FLASHPOINT

Tamahere

December 08

Accident waiting to happen

‘HSNO could do better’

NZIHSM Survey results inside

NZ INSTITUTE OF HAZARDOUS SUBSTANCES MANAGEMENT

USEFUL ORGANISATIONAL CONTACTS

NZ Institute of Hazardous Substances Management
www.nzihsm.org.nz
The official home of professionals committed to the safe management of hazardous substances and dangerous goods.

The NZIHSM is a 'not for profit' industry association specialising in improving safety, health and (site) environmental performance, particularly the safe management of hazardous substances in the community.

NZ Chemical Industry Council
www.nzcic.org.nz
The NZCIC works closely with Government and industry partners to successfully implement the Hazardous Substances legislation. This is achieved by implementing and promoting Responsible Care™, the international SH&E protection initiative practised by the chemical industry in more than 53 countries worldwide.

ERMANZ
www.ermanz.govt.nz
Extensive information on working with hazardous substances.

Ministry for the Environment
www.mfe.govt.nz
The Ministry administer the HSNO Act, and provides policy, publications, technical reports and consultation documents

Department of Building and Housing
www.dbh.govt.nz
The Government agency that maintains the Building Act and the Building Code.

Local Government NZ
www.lgnz.co.nz/lg-sector/maps/
Local Authorities have responsibility for policing building controls. Some local authorities are contracted to Department of Labour to provide enforcement of the Hazardous Substances legislation.

If you know of other agencies which could be useful to members, please let us know at office@nzihsm.org.nz.

The HSNO Act – helping or hindering?

The HSNO Act has been operational for a few years and like all youngsters has had its share of complaints and growing pains as we depart from the aged familiarity from the prescriptions of the dangerous goods regulations.

Media would indicate that there are still frequent hazardous substance incidents ranging from the non-closing of an oil tap meaning the real-closure of State Highway 1 between Waiouru and Sanson while the road was cleaned, through to the very serious Tamahere coolstore incident where firefighters faced an un-fighting chance.

From the recent NZIHSM survey it was gratifying to find that respondents value our magazine Flashpoint, the 'webchat line' on http://finance.groups.yahoo.com/group/hazchat/, the webpage on www.nzihsm.org.nz and our other services as an important part of the HSNO regime for sharing experience and advocacy for members.

It was also heartening to learn that over 80% of respondents believed that our low cost service as a professional association to members was both a necessary and important part of the HSNO regime.

However, it is also clear from responses that while progress is being made, in the same way as the Building Act and the HS&E legislation before it, it will be a slow process. It was also surprising that given the over 40 years since 1958, of the previous dangerous goods legislation, only 10% of sites visited were ready for HSNO certification on their first visit by a test certifier and nearly all required HSNO refurbishment.

So was the legislative addition of test certifiers/advisors considered useful for society to reduce the adverse effects of hazardous substances while maintaining their useful properties to users, society and the environment? Survey results indicated that over 86% of respondents believed that the system was working and that the test certification step was an important part of the process.

So where to from here?

Many indicated that for the HSNO regime to be sustainably successful it was important for the government, test certifiers/institute and user groups to actively support

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John Hickey
Institute president

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Flashpoint

Flashpoint is the official journal of the NZ Institute of Hazardous Substances Management.

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Institute not consulted

In September 2008 the New Zealand Institute of Hazardous Substances Management made strong submissions to the Ministry for the Environment about not being one of the organisations involved in or being consulted on the review of HSNO test certifiers.

As the organisation which most represents test certifiers in New Zealand, the Institute felt it should at the very least be consulted, if not a full member of the review team. In the letter, the national executive stated that Mfe should include all relevant parties, particularly those who are most likely to be effected by the outcome of such a review, namely 'Test certifiers'.

"In summary as the representative body for Test Certifiers in New Zealand we would like our view to be seriously considered as part of your review into Test Certifiers in New Zealand and we again emphasise that we will aim to assist you where possible towards the achievement of our mutual goal."

Post-script:

"While NZIHSM was not invited to be part of the 'Test Certifier' Review Group, we are pleased that the Ministry for the Environment is now (Nov. 2008) conducting sessions for all test certifiers in main centres and look forward to ongoing co-operation between all relevant parties" - John Hickey.

More SMEs

Small and medium enterprises, the backbone of the New Zealand business sector, increased by 2% in the year February 2007 and they now employ 594,410.

A report from the Ministry of Economic Development shows:
97% of enterprises employ 19 or fewer people;
89% of enterprises employ five or fewer people;
SMEs accounted for 31% of all employees.

New user guide

ERMA has published a new user guide – User Guide to the Thresholds and Classifications under the Hazardous Substances and New Organisms Act 1996.

The documents are available as pdf, Word and also published as an e-book. Hard copies and a CD are also available on request.

http://www.ermanz.govt.nz/hs/t&c/index.html

Online hazard help

The Department of Labour says death rates on the job are still too high and there is still much to do to educate employers and workers.

The department has developed a free resource, the Hazard Handler Online Tool, which can be used to assess a workplace for hazards and get an introduction to the basic of managing health and safety

The Hazard Handler is designed to help small businesses kick-start their hazard management system. It provides practical information on how to identify and handle both generic and industry specific health and safety issues.

If the business is eligible, the Hazard Handler online tool to apply for the ACC Workplace Safety Discounts programme.

It provides hints and tips for managing hazards and references to further resources to be explored. It should take up to 60 minutes to complete. A personalised hazard register can also be downloaded. The Hazard Handler also provides application forms for the ACC Workplace Safety Discounts programme. To apply, submit these forms and Hazard Register to ACC. To be eligible for Workplace Safety Discounts, you must be either self-employed or a small business within the agriculture, construction, forestry, motor trades, or road transport industries.

Chek the website for more information on how to apply for ACC's Workplace Safety Discounts.

Completing the tool and downloading a finished hazard register does not guarantee compliance with the Health & Safety in Employment Act 1992. However, completing the Hazard Handler provides the first steps towards managing health and safety within your workplace.

http://www.dol.govt.nz/hazardhandler/FormBuilder/FormBuilder.aspx?ID=600

Tamahere:

Accident waiting to happen

by Ross Miller

While no-one has actually used the words, it seems plain that the fatal Tamahere Icepak Coolstores explosion and fire was an accident waiting to happen.

And when reports on such accidents point out the facts, the solutions are always eminently reasonable. The wonder is that the cures are so simple the situation shouldn't have arisen. Except, of course, we are with dealing with human nature and some things just never get done.

What's a sign here or there?

So far, nobody appears to have made any political capital from the fact that Icepak was refrigerated by new eco-friendly, but explosive, refrigerants rather than the old, non eco-friendly but stable refrigerants.

The New Zealand Fire Service report into the incident states that a massive explosion occurred two minutes after firefighters entered the building, responding to a smoke detector activation and the resultant fire quickly grew in size and intensity once the dairy products stored there became fuel.

The blast that resulted travelled though the building and out the doors pulverising a brand-new fire truck, and was travelling at over 2000 kmh - it's a miracle the entire crew wasn't wiped out.

"The legislative framework surrounding the management and use of flammable refrigerants is complex, and it is not clear to what extent the Icepak facility complied with all requirements."

There are a number of different mechanisms through which the Fire Service could be informed that hazardous substances are in use in such a facility, the report says and admits that the fire service could have identified the facility through its own processes even though the facility lay outside the urban fire district.

This is where some of the human nature comes in. The facility, while on the Hamilton urban "radar", was not a "responsibility" of the urban crews as it is outside of their district in a rural area. And rural crews are not set up to deal with such emergencies. So, in effect, it fell through the cracks.

The report says the coolstore used the commercially available refrigerant known as Hychill Minus 50 that consists principally of propane. The facility was always at risk from fire, says the report, with very large quantities of combustible material contained in the expanded polystyrene

A brand-new half-million dollar fire truck totally destroyed in the explosion and subsequent fire – Waikato Times.

construction panels and also in the foodstuffs stored.

"There were no compliant fire detection or protection systems or hydrants, and very limited firefighting water."

When the firefighters arrived at Tamahere, it was a routine call – there appeared to be no smell associated with smoke or vapour and no warning signage about the presence of flammable gas.

"Had the firefighters suspected a flammable atmosphere to be present, their training and National Commander's Instructions would have required them to withdraw at once and evacuate to a safe place," the report said.

Scene examination and other evidence suggest the explosion was almost certainly caused by a leak of flammable refrigerant that ignited while the firefighters were in the plant room. Ignition was probably electrical.

Specific matters in the inquiry team's recommendations include:

- The HSNO regulations and standards should be amended so that stationary refrigeration systems, and the refrigerant they contain, are subject to appropriate controls.
- All large-scale flammable gas installations should by law require inclusion of stenching agents in the gas.
- The regulatory regime as a whole should be reviewed to promote the sharing of information about hazardous substances between regulatory and other interested agencies.
- The current rural/urban fire legislation should be analysed in relation to risk planning and control of fires in buildings throughout New Zealand.
- Agencies need to share information about buildings using nationally-consistent formats.

* Fire Service pre-incident planning processes need to identify high-risk buildings, including those that are outside the urban fire district.
- The current Fire Service instruction on significant incident and post-incident support should be reviewed to capture lessons learnt in this event.
- Fire Service operational instructions on the use of gas detectors should be reviewed to provide more detailed operation.
- Formal security and scene handover procedures for major fires should be improved.

Charges laid

The Department of Labour has bought charges against Icepak Coolstores and three of its directors, and against a refrigeration company and one of its directors.

The case has been deferred until mid-February.

Thousands of tonnes of dairy products were ready fuel for the conflagation at Tamahere. Not only was there a possible health hazard from the dense smoke, but melted butter and cheese had to be bunded and stored before it got into local water.

Nine factors of hindsight

The inquiry into the Tamahere disaster identified nine factors, any of which could have avoided the risks and injuries to the responding firefighters.

1 HSNO regulations applied fully to this situation.

2 Prior notification to the Fire Service of hazardous substances at the premises.

3 Receipt of an application for approval of an evacuation scheme.

4 Pre-incident planning and familiarisation by local fire service staff.

5 Fire service awareness of the large-scale use of flammable refrigerants in New Zealand.

6 Warning sign at the premises.

7 Stenching agent present in refrigerant gas.

8 Flammable gas detection on the premises alerting crews.

9 Crews using a portable gas detector.

This, says the New Zealand Fire Service report into the incident, indicates that the fundamental cause of the incident may lie in part in systemic defects in the regulatory environment and the communication between the various regulatory agencies. 'This is an issue that may deserve wider investigation by the Government," says the report.

NZIHSM executive

The NZIHSM committee and advisors from a recent meeting are from left to right: Bill Birch (NZCIC), Phillip Tse, John Hickey, Linda Amitrano, Geoff Mayes, Jack Travis, Joanne Daglas (NZCIC), Anthony Lealand, Colin Pullan, Peter Roche Absent: Dave Lascelles, Peter Keller.

New rules for farm diesel storage

Existing above-ground diesel tanks of up to 2500 litres capacity will no longer need to have a compound (bund) to guard against the risk of leakage, providing they are located so that any spillage will not endanger any building or flow into any natural water, under new ERMA regulations.

Other rules regarding the use of existing and new diesel tanks can be found on the ERMA New Zealand website.

The exemption only applies to diesel tanks that were in use or under construction prior to April 2004 and continue to meet the requirements of the previous Dangerous Goods legislation.

The rule change will allow existing 500 gallon (2273 litre) diesel tanks to continue in use without requiring the construction of a compound.

The new rules apply to existing diesel tanks as long as they are regularly maintained and are in good order. All new tanks over 2000 litres will have to have a compound.

The regulations regarding the storage of petrol on farms have not changed.

Three more chemicals for review

The Environmental Risk Management Authority has decided there are grounds to reassess the risks and benefits of the continued use of:

* trichlorfon, used as an insecticide and in veterinary uses;

* dichlorvos, used for control of crawling and flying insects in both agricultural and public health sectors; and

* methylarsinic acid, used for control of paspalum and other weeds in turf.

They are being reassessed as part of a strategic hazardous substances review and reassessment programme, which aims to reduce risk to people and the environment. Under this five- year programme, ERMA New Zealand has targeted for reassessment a priority list of 20 hazardous chemicals used in New Zealand.

It is a living list and may be changed or added to over the five years of the project.

"What we will be doing now is gathering latest local and overseas information on the human health and environmental risks associated with these chemicals," said Mike Morris.

"We'll be looking at their current use in New Zealand, and whether alternatives exist. The reassessment will reconsider the adequacy of the safety precautions, or even whether the chemicals should still be used in New Zealand."

ERMA wants to hear from people using these chemicals.

Another look at Methyl bromide

Valid grounds exist for the reassessment of the fumigant methyl bromide, according to ERMA – the first step in a process that will determine if it can continue to be used in New Zealand.

CEO Rob Forlong said there was a significant degree of public concern about the effects of methyl bromide as an ozone depletor and possible health effects on workers, and a reassessment of it would clarify the risks, costs and benefits of its use.

The Authority decided there had been a significant change in both the use of methyl bromide and in the quantities being imported. This was due in large measure to the growth in log exports to Australia, India and the Far East.

The work is expected to take up to 18 months, after which the public and interested organisations will be invited to make submissions.

Sawmill PCP levels safe

One very large, six large, 28 medium, and 220 small sawmill sites exist in New Zealand where pentachlorophenol has been used.

Data has been collected at 17 sawmills to estimate the extent of dioxin present in a consultant review. Mfe's Sue Powell says that of the 255 sites, 100 are no longer sawmills. Most are zoned commercial or industrial, but a small number of sites are now used for residential purposes and land records were not clear whether those sites had been appropriately managed.

"The risk of health impacts is regarded as low, but as a precaution health and council officials visited those sites and spoke to residents. All of the residents were aware of the land's former sawmill use."

The report updates the national estimate of dioxin in soils at sawmill locations, and contributes to a reporting obligation under the Stockholm Convention on Persistent Organic Pollutants.

All councils in New Zealand have received the report, and under the Resource Management Act's 2005 amendments are obliged to ensure their land databases correctly reflect sites known to have a history of contamination.

"Councils should require the clean-up or ongoing management of former sawmill sites where PCP was used before approving future land-use changes," Ms Powell says.

The report is available at http://www.mfe.govt.nz/publications/hazardous/assessment-dioxin-contamination-sawmill-sites-2008-10/index.html.

Agrecovery spreads wings

The Agrecovery rural recyling programme is reaching beyond its original container collection and disposal to take on far wider reaching projects.

The Stockholm Agreement is 'winding down' but 3R Group's Bruce Emerson says a model is being worked on that will continue to ensure the retraction of unwanted chemicals.

"We have a responsibility to continue recovery programmes," he said, recounting a story of a false wall being found in a shed, behind which were stored tonnes of unrecognisable chemicals that had been lost to modern memory.

Agrecovery is also moving on from its initial plastic container recovery to programmes next year that will collect silage wrap and large chemical drums of 200 litres plus.

This year has been a good one with the progamme 70% up on its first year and for this financial year, a quarter of a million containers have moved through the 50 collection sites. Feedback from users, brand owners and the Ministry for the Environment was positive and they all see the importance of the industry supported product stewardship programme.

Mr Emerson said it was now important to get more involvement from dairy hygiene and animal remedy companies and to increase the participation rate from growers and farmers to at least double the number of agrichemical containers recovered in the next year.

"Having collection sites stretching from Winton in the south to Kaitaia in the north and developing the world's first mobile shredding truck designed to specifically process agrichemical containers has to rate as some of the year's greatest highlights. Other highlights included:

- training hundreds of people throughout New Zealand on the important aspect of accepting triple rinsed containers;
- a nationwide road show undertaken during October 2007 where Agrecovery was presented to retailers, farmers and growers;
- developing the promotional tool kit and witnessing the rapid increase in recognition of the brand name Agrecovery;
- signing 14 new brand owners and cementing relationships with the 16 original that committed to Agrecovery.

"Our Agrecovery champions such as former All Black Ian Kirkpatrick also deserve special mention. As everyday users, they have volunteered to publicly stand up for the programme.

" They have given us wonderful stories about why they have embraced Agrecovery and are now inspiring others to come on board.

"Their experiences are real and this is what makes the difference," Mr Emerson said.

Gisborne has been a stand-out region where growers and farmers are rallying together encouraging their neighbours, colleagues and friends to be part of the programme.

HSNO Act – NZIHSM survey: OK but could do better

Since its inception in 1996 and commencement of implementation in 2006, the Hazardous Substances and New Organisms Act has come under significant criticism.

Mainly anecdotal comment is along the lines that:

- it is too difficult;
- it is not working;
- there are too few test certifiers who are making too much money;
- compliance costs are too expensive;
- there is no enforcement for non-compliance, so why bother?
- there are many non-compliant businesses who are making no effort to comply;
- the old dangerous goods legislation was more effective.

While the HSNO Act is new legislation in that the compliance requirements have only really been in force a little over two years, there is little data to assess the validity or otherwise of most of these claims.

The previous dangerous goods legislation, which commenced in 1958, delegated the responsibility for administering and enforcing the Act in the main to the local authorities or city councils.

They were typically charged an annual dangerous goods licence with the main visits by government inspectors to dangerous goods sites being during the requirement for a building consent, or along with the OSH authority after a complaint or an incident, which is often too late.

To address this lack of co-operation between all interested parties, a new 1996 HSNO Act effectively split interested parties into three central areas: Legislation and administration (Govt), Compliance advice (Private) and Users (Private).

A major difference from previous legislation is that the compliance function (test certifiers) has been split from the enforcement function (public authorities) to 'in theory' prevent potential conflicts of interest and allow better co-operation between the "users" and the compliance officials (test certifiers) to raise the standard of compliance and reduce and/or minimise the risk to the community and environment.

Is the theory working?

The HSNO Act 1996 effectively split the role of the enforcers and the compliance assistance to encourage users to seek assistance from an intermediary assisting group (test certifiers) who could review, advise and certify a hazardous substances location without the immediate threat of being closed or restricted by authority.

This model could be outlined as illustrated in the diagram below.

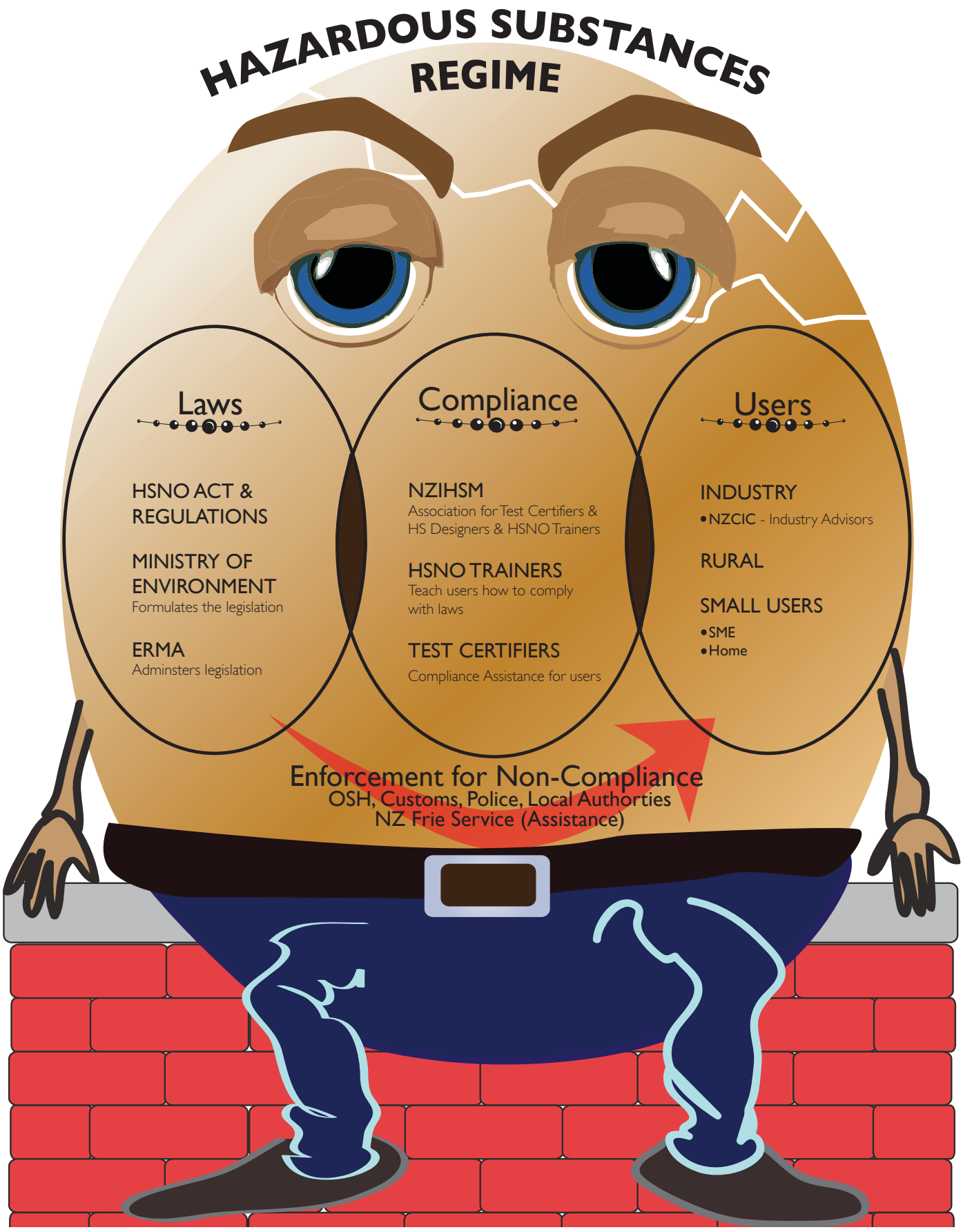
The diagram indicates the success of such a system relies on the three functions – legislators (govt), compliance advice (private test certifiers) and hazardous substance users (private) – working together to minimise HS locations and users from non-compliance and requiring the actions of government enforcers to force compliance to close a facility.

To try and allieviate a perceived lack of hard data, the professional association for the HSNO test certifiers (the New Zealand Institute of Hazardous Substance Management) decided to survey its members and other interested parties to provide some realistic data on these and other issues so that a more scientific approach could be adopted in identifying the scope and scale of perceived 'problems' with the current HSNO regime.

The response

There was a good response to the survey with over a quarter of members plus others responding to what is obviously a significant

How precarious is the HSNO regime?



Type of HSNO Work	Avg No of certificate processes commenced per year per respondent in each category	No of certificates issued in year for respondent in each category	Average % certificates started that complete per annum	Average No of Site vists per year (Test certifiers & Enforcement) per relevant respondent	Average No of visits before certificate standard is achieved (No)	Average time between first visit and site reaching standard of compliance for certificate (Days)	Estimated % of clients who do not respond in 1 year after preliminary advice is provided per respondent
Approved handler certificates	116	106	91.64%	11	1	30	12%
Approved handler training	144	69	47.74%	44	3	2	0%
Hazardous substance location	63	35	56.46%	65	3	86	26%
Stationary container	22	17	74.63%	22	3	40	23%
Enforcement	0			144		119	11%
General advice	50			42		0	5%
Other : (detail)	20			20			

Note: These figures are averages of received responses. Where three or less responses were received to a question these were NOT averaged

issue affecting the HSNO regime. The responses were from around the country with approximately two-thirds of respondents from the North Island and one third from the South Island.

Private vs public respondents.
The balance of the surveys received were 35% from the self-employed sector, 29% from the local and central government representatives and 35% from the private sector.

Where are the test certifiers gaining their income from and are they charging too much?
For the self-employed respondents it would appear that, on average, they gain two-thirds of their income from the private sector and one-third from the Government.

Charge rates and remuneration.
It is noticeable that in terms of remuneration, with a few notable exceptions, the average test certifier earns only 27% of income from HSNO chargeable activities versus 9% non-chargeable activities, and the majority of the income is derived from other non-HSNO related activities.
This would tend to indicate that the majority of test certifiers still need to derive the majority of their income from non-HSNO related sources, so with a few exceptions, the average test certifier needs to have a separate source of income.

This is further emphasised by an pro-rata average salary of the test certifiers responding being only slightly above the New Zealand average salary at approx $52,000.

For comparison purposes, as this value is less than the average salaries of similar professions like accountants, engineers and architects, it does not indicate that test certifiers are overcharging for their services.

Work by client type.
For the respondents, it appeared that their work undertaken was 55% for industry, 16% rural, 17% government with the retail sector 6% and small/medium enterprises 7% accounting for the other certificates. While not unexpected, this could indicate that the SME sector may not be targeted by test certifiers as much as 'larger client' sectors.

Market size and uptake of test certificates by users

There are three main HSNO test certificates undertaken by test certifiers:

Approved Handler – for those who wish to use significant quantities of hazardous substances;

HSNO location – for places that store or use significant quantities of hazardous substances;

Stationary Container – for containers storing more than minor quantities of HS.

Approved Handler Certificates It would appear that the average test certifier issues almost twice as many approved handler certificates as any other certificate. This is possibly not surprising given that many approved handler certificates can be issued as part of many persons applying for an AHC while attending an approved handler course.

These numbers would tend to reinforce anecdotal evidence that the approved handler certification regime has met a reasonable level of success.

HSNO Location Certificates
Possibly of more concern is the the statistic that only 57% of hazardous substance certificates are completed within an annual period. This would indicate that for a variety of reasons, hazardous substance location certificates are taking over 80 days to complete. Over a quarter of those sites that do apply for an HS Location certificate, do not finish the process after one year of commencement.

This may be surprising given that the location certificate requires only basic requirements such as identification and classification of HS on a hazardous substance register, AHC, secondary containment, signage, safety data sheets and emergency response plans and adequate zoning and fittings for flammable areas.

Most of these sites have in the past held dangerous goods licences which also required most of the above requirements, but yet only 10% of sites are compliant when first visited.

Also, if only 15% actually understand the requirements, this would indicate that education is a major part of test certification.

Many not compliant

While it is a requirement that all sites with HS be compliant, there are still many yet to meet this standard.

If this is considered alongside the estimate of 42% of possibly non-compliant sites that have not even commenced the process, then there is still an alarming number of sites that need to be raised to a compliant standard.

The 86-day period for sites to become compliant may also indicate that test certifiers are actually taking the process seriously and rather than just issuing certificates prior to full compliance, they are certifying correctly and informing and waiting for sites to achieve compliance before certifying, even though this is often not financially efficient for the certifier.

The issuing of interim certificates (as indicated by 75% of respondents) prior to full compliance may assist this process and the notification of HS sites to regulatory authorities.

Stationary container certificates.

These share many of the same issues as the HSNO location certificates above. Responses indicate that more enforcement needs to be undertaken in this area.

Overall findings

The estimates indicate some success is being made in the object of the HSNO Act to protect the users, society and environment from the adverse effects of the use of hazardous substances.

It is clear that the efforts involved to get everyone hazardous substance knowledgeable and compliant will be a very hard task. But it appears that, particularly in the education of users and approved handlers, considerable progress is being made over the previous dangerous goods legislation.

This is further emphasised in the 86% of respondents who believe the HSNO test certifier regime and HSNO Act are working to an acceptable standard, but could be improved.

From most of the responses it is clear that more support from the Government and enforcers for the compliance activities and test certifiers is required to create a long-term sustainable system.

The major areas identified by the respondents for assistance to the HSNO and test certifier regime are as follows:

- Encouragement for all sites to commence HSNO test certification through increased enforcement. Unfortunately there are still many non-compliant sites that only respond to an authoritative or government intervention.
- Similar to most other professions, there should be encouragement for a professional test certifier association like the NZIHSM. For a fully sustainable system, government assistance for a professional institute is recommended.
- There should be an ability for test certifiers to be able to issue interim test certificates and ability to enforce compliance of slow moving or reluctant sites.
- Government assistance, training, quick query resolution and support of test certifiers is required to maintain a sustainable system.

4. Market Understanding of the HSNO Act
These questions are the respondents **ESTIMATE** of how their clients understand the HSNO regime and their requirements under this.

	Average Percentage (%) of respondents that agreed with statement
Percentage of certificate processes started that do not complete	23%
Do you think that issuing interim certificates (with conditions) for almost compliant sites would be useful?	75%
What Percentage of sites are compliant when you first visit:	10%
What percentage of sites know most the HSNO requirements when you first visit?	15%
What percentage of sites in your area do you estimate may need test certificates but have never applied?	42%
What percentage of your TOTAL WORK time do you estimate that you spend in HSNO related activities?	47%
Do you think that the existing certification system is acceptable?	86%
Do you think that government should financially assist test certifiers?	68%

Transition time almost up for handler papers

The transition period for approved handlers to get all their documentation will expire on 1 January 2009. If you are using chemicals that are required to be under the control of an approved handler, it is important that you have your full 5-year approved handler test certificate by this time.

ERMA New Zealand is now implementing the last stages of the Group Standards system of regulation which was introduced in 2006 under the Hazardous Substances and New Organisms (HSNO) Act.

Group standards gave approval to over 100,000 industrial, manufacturing and domestic chemicals that were in use at the time the HSNO legislation was introduced. They set a variety of conditions for the safe use and management of these substances.

Approved handlers are required for substances that are acute poisons (class 6.1A and 6.1B under the HSNO classification scheme), carcinogens (6.7A in quantities greater than 10 litres) and flammables (3.1A and 3.1B for certain quantities).

You should know the hazard classification of the chemicals you are using, but if you are at all uncertain check with your supplier or look on the safety data sheet.

Test certificates are issued by HSNO approved test certifiers. A list of test certifiers is available at: http://www.ermanz.govt.nz/search/tc.html To obtain a test certificate, you will need to demonstrate to a test certifier that you have knowledge of the hazardous substance, practical experience in handling the substance and any equipment you need to use and that you know about the HSNO legislation.

For more information on approved handlers, call the ERMA New Zealand Hazardous Substances Compliance Line on 0800 376 234.

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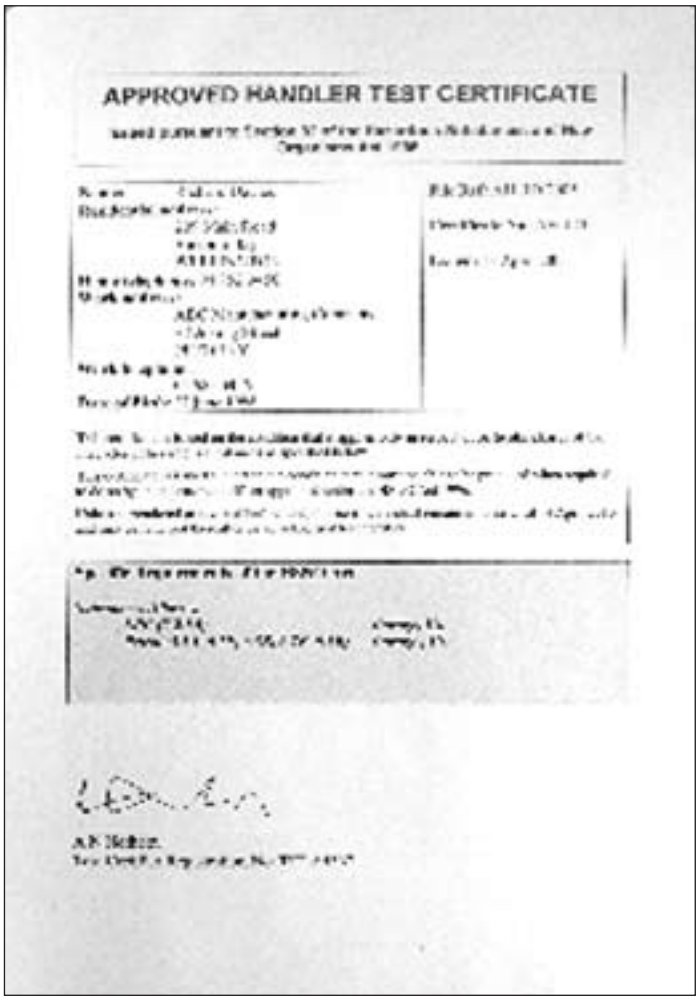
each other. In particular private test certifiers seem to provide a low-cost, often thankless but very important role. However as perceived low-paid, high-risk emissaries for the Government, increased government support is required for the sustainability of this test certifier group.

Additional government and HS supplier enforcement, where required to provide motivation to non-compliant sites, would also be beneficial. The insurance industry might like to advise its clients that coverage may be incomplete where hazardous substances are present without suitable certification

So what now? Our institute undertakes to lend its support to the HSNO process – and thank you for your help too!

--- *John Hickey*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Magazine standards wrong for pyrotechnics

by Anthony Lealand

ERMA NZ has asked for submissions on Australian Standard for magazines AS 2187.1-1998 but magazines built to this standard, or similar massive construction standards, have been shown to be extremely dangerous should an explosion occur.

There have been three major accidents involving this style of magazine.

One was in Carmel in Australia, where handling pyrotechnics near a magazine ignited the magazine, which then blew up and the debris punctured other magazines causing a chain reaction, firing steel debris hundreds of metres.

A second incident in Australia at Howard's fireworks storage at Wallerawang repeated the scenario, with exploding magazines igniting additional magazines, and throwing the steel container debris for hundreds of metres.

Remarkably similar results occurred in Holland at Enschede, when reinforced concrete magazines threw large lumps of debris for hundreds of metres. It was salutary to observe here that substantially lighter steel containers, called Mavoboxen, did not fire the debris nearly as far.

The Australian standard is based around the security of class 1.1 high explosive (commercial blasting explosives). The security of high explosive is paramount to prevent misuse. However, high explosive does not contain its own initiation source (the detonator). Modern high explosive has an almost impeccable record for safety in storage.

Fireworks, which can be ignited by either spark, heat, friction, impact or flame, however, present a substantially increased risk of initiation, especially when chain reactions of magazine initiation occur.

The nub of the matter is that the stronger the enclosure the fireworks are contained in, the greater resulting explosion. The resulting pressures tear the magazine to pieces and throw pieces for hundreds of metres.

We are very lucky that Germans at CHAF (Quantification and Control of the Hazards Associated with the Transport and Bulk Storage of Fireworks) did some tests on bulk fireworks along with Ettore Contestabile at Canada Centre for Mineral and Energy Technology (CANMET) which has an ongoing programme of testing fireworks.

You can see this at the CHAF site <http://www.chaf.info/videos.htm> where a test with a 20' ISO container full of waterfalls explodes.

This normally is a very mild firework effect taking a minute to burn when not contained.

In personal communications with American pyrotechnicians, they have told me that in some states they are permitted to store

The Howard incident

The long strip of container lodged in the wall was thrown several hundred metres and through the wall of the shed.

fireworks in old truck trailers. These are of aluminium and fibreglass construction, fitted with substantial locking.

In incidents involving these, debris has been thrown to a maximum of 100 m, not 300m or 400 m. The debris is also far lighter.

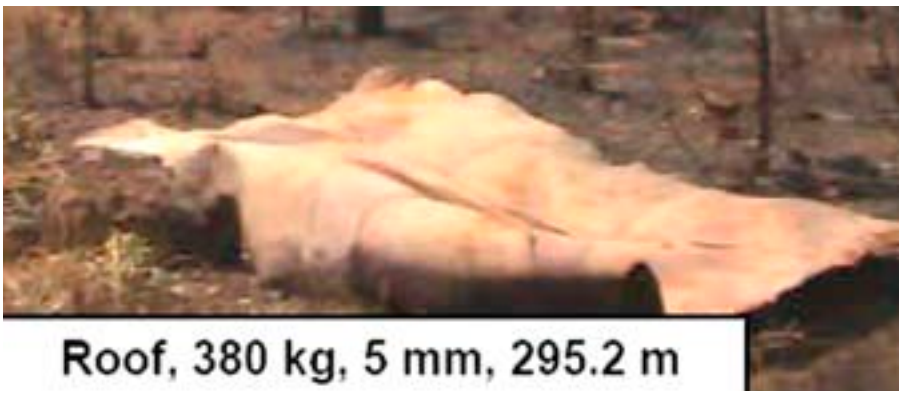
In my opinion, the security of fireworks can be addressed with barrier fences, video surveillance and burglar alarms.

The debris and containment issues can be dealt to by alternate methods of light frangible (easily broken) magazine construction.

The matter will be discussed at the International Fireworks Symposium in Mexico in April 2009 where I will be presenting a paper on this problem.

Anthony Lealand is a test certifier and an importer and manufacturer of fireworks in Christchurch.

The photos by Ettore Contestabile from TNT Equivalency of Firework Shells: an insight into the Carmel Explosion, *show the door (above) and the roof of the container, both hurled hundreds of metres.*



Merry Christmas and a safe New Year

HSNO begins at home

Most of us are aware of the obvious hazards in the workplace or in public places, but it's a fair guess, unless HSNO people have little children, their everyday household hazards are within easy reach and the house wouldn't qualify for an "appropriate licence".

For most household cleaners, detergents and pesticides used at home, providing you follow the instructions on the label and packaging on how to use and dispose of the products, you should be meeting the key requirements of the HSNO Act.

However, if you have one of the following products you may need a little more information –

Swimming pool chemicals

Most domestic swimming pool chemicals do not need any special training or certification requirements.

But it is important you read all the instructions carefully, especially on how to use them, where and how you can store them safety.

Avoid having more than you need and always keep them locked up in a safe place away from children and away from sources of ignition such as electricity or flammable substances.

Talk to your supplier if you need more information on the specific products you are using.

LPG gas bottles

If you use LPG gas bottles for your barbeque or heater:

- ensure they are within their test period. Your service station will check this each time they are filled
- if you have old LPG bottles, talk to your local authority about how to dispose of them safely
- if you have more than 100kg of LPG, you need to have an Approved Handler available and a location test certificate; this includes the total amount of all the bottles you have at home.

Talk to your supplier and confirm they have an approved handler available at all times and contact a test certifier to arrange your location test certificate.

Petrol

Containers of petrol must be stored properly and safely. If you have more than 50 litres of petrol (not including what is in you car) then you will need to be an approved handler (or have one available) and have a location test certificate.

So only store what you need to use and keep below the limits unless you get the appropriate certificates.

Paint

Solvents like turpentine for thining paint or washing brushes are flammable and must be stored safely and away from sources of ignition.

Divers

If you have tanks for diving:

- ensure they are within their test period. Your local dive shop will check this each time they are filled.
- if you fill your own tanks, you must be an approved filler and ensure the tanks you fill are within their test period.

You should also ensure your filling equipment is well maintained and the quality of the compressed air is checked regularly (note the filling equipment and air quality is not controlled under the HSNO Act).

NZ Institute of Hazardous Substances Management (Inc)

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Position Held: _____

Full or Part Time: _____

Other Duties: _____

Or: ☐ *Self-employed*

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