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**Pike River, Managed mining,  
Member survey, IBC storage,  
Flexible Regulatory Systems.**



# USEFUL ORGANISATIONAL CONTACTS

## **NZ Institute of Hazardous Substances Management (formerly the Dangerous Goods Inspectors Institute)**

[www.nzihsm.org.nz](http://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.

## **Responsible Care NZ**

[www.responsiblecarenz.com](http://www.responsiblecarenz.com)

Box 5557 Wellington 6145

Responsible Care NZ works closely with industry partners to successfully implement the Hazardous Substances legislation. This is achieved by implementing and promoting the international SH&E protection initiative.

The NZIHSM works alongside Responsible Care NZ to enhance professional knowledge and capability.

## **EPA**

[www.epa.govt.nz](http://www.epa.govt.nz)

The EPA administers the HSNO Act and supplies extensive information on working with hazardous substances.

## **Ministry for the Environment**

[www.mfe](http://www.mfe)

**The Ministry provides policy, publications, technical reports and consultation documents on HSNO legislation.**

## **Department of Building and Housing**

[www.dbh.govt.nz](http://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/](http://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.

## **Government legislation**

[www.legislation.govt.nz](http://www.legislation.govt.nz)

If you know of other agencies which could be useful to members, please let us know at [office@nzihsm.org.nz](mailto:office@nzihsm.org.nz).

## President's column

The HSNO regime has hopefully settled slightly from the turmoil of the Pike River, Rena and other disasters of recent years.

The concluding report from Royal Commission of Enquiry into the Pike River Mine explosion was released and while inconclusive as to what exactly caused the explosion, it did find it was a possibly avoidable incident, and that is the tragedy! It made a number of major recommendations as to methods that may be employed to avoid tragedy in the future with, interestingly, many of these being similar to the existing HSNO controls and we have an article on this.

We also examine Flexible Regulatory Systems where some authorities can more easily adapt and improve problems with existing regulations. We also have an article on preventable incidents that some of our members have observed and hopefully forestalled.

The NZIHSM has repeated its membership survey from 2008 and found that while there are still areas for improvement, overall the HSNO regime has improved and indeed is showing some promise!

In line with the ongoing controversy over the various forms of mining such as coal, deep sea and gold, we have investigated the mining industry in a close Pacific neighbour to see whether it is good, bad or just muddy.

It is interesting from the above enquiries that the public sentiment wishes senior management to have responsibility, and interesting that the Government has announced a new stand-alone Crown agent focused on workplace health and safety – expected to be in place by December. Along with the Director's Institute, it has also "begun the drafting of guidance material for directors on how good governance practices can manage health and safety risks."

The NZIHSM is also interested in standards and has joined with the Standards Association for more cost-effective access by our members

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## Flashpoint

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

Editorial material does not necessarily reflect the views and opinions of the Institute.

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# Tough talk on IBC storage

**The practice of using IBC for fixed storage is dangerous and not acceptable, according to the Ministry of Business, Innovation and Employment, and will be dealt with.**

Kim Comben, the Ministry's HSNO technical leader, says the Hazard Management Bulletin is clear on their use and it should be followed to the letter. "Where we find

this behaviour, we will act swiftly because of the danger.

"If people in the industry become aware of this illegal behaviour, or suspect that such activity is being carried out, they should notify the Ministry's Health and Safety Group through our 0800 20-90-20 contact centre number so we can take enforcement action.

"Reports can be made anonymously," he said.

The DOL's Hazard Management Bulletin says IBCs are defined as transportable containers. Under the HSNO Act, an IBC connected to machinery or other storage vessels for the purpose of discharging its content is classified as a transient item, which is not normally located at a specific place.

When the IBC remains permanently in place, is regularly filled, and used to continuously supply product to a manufacturing process, the IBC, together with the connecting pipework and fittings, becomes a stationary container system (NZ Gazette 35, Schedule 8, Part 21).

A permanently installed IBC, refilled in-situ and not subject to any controls, e.g. secondary containment or inspections, is not HSNO-

compliant and is therefore illegal. As such, it poses a significant workplace hazard.

The Health and Safety in Employment Act 1992 requires employers to take all practicable steps to identify, eliminate and minimise workplace hazards. The misuse of an IBC as a stationary container fails to satisfy this requirement.

The bulletin reminds everyone that suppliers cannot deliver to IBCs known to be non-compliant.

Both the supplier and the customer risk prosecution, facing a maximum fine of \$500,000 or up to three months' imprisonment. Additional penalties of up to \$50,000 per day can apply until remedial action is complete.

The Environmental Protection Agency has information about the controls required for IBCs under the HSNO Act. Visit [www.epa.govt.nz](http://www.epa.govt.nz) or phone 0800 376234.

The manufacturer or supplier of any hazardous substance or equipment (e.g. IBCs) using hazardous substances, must provide safety data sheets for each hazardous substance used in a workplace. These sheets should include HSNO approval numbers for the hazardous substances. These approval numbers can be used to get information about the required safety controls for the substances from the PA website.

## Online safety Service

**A new online safety information service will make life easier for retailers selling agricultural chemicals and other hazardous substances.**

**The database includes information on more than 2200 controlled substances regulated under the HSNO Act.**

**Agcarm has provided \$10,000 to help set up the service that retailers will subscribe to. CEO Graeme Peters says it replaces the need for retailers to keep and update physical records of safety information, a system which he says had become a giant mess.**

[www.epa.govt.nz](http://www.epa.govt.nz)

# Stand-alone H&S agency

A new, stand-alone workplace health and safety agency, to significantly improve workplace health and safety record, is being instituted by the Government.

The creation of a stand-alone Crown agent was a key recommendation of the Royal Commission on the Pike River coal mine tragedy.

The new agency will have a dedicated focus on health and safety and be committed to ensuring people are well protected from injury and death when they go to work each day. The Crown agent will enforce workplace health and safety regulations, and work collaboratively with employers and employees to embed and promote good workplace health and safety practices.

The workplace health and safety functions currently sitting within the Ministry of Business, Innovation and Employment will transfer to the new agency, which is expected to start operating in December this year.

For employers and employees, it is business as usual for the time being, and the Health and Safety Group in MBIE will continue to do this work.

## Editorial continued ...

to standards. Hopefully the combined knowledge of our predecessors, along with the HSNO controls, can also assist us with avoiding major tragedies in the future.

We hope that all of the above assists us with our enhanced goal as decided at the last AGM of:

“Protect, promote and enhance the environment and health and safety of people and communities by preventing or managing the adverse effects while maintaining the benefits of hazardous substances.”

Enjoy the read!



John Hickey,  
President.

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# For whom the bell tolls?

Chemicals are, indeed, wonderful things!

Using wood, humans created fire, and fire meant cooked food, energy to heat the cave on a cold night, and frighten off other competitors from the animal world.

Since mankind discovered metals, they have learned to make a knife. From the knife, hunting became a probability, rather than just a possibility.

While wood was great, it was also heavy and, from an energy efficiency perspective, or kilojoule per kg, it was hard to store or carry round. Then about 3000 years ago, coal was found and used – energy-efficient and with a high calorific value or kilojoules of energy/kg. This efficiency also allowed for the development of the steam engine and through mechanical transport, allowed long distances to be travelled quickly.

The use of energy allowed us to make steel and build bigger and better bridges and buildings so that we can fit more of us in group living and cities.

Following this came the age of oil, a wonder product that reclaimed the world for

man from the natural gases, through liquid fuels, through heavy oils, waxes and tars through to plastics and other useful products that transformed the lives of much of mankind from local hunter gatherers to global citizens and masters of the planet on which we live!

This was indeed fantastic and the lives of many of us are much improved from those of our ancestors of only a few generations ago.

## Balance

However, like all good things, there always seems to be another side. For every benefit there is also a potential downside, or too much of a good thing. While this use of high energy oil and chemicals has given us many benefits, it unfortunately can also lead to big issues or problems where unbridled use is encouraged without a balance of all effects.

The issues of plastics disposal, air pollution, global warming or weather 'weirding', fires and explosions all contribute to a downside from the uncontrolled use of wonderful products. Balance is required and where the positive aspects of chemicals are

welcomed, some care should always be taken to avoid the adverse effects of use of the same.

An example of where balance is required is flammable gases, and the negative effects of a good product can have dramatic and explosive consequences.

Shorter chain hydrocarbons such as butane and propane can supply instant and intense energy, which is great when used in fuels, refrigerants, propellants and similar products.

The downside of this is that these can supply instant, intense and sometimes explosive energy, which can cause damage in refrigerants, propellants and similar products when not used properly. LPG is a case in point, which has many benefits combined with some risk.

Suppliers have now been asked to take some responsibility for their supply. (i.e. It is not only the baby with matches, but also the supplier of the matches that must take some care.) Most suppliers are now correctly checking that a facility is safe or with acceptable risk before delivering their product by checking that correct certification is now in place before delivery.

The converse of this is that there is often pressure placed on the certifiers to certify a facility as soon as possible so delivery can proceed unencumbered without any delays, and what is seen by the uninitiated as minor

infringements, should be considered OK.

The issue for the test certifier is that neither the customers nor the supplier, are likely to thank you when you highlight potential difficulties with an established installation and reasons to delay certification. However, the certifier must advise the optimum result to minimise the risk of a hazardous incident and 'protect people and the environment against the adverse effects of hazardous substances'.

Some examples found by certifiers' include:

**The installation of LPG cylinders for school laboratories.** These had been installed and in use for some years, but on close inspection were within 1m of an egress doorway, had low level vents bleeding to under a classroom and windows just above them. These cylinders, while

outside, were installed under a canopy within school quadrangles. Consideration of all of this was of concern to the certifier in spite of the claim by the school that they had been used safely for many years and previously certified.

From past experience as a fourth former (or year 10 in modern terms), the certifier believed that anything was possible and separation of the cylinders from the classrooms and egress routes should be insisted on.

Given the potential risks, the certifier refused to re-issue certificates until such a time as the issues were resolved, although the decision was not popular and final resolution is still being sought.

**A public laundrette branching into LPG cylinder filling alongside the clients** (pictured below). An LPG cylinder store complete with power supply and oxygen bottle. The store was shifted successfully and problems easily fixed.

**A major council with multiple LPG cylinder stores installed in public parks had provided adequate cages.**

However, there were no fire extinguishers in close proximity and some cylinders were installed adjacent to manhole and stormwater drains. While this was raised, the reporting certifier appears to have been replaced with a 'less difficult' certifier who will hopefully resolve this.

The benefit of these examples is that an independent certifier is able to raise the issues and hopefully prevent tragedy prior to the event.

However, like any referee, a certifier's decisions may not always be supported, and they may be replaced, but like ALL who's role is to "prevent the adverse effects of hazardous substances", a certifier must be able to look in the mirror and ask: "Am I brave enough to be sacked today??"

Such is the life of a test certifier!



## Flexible Regulatory Systems

# Moving with the times

by **Anthony Lealand**

Two government departments dealing with extremely dangerous and lethal products in everyday ordinary use, have the ability to create rules and exemptions built into the regulatory structure.

I'm speaking of the Civil Aviation Authority and the Electrical Workers Registration Board.

Both address the needs of industry by listening to what problems have been found with the rules, what new rules need to be created, or what rules need to be deleted.

This is best expressed in the words on the Civil Aviation Authority website that says:

"The objective of the new rules system is to strike a balance of responsibility between the State authority and those who provide services and exercise privileges in the civil aviation system. This balance must enable the State authority to set standards for, and monitor performance of, aviation participants while providing the maximum flexibility for the participants to develop their own means of compliance."

So with this in mind, there are some very clear guidelines on the website. The first is:

any interested person may petition the Minister to make a rule. To petition for a rule change, you must lodge a petition using form 24011/01. There is no charge to lodge a petition to make a rule, and a very simple and direct form is offered to lodge a petition.

This is further tempered with a procedure for asking for exemptions from the rules where a case can be made to support a new or

different way of working, or a reason why the rule on a particular instance causes difficulty with no gain in safety. It can be seen at <http://www.caa.govt.nz/ruAre>

I rather like the phrasing of this power in the Act:

The Director may grant exemptions when (among other reasons)

- the prescribed requirements are clearly unreasonable or inappropriate in the particular case;
- events have occurred that make the prescribed requirements unnecessary or inappropriate in the particular case,
- and that the risk to safety

**continued next page ...**

## Killer fertiliser blast

The massive explosion in a Texas fertiliser factory recently killed five volunteer firefighters, an off-duty career firefighter captain and four paramedics who had attended the pre-explosion fire call. Four civilians also died.

The single explosion of

ammonium nitrate and anhydrous ammonium caused about US\$100 million in damage and flattened three blocks of buildings. At least 200 people were injured.

The blast was reckoned equivalent to a 2.2 earthquake on the surface.

photo courtesy of a security camera





will not be significantly increased.

## The Electrical Workers Regulation Board

Up until 2010, electrical

workers had very prescriptive legislation dating back to 1925 with extremely fixed categories of workers such as the electrical wireman corresponding to today's electrician.

With the prior knowledge that the new legislation was to be brought in, the board moved very quickly to consult with the industry to establish the classes of work registration required. This was then signed off by the Minister of the day.

New classes of registration were created, designed to be inclusive and accommodate electrical workers from Dargaville to Invercargill. However, there were industry specific requirements and an electrical worker with Transpower would not automatically qualified to work on Kiwirail, as one would be a line mechanic, and the other requiring traction training.

As well, workers in one industry may only have 10% of their work involved with the electrical side and the remaining 90% with the mechanical set-up for the electrical work.

The EWRB sets the training syllabus, creates the exams, and a means of compliance with the regulations.

All this is done in regular and open consultation with industry giving the board the important feedback so the understand the implications of changes.

Naturally there are worries as changes are made. Have they got it right? But the very fast response time to change matters is significant in moving with the times and creating corrections as new facts come to light.

# AGM minutes

We had an interesting, informative and well-attended AGM and forum a few months ago where a number of topics of interest to our members were considered.

Interesting presentations were received from Pete Keller on the issues with Solid Waste Management at a District Council and we also had a member of the New Zealand Fire Service detailing what actually happens when the NZFS receives a call to attend an industrial incident. Both were well received.

In response to the number of audits taking place on our members at present, and so your institute can forward a balanced view from its members, of the positive contributions that we are all making to the HSNO regime, we will be re-conducting our five-year survey and would be grateful if you could assist in providing your opinions by filling in the confidential survey and returning this when you receive it shortly.

At our AGM, Linda and most of your committee have agreed to continue their service and we are very grateful and again thank them for this.

As part of the AGM, the goal of our institute was discussed and the meeting resolved to promote the benefits of chemicals and hazardous substances as well as protecting against the negative effects. This is a positive move and our 'enhanced' goal now reads :

"Protect, promote and enhance the environment and health and safety of people and communities by preventing or managing the adverse effects while maintaining the benefits of hazardous substances."

A summary of the AGM minutes have been issued separately.

Keep up the good work and please do not hesitate to contact Linda at [office@nzihsm.org.nz](mailto:office@nzihsm.org.nz) or on 0800 854444 if we too can be of assistance and don't forget to send in your standards order forms to take advantage of our member discounts where required.

What the Royal Commission report revealed and what can we learn from this?

# Pike River— Lest we forget!

by John Hickey

The Royal Commission Inquiry report on the Pike River tragedy leads with the photographs of the 29 men whose bodies remain inside the West Coast coal mine.

On Friday, 19 November, 2010, the Pike River mine exploded, leaving the men trapped underground. The RCI report released in November 2012 found the Pike River disaster was a preventable tragedy.

It was inconclusive about what caused the explosion. However, the Commission found the immediate cause of the explosion was a large methane explosion.

“It is not possible to be definitive, but potential ignition sources included arcing in the mine electrical system, a diesel engine overheating, contraband taken into the mine, electrical motors in the non-restricted part of the mine and frictional sparking caused by work activities,” the report found.

The report found the mine had insufficient ventilation and drainage systems, and could not cope with everything the company was trying to do – driving roadways through coal, drilling ahead into the coal

seam and extracting coal by hydro mining.

There was no-one at the mine responsible for ventilation management. During the first explosion the main fan failed, a back-up fan was damaged during the explosion and did not start automatically and the ventilation system shut down.

The report said the mine’s board of directors ignored health and safety risks and should have closed the mine until the risks were properly managed.

When Pike River Coal Ltd began construction of the mine, it had problems from

the beginning. “History demonstrates that problems of this kind may be the precursors to a major process safety accident. Whether an accident occurs depends on how the company responds to the challenges and the quality of its health and safety management,” it said.

The commission suggested that the Department of Labour, and independent monitoring performance in relation to health and safety, certainly ‘had room for improvement’.

All HSNO practitioners should learn from this report, as there are potentially many similar incidents possible under the HSNO regime. However, the HSNO Act practices, in many cases, hold answers to this failure, and in the interests of prevention, we will list the RCI report’s major recommendations with a Hazardous Substance & New Organisms Act practice (HSNO) alongside: The following are the 16



Flames pour from a ventilation shaft after the explosion. Photo: Stuff.

major recommendations from the Royal Commission report on the Pike River Coal Mine tragedy.

**Recommendations**  
(The HSNO Act equivalents)

**Recommendation 1:**  
To improve New Zealand’s poor record in health and safety, a new Crown agent focusing solely on health and safety should be established. (HSNO: Ministry for the Environment and Environmental Protection Agency)

**Recommendation 2:**  
An effective regulatory framework for underground coal mining should be established urgently. (HSNO: The Hazardous Substance and New Organisms Act 1996, regulations, standards and codes of practice).

**Recommendation 3:**  
Regulators need to collaborate to ensure that health and safety is considered as early as possible and before permits are issued.

(HSNO: Approved Handler, Location and Stationary Container certification and Resource Management Act requirements for HSNO).

**Recommendation 4:**  
The Crown minerals regime should be changed to ensure that health and safety is an integral part of permit allocation and monitoring. (HSNO: HSNO certificates AND Supplier responsibilities for checking permits in place before supply).

**Recommendation 5:**  
The statutory responsibilities of directors for health and safety in the workplace should be reviewed to better reflect their governance responsibilities. (HSNO: Strict liability legislation with all parties from the top down (person in charge) responsible).

**Recommendation 6:**  
The health and safety regulator should issue an approved code of practice to guide directors on how good governance practices can be

used to manage health and safety risks. (HSNO: Not specific director’s CoP, but advice during test certification process).

**Recommendation 7:**  
Directors should rigorously review and monitor their organisation’s compliance with health and safety law and best practice. (HSNO test certification process).

**Recommendation 8:**  
Managers in underground coal mines should be appropriately trained in health and safety. (HSNO: Approved handler certification)

**Recommendation 9:**  
The health and safety regulator should issue an approved code of practice to guide managers on health and safety risks, drawing on both their legal responsibilities and best practice. In the meantime, managers should consult the best practice guidance available. (HSNO: regulations, codes of practice, NZ Inst. Of Hazardous Substance Management).

**Recommendation 10:**  
Current regulations imposing general health and safety duties on the statutory mine manager should be extended to include detailed responsibilities for overseeing critical features of the company’s health and safety management systems. (HSNO: Strict liability legislation with all parties having responsibility from the person in charge).

**Recommendation 11:**  
Worker participation in health



**A digger removes the portal seal.** Photo: NZPA.

and safety in underground coal mines should be improved through legislative and administrative changes. (HSNO: Approved handler certification coupled with annual testing of emergency response plans and systems).

### Recommendation 12:

The regulator should supervise the granting of mining qualifications to mining managers and workers.

(HSNO: Test certifier regime and approved handlers).

### Recommendation 13:

Emergency management in underground coal mines needs urgent attention.

(HSNO: emergency response plans and regular testing).

### Recommendation 14:

The implementation of the co-ordinated incident management system in underground coal mine emergencies should be reviewed urgently. (HSNO: Integrated database although room for improvement in co-ordination between all participants (eg; Min Environment, EPA, DoL, Customs, NZ Fire Service, Councils, NZIHSM here).



Photo: Getty

### Recommendation 15:

The activities of the New Zealand Mines Rescue Service need to be supported by legislation.

(HSNO: HSNO certifiers, enforcers and practitioners and their professional organisations' [eg: NZIHSM, RCNZ, etc] could do with some support here).

### Recommendation 16:

To support effective emergency management, operators of underground coal mines should be required to

have modern equipment and facilities.

(HSNO: Users could be assisted by test certifiers and approved handlers for advice in this area).

Overall, the Pike River tragedy was a sad but possibly avoidable incident, and that is the tragedy!

All HSNO practitioners must learn from the experience of our 29 colleagues and the others involved so that by working together, and using the tools, we can form a fence at the top of the cliff rather than an ambulance below!

Let us not forget them!



## The 2013 NZIHSM survey

# HSNO Act shows promise

Since its inception in 1996 and implementation in 2006, the Hazardous Substances and New Organisms Act (HSNO Act) has come under some significant criticism, mostly anecdotal, along the lines that:

- it is too difficult;
- it is not working;
- test certifiers are charging too much;
- certification takes too much time, cost and effort;
- there is no enforcement for non-compliance, so why bother;
- there are many non-compliant businesses who are making no effort to comply; and many other issues.

The HSNO Act's compliance requirements have now been in force a little over seven years, so how are we going and how have things changed since the last NZIHSM survey in 2008?

The previous dangerous goods legislation, which commenced in 1958, delegated the responsibility for compliance and enforcing the Act in the main to the local authorities or city councils. These typically charged an annual dangerous goods licence with the main visits by Government dangerous goods inspectors to DG sites being during the requirement for a building consent.

Anecdotal reports suggested the combination of compliance advice and enforcement occasionally led to potential conflicts of interest. The annual DG licence was often perceived as a billing exercise from council finance departments and many sites never received a visit until after an incident.

After the 1984 ICI fire, to address this apparent lack of co-operation between all interested parties, a new 1996 HSNO Act effectively created an independent private sector compliance assistance step to assist users through the test certifiers, with the general structure being: Legislation (Govt), Compliance advice (Test Certifiers) and Users (Private).

### Is the theory working?

This model could be outlined as follows:

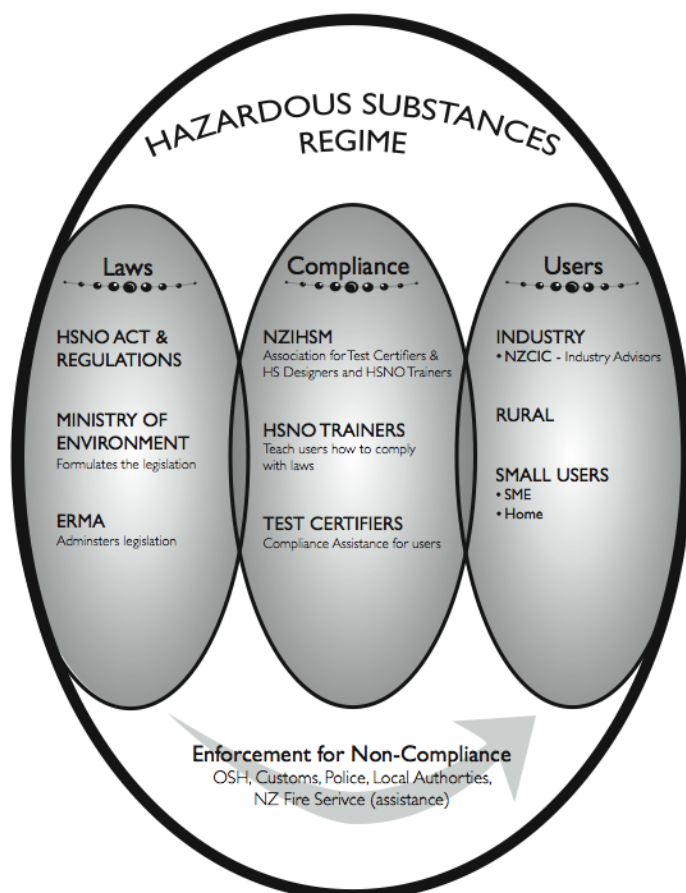
As the (pre-EPA) diagram indicates, the success of such a system relies on the three functions – Legislators (Govt), Compliance advice (private

test certifiers) and Hazardous Substance Users (private) working together to minimise HS locations and users from non-compliance in order to protect users, society and the environment from the adverse effects of hazardous substances.

Only where the compliance system fails do government enforcers need to act to force a facility to adopt safety compliance.

### How has the HSNO regime progressed to date?

To try and alleviate a perceived lack of hard data, the New Zealand Institute of Hazardous Substance Management, as the professional test certifier's association, surveyed its 'test certifier' members and other interested parties in 2008 to obtain data on these and other HSNO regime issues, and have repeated this survey



in 2013 to check on progress.

## Survey overview (preliminary results)

### The response

Of the 2013 surveys received, 86% were from the self-employed and private sector, and 14% from the local and central government representatives.

### Charging too much?

For the self-employed respondents, it was found in 2008 that on average two-thirds (66%) of their income from the private sector and one-third from the Government. In 2013, the results indicated that 76% of income was from the private sector and 24% from government sources, which may indicate a positive result for the tax-payer.

### Charge rates and remuneration

It is noticeable that in terms of remuneration, with a few notable exceptions, in 2008 the average test certifier earned only 36% of their income from HSNO activities with a quarter of these being non-chargeable HSNO activities. In 2013, the results indicated 38% of income was from HSNO activity and 18% for non-chargeable activity.

This result would indicate that the majority of test certifiers still need to derive much of their income from non-HSNO related sources.

So with a few notable exceptions, the average test certifier still needs to have a separate source of income.

In 2008 the average pro-rata 40-hour salary of the test certifiers responding was only slightly above the New Zealand average salary at approx \$52,000pa, and there was similar remuneration between government and private sector certifiers. In the 2013 survey, the results were not definitive in this area but would indicate the average annual test certifier salary has increased marginally, but is not significantly different to that for similar professionals.

However, most test certifiers are small to medium operations with significant cost proportions of income. On this basis it would appear that the average charge rate to break-even assuming the average certifier salary, was around \$120 per hour.

There was, however, a range provided with one certifier indicating that an hourly rate of \$280 should be charged. While this was likely to be a rather optimistic expectation, the observation was made that a safety defence at the top of the cliff should be paid at least as much as a legal salary at the bottom (ie: prevention should be worth as

much as the cure).

The above would indicate that test certifiers are NOT overcharging for their services, especially when balanced against personal liability and similar professionals.

### Actual time to process certificates

In the latest survey we asked respondents to indicate the actual time taken to properly analyse a location, and/or stationary container test certificate for a typical 'new' site, from the first visit through to the provision of a report and certification.

Overall, this would indicate that for typical industrial site with between 10-20 hazardous substances, the average processing time for a location certificate was around 14 hours and a stationary container certificate, approx. 9 hours test certifier time.

These times assumed minimal travel times and also that required MSDS and hazardous zoning diagrams were available to the test certifiers during the first site visit. Where these are not available, the average real time can



Photo: ISN

be somewhat longer as was indicated:  
Work by client type (ie: Is it too difficult and not working)

For the respondents, the work split was 55% for industry, 16% rural, 17% Government with the retail sector 6% and

SMEs 7% accounting for the other certificates.

## Market size/uptake

The survey responses by

| AVERAGE ITEMS AND TIME REQUIRED TO PROCESS A CERTIFICATE |   |  |  |  |
|--|---|--|--|--|
| ITEM Required  | INITIAL ANALYSIS NEW SITE   |  | INDUSTRIAL SITE  |  |
|  | COMPLEX SITE LOCATION CERTIFICATE<br>Average real time to complete HSNO certificate (hrs) | INITIAL COMPLEX TANK: STATIONARY CONTAINER CERTIFICATE<br>Average real time to complete HSNO certificate (hrs) | LOCATION CERTIFICATE<br>Average real time to complete HSNO certificate (hrs) | STATIONARY CONTAINER CERTIFICATE<br>Average real time to complete HSNO certificate (hrs) |
| Initial contact  | 1.0   | 1.0  |  |  |
| Travel time & Site visit                                 | 6.0   | 6.0  |  |  |
| Analysis of substances (ea)                              | 6.7   | 2.3  | 6.7  | 2.3  |
| Preparation of report                                    | 5.3   | 4.7  | 5.3  | 4.7  |
| Obtaining Zone diagrams                                  | 4.0   | 4.3  |  |  |
| Notification to client                                   | 1.0   | 1.0  | 1.0  | 1.0  |
| Issue certificate, onto database                         | 1.0   | 1.0  | 1.0  | 1.0  |
| Other items?   |   |  |  |  |
| <b>TOTAL TIME (Hours)</b>                                | <b>25.0</b>   | <b>20.3</b>  | <b>14.0</b>  | <b>9.0</b>   |

**Table 2. Market Understanding of the HSNO Act**

| Table 2. Market Understanding of the HSNO Act  |  |  |
|--|--|--|
| These questions are the respondents <b>ESTIMATE</b> of how their clients understand the HSNO regime and their requirements under this. |  |  |
| ITEM   | 2008 : Average % of respondents that agreed with statement | 2013 : Average % of respondents that agreed with statement |
| Percentage of certificate processes started that do not complete   | 23.0%  | 17.1%  |
| Do you think that issuing interim certificates (with conditions) for almost compliant sites would be useful?                           | 75.0%  | -  |
| What Percentage of sites are compliant when you first visit:   | 10.0%  | 15.0%  |
| What percentage of sites know most the HSNO requirements when you first visit?   | 15.0%  | 33.3%  |
| What percentage of sites in your area do you estimate may need test certificates but have never applied?                               | 42.0%  | 12.5%  |
| What percentage of your TOTAL WORK time do you estimate that you spend in HSNO related activities?                                     | 47.0%  | 33.1%  |
| Do you think that the existing certification system is acceptable?   | 86.0%  | 85.7%  |
| Do you think that government could assist test certifiers more?  | 68.0%  | 57.1%  |
| Do you think that enforcement could assist test certifiers more?   | -  | 71.4%  |





**Photo: QEC.**

certificate type and timings can be summarised as: These results would indicate that there has been some noticeable improvement of site knowledge of the HSNO Act requirements over the last five years.

This improvement could partly be attributed to the approved handler training system, and also the influence of supplier's responsibility now requiring suitable certification in place before supply.

However, given that less than one third of sites are fully aware of HSNO Act requirements prior to the first test certifier's visit, this would indicate the certification regime still adds significant value to the HSNO regime. It is also noticeable that some liaison and communication improvement could still be made between enforcement agencies and the test certifiers.

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

- Approved Handler: for persons 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 hazardous substances.

## Overall findings

The above and following estimates would indicate that 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 all society hazardous substance-knowledgeable and compliant will continue to be an engaging 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.

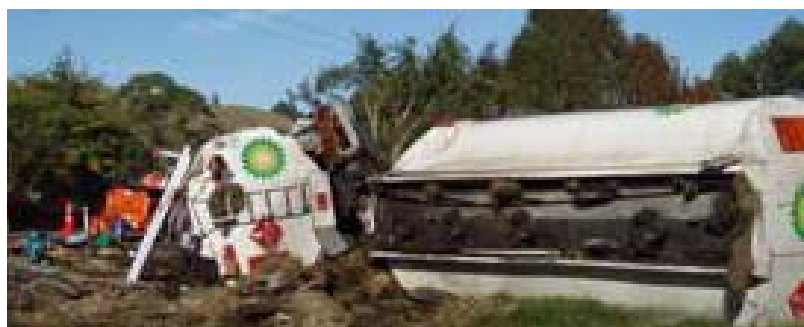
This is further emphasised in the 86% of respondents who believe the HSNO test certifier regime and HSNO Act are working to an acceptable standard, but could be improved.

From most

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

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

- Encouragement for all sites to commence HSNO test certification through increased enforcement. Unfortunately there are still some non-compliant sites that only respond an authoritative or government intervention.
- Suppliers accepting responsibility for checking suitable HS storage, certification and procedures in place prior to delivery of HS has encouraged site improvement.
- Similar to most other professions there should be encouragement for a professional test certifier association like the NZIHSM.
- Class 6,8,9 should be included in HS location certificates.
- There is room for improvement in co-operation, liaison and feedback between enforcement agencies and test certifiers who should be working as a combined team to achieve the goals of the HSNO Act.





# Managed mining good for New Caledonia

NZIHSM received information from its Pacific correspondent while in Noumea recently to see our French-speaking neighbour, learn right-hand side driving and also have a preliminary insight on the mining industries effect in New Caledonia. Observations:

## The country

New Caledonia sits at approximately 20° south, level with upper Queensland and to the west of Vanuatu. It is a series of islands with the main island called Grand Terre – a mountainous island 400km long and 50km wide and similar to New Zealand in being divided by a central mountainous range with definite east and west sides.

This is perhaps not surprising given that Grand Terre was not created by volcanic activity, but was originally part of Gondwanaland.

Grand Terre and New Zealand split away from Australia about 140 million years ago and 80 million years later, Grand Terre separated from New Zealand, heading north into the Pacific.

It is rich in minerals and one of the largest nickel producers in the world.

## The Europeans

When James Cook discovered Grand Terre in 1774 he named it New

Caledonia as it reminded him of the highlands of Scotland named Caledonia by the Romans.

The first Europeans to settle in New Caledonia were British and American Whalers who arrived in the 1840s from Sydney. There were around 60,000 indigenous population around this time.

Then in 1853 Napoleon III visited and laid claim to New Caledonia and the French flag was raised in the north-east, at Balade in 1853. In the traditions of the time, the locals were not consulted and probably did not realise that they were now part of France if indeed they knew where that was!

The local indigenous people were termed Kanaks by the French and given that disease as well as technology that accompanied the new arrivals – there was no doubt mixed reactions to being 'taken over' by a foreign power.

## New Zealanders and New Caledonia

The Second World War strengthened the liaison between New Caledonia and New Zealand with over 40,000 American and New Zealand troops being based at New Caledonia as part of the Pacific Islands campaign. The campaign for the nearby Treasury Islands being the first opposed landing by NZ troops since WW1.

The 70th anniversary of this was commemorated in the New Zealand Pacific War cemetery 9km south of Bourail on Anzac Day this year.

Due to the Kiwis assisting with the airport construction and having a hospital base in Bourail, which treated locals as well as soldiers, the 240 New Zealand soldiers buried in Bourail are remembered affectionately, with local children putting a flower on each grave at Anzac Day ceremonies. The Anzac cemetery (pictured below) is well kept .

## The economy and mining

New Caledonia is a major source for nickel and contains roughly 10% of the world's known nickel supply.



The GDP of New Caledonia in 2007 was \$US8.8 billion, the fourth-largest economy in the South Pacific after Australia, New Zealand, and Hawaii. The GDP per capita was \$US36,300 in 2007, lower than in Australia and Hawaii, but higher than in New Zealand.



Over 60% of electricity is from foreign fossil fuels and this along with mainly French food and machinery accounts for major imports.

Exports from New Caledonia amounted to 2.11 billion US dollars (2007), 96.3% of which were mineral products and alloys (essentially nickel ore and ferronickel). These mining exports have provided the wealth for New Caledonia and allowed for the comparatively high GDP.

New Caledonia is still considered a French overseas territory and while relations have not always been cordial between the indigenous Kanuk people and the Caldoche (French descendents), since 1946 the Kanuks have had greater inclusion in a more egalitarian society from that of early European settlement.

Noumea is the only major city with over two-thirds of the population of 249,000 living in the Noumea region of New Caledonia.

### **Mining**

Given that mining is such a large contribution to New Caledonian society and a regular topic in the HSNO community in its southern

New Zealand neighbour, what has been the good and bad aspects of this on New Caledonia?

From a negative perspective in the early years, open cut nickel mining has still left scars on the landscape and emissions from the smelter of nickel, a carcinogen and hazardous substance, along with runoff from mining into the sea has been the cause of concern.

Deforestation and cattle farming particularly on the western, Caldoche-dominated side, has also lead to erosion. The eastern side has less farming and is more dominated by the traditional Kanuk villages and culture. Interestingly, much of the mining takes place in the south-eastern side of the country.

So are there positive aspects to the mining of a finite resource?

While the mining industry has received 'bad press' in some quarters due to environmental risk and the use of 'finite resource', it would be simple to concentrate on these negatives. From a positive perspective the mining industry now appears to

### **This nickel smelter is almost a suburb of Noumea.**

have taken note of the environmental concerns with industry following government policies to maintain the balance between environmental conservation measures and mining industry including installing pollution abatement equipment followed by re-plantation of vegetation after mining.

There appears to be significant employment of locals in the mining industry, including the training of Caldoches and Kanuks for professional positions (eg: geologists), which along with the mining industries contribution of most of the foreign earnings has allowed for a very healthy GDP for the Pacific islands.

### **Conclusion**

Based on a discussion with a local Kanuk geologist and consideration of the above issues, it would appear on balance that provided the environmental concerns can be allievated, the mining industry is a major and positive contributor to the New Caledonian society and allows for a good standard of living from a western perspective.

# Uncle Archie

Hello HS PRACTITIONERS!

## Latest 'Official advice' for TC audits??

A test certifier was perplexed recently when rung by a former 'client' and severely reprimanded for instructing the 'client' that an approved handler would be required for handling and using sulphur dioxide. Apparently the 'client' had later rung the 'EPA helpline' and been told "not to bother!!!"

This, of course, was in contrast with the TC's advice from the HSNO 6,8,9 regulations Sched 1 where "any quantity" of a class 9.1A is required to be under the control of an approved handler.

The TC contacted Archie to comment on how TC's seem to often find themselves in a "damned if you do, damned if you don't" situation and some support from the EPA and NZIHSM would be appreciated. However, perhaps the 'don't bother' policy could be extended into 'why bother' being an acceptable reply to the latest round of test certifier audit queries!!

## Pike River Commission of Enquiry

Wow!! The Royal Commission of Inquiry report into the Pike River Mine explosion and loss of 29 lives was quite damning with a general

consensus that the incident was a preventable tragedy. There were a number of recommendations made that are remarkably similar to the HSNO Act controls. Maybe using these controls for mining could work?

## Rio – What?

The outcomes from the Rio 12 Earth Summit are still deafening by their silence! Hopefully all of the planet's problems have gone away and only cash crises remain in their place. It is fortunate that New Zealand is NOT getting droughts, Australia NO floods, America NO tornadoes and Beijing NO smog! However, we did have a nice warm summer!

## Supplier responsibility

Comments from test certifiers and enforcers are suggesting that the recent EPA-developed practice of ensuring suppliers check that suitable HS Approved Handler and Location Certificates are in place BEFORE they deliver, is a very good one from a safety perspective and most suppliers are acting responsibly! I have always



thought it unfair just to blame the kids for the wrong use of fireworks or booze!!

If you want to send your comment, you can send it to [archie@NZIHSM.org.nz](mailto:archie@NZIHSM.org.nz). The ideas expressed in this column are not necessarily the views of the NZIHSM or **Flashpoint** and in some cases, the NZIHSM frankly does not approve!

## Standards discounts

Standards New Zealand have now finalised their method for allowing up to 20% discounts for the purchase of NZ standards and 10% on international standards to our NZIHSM members with their suggested method as follows:

"Your members will not be able to log onto your account on our website so they will need to complete and return the order form to [office@nzihsm.org.nz](mailto:office@nzihsm.org.nz) who will then send the order form to Standards New Zealand so we can ensure that only the members of NZIHSM receive the membership discounts."

WE have attached a copy of this form to this email and invite any members who wish to take advantage of the Standards NZ offer to not hesitate in sending completed forms to us at [office@nzihsm.org.nz](mailto:office@nzihsm.org.nz) so that we can forward them on your behalf.

[www.nzihs.org.nz](http://www.nzihs.org.nz)  
[office@nzihs.org.nz](mailto:office@nzihs.org.nz)

