the site, the project is being likened to previous successful but complicated orphan site projects, namely the NZ Fruitgrowers Chemical Company in Mapua (eight years and \$12m) together with the Coromandel Tui Mine Tailings Dam (four years and \$20m).



The abandoned site draws attention to the truism that one bad industry example cancels many more good operations. Expensive remediation of orphan sites falls on ratepayers and the taxpayer. This and similar known sites threatening the health and security of people and our vulnerable environment, require urgent attention.

When collective efforts to enable compliance fail, early intervention and enforcement together with the prompt seizure of assets belonging to principal offenders, would have our support. Our industry can provide specialist training for local authorities prepared to deal with this growing problem.

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We wish our colleagues world-wide good fortune in remaining safe and successful throughout your personal and business endeavours. Kia Kaha (Stay Strong).

Be extra careful out there.



IF THIS WAS YOUR CHEMICAL CONSIGNMENT, WHAT WOULD YOU DO?

LET'S DISCUSS HOW
OUR 0800 CHEMCALL
24/7 EMERGENCY
RESPONSE SERVICE
CAN HELP.

BE COMPLIANT, STAY COMPLIANT

CALL 04 499 4311

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