Practical proposals for improving the Department of Labour’s approach to high hazard industries
BACKGROUND

Employers, principals and other people with duties under the Health and Safety in Employment Act 1992 and the Hazardous Substances and New Organisms Act 1996 have legal obligations to ensure the safety and wellbeing of people (and in the context of hazardous substances, the environment). The Department’s role is to administer and enforce the legislation and to:

- help duty-holders to improve safety at places of work and the safety of people at work by providing information and education
- ascertain whether or not the Act has been or is likely to be complied with
- take all reasonable steps to ensure the Act is being complied with.

The Department of Labour’s Labour Group is responsible for enforcing the Act in all places of work. However each workplace is different and can present different hazards and potential harms. In its enforcement work, the Department has tended to prioritise those workplaces where injury and harm are serious and frequent such as forestry or construction and where employers have exhibited an unwillingness or poor ability to effectively manage safety. This approach is a prudent use of a limited inspectorate resource and is consistent with modern regulatory principles.

However, some industries have inherent and significant risks or hazards even when managed by highly motivated and safety conscious operators. For a small subset of these high risk activities, the risk of failure can be catastrophic.

Fortunately, few New Zealand businesses or places of work have the potential for catastrophic failure. Furthermore, where higher risk activities or places of work exist, risks and hazards are generally well managed and, as a result, catastrophic failures are rare events.

Unfortunately, as the Pike River coal mine disaster and other recent large scale disasters such as the Japanese nuclear reactor disaster at Fukushima or the Deepwater Horizon spill in the Gulf of Mexico demonstrate, catastrophes can and do occur.

PURPOSE

This paper intends to assist the Labour Group to identify an appropriate approach to managing high hazard industries. The paper is written for internal audiences and some of the technical detail assumes a reasonable level of knowledge on the issues and the legal/operational contexts. The paper makes a number of recommendations and potential actions for the Group to consider as it works to improve the Department’s approach to high hazard industries.
SUMMARY OF RECOMMENDED ACTIONS

This summary lists the seven improvements suggested in this paper and another 33 specific actions proposed to achieve these improvements. The 33 actions and subsidiary additional action points are not necessarily comprehensive, but provide some sense of the nature of the work required to deliver the work. Many of these actions will be able to be achieved simultaneously.

Recommendation one: Enhance the Department’s focus, capacity and capability to deal with high hazards

- Establish a High Hazards Unit led from National Office
- Planning and co-ordinating high hazard work on a national basis
- Provide additional internal resources to support high hazard work
- Formalise and recognise the contribution from general Health and Safety Inspectors
- Review and update information systems to support high hazards.

Recommendation two: Draw on certification, verification, plans and notifications

- Ensure all required information (operators are required to provide the Department) is up to date
- Establish a national standard for petroleum installation inspection bodies
- Collect information about inspection bodies’ use of subcontractors
- Encourage the use of verification schemes
- Remind operators of all notifiable requirements and pull this information to centralise the holding and processing of this information
- Invite petroleum operators to provide copies of reports of audits completed over the past six months
- Refresh inspection bodies and ensure they are kept current
- Open the possibility of self-inspection or industry-provided mutual inspection
- Encourage reporting near misses / major events
- Develop lead and lagging indicators for high hazards
- Develop a new industry liaison forum focused on high hazards
- Invite inspection bodies to inform DoL of conditions, limitations, qualifications on certificates.
Recommendation three: Strengthen relationships
- Strengthen the relationship with third party inspection bodies
- Strengthen the relationship with employee representatives and health and safety representatives
- Strengthen the relationship with NOPSA
- Strengthen the relationship with operators
- Strengthen the relationship with MED
- Strengthen the relationship with Maritime New Zealand
- Enable other regulators to access our data/information holdings
- Maintain international contacts—but lift them to a strategic level while also maintaining operational contact.

Recommendation four: Bolster the analysis of safety cases
- Third party scrutiny of current safety cases
- Third party scrutiny of future safety cases
- Consider developing an ACOP or guidance note on safety case development and or assessment
- Selectively test conformity with safety cases.

Recommendation five: Help high hazard industries to comply
- Identify any international standards that can be adopted within the current regulatory framework
- Help mines complete a safety assessment/report by providing a simplified template
- Provide high-hazard providers with targeted information on requirements of HSE, HSNO Acts and applicable regulations.

Recommendation six: Support environmental outcomes and regulation
- Actively support interim measures to promote environmental outcomes while legislation is underway.

Recommendation Seven: Hold off further work on funding until these practical suggestions are implemented or progressed
Context

Defining high hazards for the purpose of this report

There is a general consensus that the concept of a ‘high hazard’ industry describes a small set of strategically important operators and activities where failure is rare but which can have catastrophic consequences.

Drawing on various approaches and examining overseas definitions, this paper uses the following working definition for the term high hazards:

- vital to the New Zealand economy
- where failure can have catastrophic impacts (large traumatic loss of life)
- where there are inherent risks that need to be managed actively
- where managing safety is technically complex
- where the risk of failure is low
- where the Department has a prominent regulatory presence (or where there is not another agency that appears to play a significant role—e.g. aviation and the Civil Aviation Authority).

Industries vital to the New Zealand economy

There are some inherently risky industries/work practices which benefit the wellbeing of the nation. Underground mining (particularly underground coal mining), for example, is an inherently dangerous activity but it plays an important role in the New Zealand economy. Similarly, aviation is an industry where there are catastrophic possibilities but also is crucial to the success of the New Zealand economy.

Industries and places of work where failure can have catastrophic impacts

The essence of the high hazard concept is where failure could result in catastrophic impacts. Impacts can be broader than just serious harm or fatalities to people. For example, potential impacts could include:

- multiple fatalities and/or serious harm in the workplace
- fatalities and/or serious harm for members outside of the workplace (e.g. public harm)
- significant environmental damage with the potential to affect the wellbeing of people (e.g. environmental contamination). This is separate from purely environmental damage that has no effect on people as this is the domain of other regulators
- significant credibility or reputational damage - for example, where a near miss might not injure anyone, but demonstrates significant apparent failings in the regulator.

Work where there are inherent risks that need to be managed actively

Unexpected things can occur in any activity and these can inflict significant damage or harm. However, freak occurrences do not necessarily mean an industry or activity is inherently risky. Offshore drilling for petroleum is inherently difficult. The environment is risky, the substances being dealt with are toxic, flammable and unstable, and there are immense pressures involved. Unmanaged, any one of these aspects is likely to contribute to a significant accident. By
contrast, a petrol station deals with basically the same product but, left unmanaged, while risky, is reasonably stable. The difference is the need for active, ongoing management.

**Industries where managing safety is technically complex**

There are many industries where the activity itself is generally safe and safety systems are aimed at preventing disruption or accidents. However, the high hazard concept suggests that safety is something that needs to be sustained through active management (see above) and that the safety systems required are complex. In some industries safety can be maintained by just prudently following set approaches. However, in high hazard industries, the systems are complex and technically challenging.

**Where the risk of failure is low**

Another aspect of the high hazard concept is the infrequency of events. The Department tends to direct its health and safety enforcement to the industries where accidents are frequent and harmful. However, high hazard industries are those where accidents are infrequent but catastrophic if they occur. It is unlikely activities or industries creating frequent and catastrophic-scale harm could exist. So it appropriate for the Department to prioritise its limited enforcement resources on those industries where accidents are both frequent and harmful (i.e. harmful but not catastrophic) and to also focus on industries or activities where accidents are infrequent but potentially catastrophic.

**Where the Department has a prominent regulatory role**

The Department has the broad mandate of enforcing health and safety, employment and hazardous substances law in places of work. This technically means it has a role in virtually all industries and work-related activities in New Zealand. In some industries the Department is seen as a lead agency whereas other industries - including 'high hazard' industries - have other regulators who play a general role in maintaining safety, in a general sense. For example, commercial aviation has significant risks associated with it, but the Civil Aviation Authority is the main safety regulator for ensuring aircraft safety.

**Industry analysis**

Using these criteria is possible to examine various industries set out in the New Zealand Standard Industry Output categories which is used by Statistics New Zealand for its statistical analyses of industrial activities. The Industry Output categories are the officially accepted way of bundling varying types of businesses into particular categories.

If one was so inclined, this kind of analysis could equally be applied to any sub-industry, or indeed a particular place of work or type of activity.

This analysis indicates two industries that fit under this high hazard definition:

- coal mining
- oil and gas extraction.
The analysis also shows the following might also fit under the high hazard definition depending on the circumstances:

- metal ore and non-metallic mineral mining and quarrying
- exploration and other mining support services
- petroleum and coal product manufacturing.

The Department also maintains an active interest in pipelines and geothermal-related activity - both these industries might be included in the high hazards concept. Pipelines carrying gas and other petroleum products may be particularly hazardous. So, there could be a good argument to include these technical areas under the high hazard rubric. Geothermal is already partly managed through the Department’s specialised petroleum resource. It is therefore sensible to continue with this arrangement and to ensure petroleum resources continue to include a focus on geothermal. Bringing the existing pipeline specialised resource into the High Hazards Unit may also be something that ought to be considered.

For the purposes of this paper, though, the focus is primarily on coal mining and oil and gas extraction. However, existing practice suggests bringing the whole extractives focus into the High Hazards Unit (i.e. include quarrying and other types of mining alongside the focus on coal mining) and that onshore and offshore petroleum production and geothermal is included in the High Hazards Unit’s focus on petroleum. Any further widening of the high hazard definition can occur after these initial practical steps have been taken to clarify and improve the Department’s approach to high hazard industries - in particular coal mining and petroleum production.

Other industries that might fit the broad definition of ‘high hazard’ but in which the Department does not play a prominent regulatory role (i.e. there is a more prominent regulator involved) include:

- electricity generation and on-selling
- electricity transmission and distribution
- gas supply
- rail transport
- water transport
- air and space transport.

Again, there may be some sense in widening the Department’s scope on high hazard industries to include these other sectors. However, any decision on this should be considered after the work recommended by this paper has been significantly progressed.

Another way of identifying high hazards is to consider the hazardous nature of certain places of work or facilities rather than types of work. This approach is taken by some other jurisdictions where ‘major hazard facilities’ can be the focus of high hazard regulatory attention. There are some facilities in New Zealand that have catastrophic potential – those with significant holdings of toxic and easily dispersed chemicals, for example. A real example of this type of facility would be a pulp and paper mill that holds large quantities of chlorine dioxide. A failure in the containment could result in a major and potentially fatal release of chlorine gas into a populated area. There is a legitimate open question about whether the High Hazards Unit should broaden its thinking to include major hazard facilities.
This report does not attempt to resolve that question and leaves it open for subsequent thinking. It should be noted that the effective control and safety of hazardous substances is managed under the Hazardous Substances and New Organisms Act. This Department is responsible for enforcing this Act in places of work.

**Capability and capacity**

The Department of Labour’s Labour Group wants to ensure its work with high hazard industries is appropriate and effective given the current regulatory and legislative framework.

The Department’s fundamental concern emerging through the reviews on high hazard work such as underground mining and petroleum is about the Department’s capability and capacity - although most of the focus is actually on the issue of capacity and whether this has an adverse effect on its capability and the level of attention it gives these industries.

This paper identifies a number of practical suggestions on actions that can be taken reasonably quickly to improve the Department's approach to high hazard industries within the current regulatory model. Changing the regulatory framework is largely seen as sitting outside of the scope of this work.

**A practical analysis**

This paper is not intended as a policy review. It is intended to analyse what can be done to improve the Department’s approach to high hazard activities within the current regulatory framework.

Other work, such as the MED comparative review of HSE legislation, identified areas where New Zealand’s regulatory approach could be reviewed. This includes, for example: changing the regulations to allow for the acceptance of safety cases and implementing an industry-specific levy to fund inspection activities.

However, the approach taken by this paper is to maximise the Department’s effectiveness within the current regulatory framework and resources before undertaking a more fundamental review of the law itself.
SUMMARY

The Department’s approach to high-hazard activities is not broken or fundamentally deficient. There are, however, some immediate improvements that could be made within the current regulatory framework that would go a long way to improving the focus, effectiveness and efficiency of the Department’s efforts.

While there are no specific regulations or statutes relating to high hazard industries, regulations under the Health and Safety in Employment Act impose specific requirements on two industries considered to be high hazard in nature - mining and petroleum exploration and extraction.

New Zealand’s health and safety inspectorate is small - about 140 inspectors covering approximately 470,000 enterprises in New Zealand and all of the places these enterprises undertake work. Consequently the amount of resource within this inspectorate focused on high hazard industries is small. Even taking New Zealand’s diminutive size and the small size of its high-hazard industries into account, the Department’s level of resource committed to the regulation of high hazards is small. It is important to note this as any significant increase in any high hazard resourcing potentially comes at the expense of other areas of focus.

Even with the best will in the world, securing additional capacity in these industries is challenging for a number of reasons. Because of the small size of the local industries, accessing people who are suitably independent is challenging. Because the global market for these specialists is reasonably competitive, the Department needs to match market prices to secure their services. Expertise in these industries is globally quite small and in New Zealand it is very small.

This paper not only focuses on boosting the level of resources deployed in high hazards. It also tries to encourage thinking about how the Department can maximise its effectiveness with the limited resources it has at its disposal. This means trying to be more effective at marshalling all of the information, persuasion and connections the Department has to promote the best outcomes.

The paper also recommends a limited reorganisation of current resources so they are more nationally focused and managed. This is aimed at promoting a more strategic approach to the work and being able to efficiently deploy limited resources across the country. It also lifts the profile of the Department’s high hazards work and enables more effective peer to peer relationships with other regulators and other jurisdictions.
RECOMMENDATION ONE: ENHANCE THE DEPARTMENT’S FOCUS, CAPACITY AND CAPABILITY TO DEAL WITH HIGH HAZARDS

General observations

High hazard activities are, by definition, activities that are associated with an inherent risk of catastrophic failure and where the steps necessary to manage safety are highly complex. In order to support its work with complex and risky high hazard industries, the Department must maintain specialised resources - specifically inspectors with specialised technical and professional expertise - to work with these industries.

High hazard work requires a higher level of attention and interaction than other places of work. Accordingly, the Department needs to maintain a sufficient pool of available resources to appropriately service these industries. However, because it only has a limited budget and inspectorate, the Department has to balance the amount of resource it puts towards high hazard industries in relation to other priority areas, such as the sectors where harm is significant and frequent, and also to maintain a general capacity.

The Department’s general workplace inspectorate is small and accordingly its ‘reach’ into New Zealand businesses is limited. This is not necessarily problematic because the primary duty for maintaining safe and healthy workplaces is on employers, principals and those in control of places of work as well as a range of others associated with workplaces. However, it does mean the Department is limited in being able to fulfil its role of supporting businesses to operate safely and comply with the regulatory framework and taking enforcement action against those who are found to have not met their statutory obligations. Accordingly, part of achieving a reasonable balance between high hazard activities and other areas of focus may be about trying to maximise the use and value of the Department’s capability and capacity as much as it is about increasing the number of inspectors working on high hazards.

High hazards require a different approach than general workplaces. Because of their highly complex nature, the Department needs to maintain specialised resources with specific industry knowledge. However, not all work with these industries needs to be undertaken by an industry specialist.

The Department must also ensure that these scarce specialist resources are focused as effectively as possible and not necessarily constrained to local or regional priorities.

The Department’s specialised resources for the high hazard extractives and petroleum industries are currently inadequate.

It is also clear the current resource deployed for the petroleum industry is stretched. With only one specialised resource working on petroleum, the current inspector finds it difficult to achieve more than simply reacting to issues raised by the industry. If the inspector is required to pick up any more proactive work, like reviewing a safety case, this effectively creates significant time pressures. The inspector is also technically subject to any local priorities and resource
constraints. So, if he needs to attend a conference or work in other regions, this needs to be balanced by the local managers against other local priorities. Generally, this seems to work commendably well. However, as resources become scarcer and the petrochemical industry starts broadening its operations beyond the Taranaki region, this will become more challenging.

Recruiting specialised staff from a small, internationally competitive industry is also challenging. Three specialists for each of the two high hazard areas supported by technical and general staff as well as through outside assistance seems a reasonable and responsible first step. As the Department improves its approach to high hazard industries, it is likely it will need to continue to monitor its resource needs.

**Planning and coordinating high hazard work on a national basis**

**General observations**

The Department’s engagements with high hazard industries are managed by service offices as one of many local health and safety priorities. If the Department intends giving high hazards a stronger focus and prominence this approach will not support this.

One of the observations emerging out of the *Review of the Department of Labour’s Interactions with Pike River Coal Limited* and confirmed by this review is that the two inspectors working with the extractives sector work closely together and plan their activities and coordinate assignments between themselves. The inspectors also operate in more than one region undertaking inspection and investigation work in extractives industries in the North Island as well as the South Island. However, this coordination is self-organised and largely dependent on a large measure of goodwill.

The *Interactions Review* also identifies instances where the operations of the extractives inspectors have been constrained by (legitimate) local issues. Given the scope of extractives activities across the country and the likely expansion of the industry, it makes sense to have the inspectors involved in mining to be managed as a national service.

The same general finding applies to the Senior Adviser High Hazards (Petroleum & Geothermal) who works out of the New Plymouth office. Until recently almost all of the exploration and extraction activity has been confined to the Taranaki region. So having the Department’s petroleum inspector located in New Plymouth has not been problematic. While it is likely Taranaki will continue to play a dominant position in the local oil industry, it is also likely that exploration and extraction activities will expand beyond Taranaki. New coal gas initiatives around the Nelson and West Coast regions as well as exploration drilling work around Poverty Bay are already starting to occur and this is likely to expand. It should also be noted that major onshore processing facilities and distribution services, such as Marsden Point and the oil and gas pipelines are also located outside the Taranaki region.
The Department’s approach to both the underground mining and the petroleum industry is likely to increasingly require a greater emphasis on nationally-driven activities such as inter-agency coordination, national contracting and use of third parties and information/intelligence sharing. These types of activities are not best handled through local offices.

**Actions**

1. **Initiate a national high hazard annual work programme** to effectively plan the Department’s work with high hazard industries and places of work. This work programme should set out the priority areas, compliance strategies as well as routine assessments, workplace visits of high hazard places of work and information strategies. [NSM]

2. **As part of the annual planning process,** the Department should identify key local and international relationships and develop an annual engagement plan. [NSM]

3. **Based on this plan,** all key relationships with other agencies, third party contracting and information sharing arrangements should be coordinated on a national basis. [NSM]

4. **The day to day work of the inspectors and other resources working in high hazards areas should be nationally coordinated in line with the national work programme and agreed national priorities.** [NSM]

5. **LGLT should agree to the annual high-hazards plan and identify any elements of the national plan that may need to be cascaded down to or supported within regional and service office plans.** [NSM]

**Establish a High Hazards Unit in National Office**

**General findings**

It is possible to undertake the proposed national high hazard planning and coordination without necessarily changing any existing reporting lines (e.g. having some sort of virtual team). However, by not shifting reporting lines to support this work, this national coordination could blur accountabilities and lead to inefficient and overlapping managerial responsibilities.

Accordingly, it is sensible to establish a new High Hazards Unit. This new unit would take responsibility for planning and coordinating all high hazard activities as well as providing a national focus point for developing and supporting relationships with other regulators, industry bodies, operators, third parties, employee organisations and the wider health and safety inspectorate.

The logical location for a national unit in the current structure of the Labour Group is within the Technical Support Services team. This would help encourage closer links between the Labour Group’s technical specialists (e.g. asbestos, engineering, pressure vessels, etc), its standard setting functions and the high hazard industry specialists.

While part of the Technical Support Services team, the high hazards work should operate as a distinct team given it has a different, more operationally focused aspect to its work compared with the advisory and specialised enforcement services currently in the team.
The general structure of the high hazard team should be to have a senior adviser providing over-arching specialist skills and enforcement/compliance skills while also having active field staff.

This structure is in keeping with ‘mining model’ where there is a Wellington-based Senior Adviser providing leadership, coordination and enforcement activities supported by specialised inspectors in the field. Longer term, the petroleum work should also shift to this model (where a Senior Advisor provides coordination, leadership and enforcement services and is supported by specialised inspectors in the field - probably New Plymouth).

It is recommended the Department should proceed to engage a Wellington-based Senior Adviser High Hazards (Petroleum & Geothermal) and the imminent retirement of the Department’s current New Plymouth-based Senior Adviser High Hazards (Petroleum & Geothermal) provides an ideal opportunity to recruit specialised inspector resources in the field.

All members of the new national high hazards team should be warranted in both HSE and HSNO and should undertake inspectorate work.

**Actions**

6. Establish a new national High Hazards Unit in the Technical Support Services team. [NSM]

7. In the short-term have the Manager Technical Support Services oversee the new High Hazards Unit. [NSM and MTSS]

8. Fold the future management of the High Hazards Unit into Phase 2 of the Labour Group review. [GM and NSM]

9. Change the reporting lines of the Senior Adviser High Hazards (Extractives) to the Manager Technical Support Services and locate the role in the new High Hazards Unit (note: the current Acting Senior Adviser will continue to report to the Chief Adviser for the time being). The Senior Adviser will continue to be based in Wellington. [GM and NSM]

10. Change reporting lines of two mines inspectors to the Senior Adviser High Hazards (Extractives) within the High Hazards Unit. The mines inspectors will continue to be physically located in their current locations. [GM and NSM]

11. When the current Senior Adviser High Hazards (Petroleum & Geothermal) retires (in August 2011), replace that position with a specialised HSE inspector [GM and NSM]

12. Establish a new cost centre for high hazard work and shift reasonable levels of resources out of affected service offices and regional budgets. The Manager Technical Support Services and the affected service managers and regional managers will need to agree on the appropriate level of resource needing to be shifted. Alongside the specific redistribution of resources from affected offices, all cost centres should also make some contribution to the operation of the unit given the national span of the unit. [MBS and MTSS]

13. The Manager Technical Support Services and the affected Service Managers will need to have clear understandings about the high hazard team members in terms of use of local resources (office space, cars, etc). These arrangements may be documented in some sort of service level agreement. [MTSS and SMs/RMs]
**Provide additional internal resources to support high hazard work**

**General findings**

The amount of resources deployed for high hazard activities is limited. For underground mining, the Department has two mines inspectors (one to be recruited) and one Senior Adviser High-Hazards (Extractives) (although there are three mining FTEs and two petroleum FTEs within the organisational structure). In petroleum, the Department currently has one specialist resource focused on petroleum exploration and extraction. This resource also covers geothermal and new petroleum technologies such as coal seam gas and coal gasification.

However, in addition to these specialised resources, there are other technical resources involved in other technical areas that may be relevant to these industries such as asbestos and pipelines. General Health and Safety Inspectors have also been used to undertake investigations, inspections and enforcement in high hazard workplaces. For example, New Plymouth inspectors have (on rare occasions) been used to investigate health and safety incidents in local petroleum operations and the Whangarei office deals with routine health and safety matters at the Marsden Point refinery. It should be noted though that despite the refinery’s complexity and risk, it has not been subject to specialised checking under the Petroleum regulations – the Department’s interactions have been general in nature (i.e. the same type of approach taken to any standard workplace).

The lack of specialised support means the Department’s capacity for dealing with high hazard industries is constrained and comes under pressure when the small number of specialised inspectors go on leave. There is no succession planning and only limited additional capacity (i.e. ad hoc support from the New Plymouth Service Manager and office) to support the Senior Adviser High Hazards (Petroleum).

**Actions**

14. Appoint a health and safety inspector preferably with a background in chemical engineering and/or petroleum to report to the Senior Adviser, High Hazard (Petroleum) in Taranaki. The expectation is that this inspector will provide additional support for the Senior Adviser as well as be part of structured succession planning. [NSM and MTSS – involve SAHHP]

15. Appoint an additional Senior Adviser High Hazard (Petroleum) to be based in Wellington. This Senior Adviser should have a strong background in the petroleum industry and have specific competencies in managing high-level relationships. While this Wellington position should be operationally focused and support enforcement and compliance activities in a coordinated way with the New Plymouth office, this position should also have a focus on building and supporting local and international relationships with other regulators and industry bodies. [NSM and MTSS]

16. Implement a succession planning system for the Senior Advisers High Hazards. This should also be reflected into the development plans for Health and Safety Inspectors supporting the Senior Advisers and the Mines Inspectors (i.e. there should be a defined career-path from the HSE inspectors within the High Hazards Unit to become Senior Advisers) [MTSS and SAHHP]
Formalise and recognise the contribution from general Health and Safety Inspectors

General findings

General Health and Safety Inspectors are professionals who are able to enforce the HSE Act in all places of work, including high hazard industries. That being said, high hazard places of work have complex and technically demanding safety systems and tend to be inherently dangerous places. For these reasons, the Labour Group will continue to need ongoing access to subject matter expertise to address technically challenging, industry-specific safety practices.

General Health and Safety Inspectors are skilled in investigations and undertaking effective HSE/HSNO inspections, as well as providing advice and assistance on health and safety matters. It is sensible to use these skills to complement the specialised skills in the High Hazards Unit. This could be organised through a pool of inspectors who are kept informed of industry developments and the work of the high hazards team.

In relevant offices (i.e. those offices who have dealings with high hazard places of work such as New Plymouth, Christchurch, Whangarei, Dunedin and Rotorua), a pool of inspectors who will work with the high hazard staff as and when required, should be identified. These inspectors will need specific training to protect their own safety in the high hazard workplaces (e.g. helicopter and deepwater survival for offshore rigs, for example).

Actions

17. All regions should be invited to identify any inspectors who can be called upon to undertake inspections, investigations in high hazard places of work under the direction of high hazard staff. These inspectors will form an extended, auxiliary part of the High Hazards Unit. [RMs and SMs]

18. The relevant regions will need to support any additional training required to ensure the inspector is familiar with the likely hazards and controls present in specific high hazard industries and how to manage their personal safety in these environments. [SMs]

19. The identified inspectors will form an extended part of the High Hazards Unit and should be included in high level briefings and be kept informed on developments (including emerging risks and enforcement activities) occurring in the relevant industries. [MTSS]

20. The inspectors supporting the High Hazards Unit should also be given an opportunity to meet with the unit at least once a year and be involved in the unit’s annual planning. [MTSS]

Review and update information systems to support high hazards

General findings

The Department’s current information systems, such as INSITE, may be well suited for managing standard workplace engagements but are inadequate for storing complex data and information flowing from high hazard places of work and activities.
High hazard workplaces produce unique flows of information such as daily drilling reports, flaring notifications and safety cases (for petroleum operations) as well as complex information such as mine maps (for mines). This high hazard data is useful intelligence for the Department’s high hazard team and for other regulators. Accordingly, the Department needs some sort of information system(s) that provides the following kinds of functionality:

- customer relations management database (which, with a bit of tweaking, may be provided by INSITE and other existing resources)
- document management system (with a structured system for archiving complex and iterative records such as multi-volume safety cases)
- structured workflow and scheduling tool that enables various interactions with high hazard workplaces (e.g. general inspectorate visits, specialised staff visits and other regulator visits to be scheduled and shared)
- some sort of data mining/analysis tool
- some sort of CAD file read system that enables three dimensional objects like well design and mine layouts to be easily stored, accessed and used
- receive, store in searchable format a database for storing third party information
- secure online interactivity (for sharing information with other regulators etc).

**Actions**

21. Once the high hazards team has been established, the team should as a priority develop a workflow/business process analysis and determine whether and what additional systems will be required to support the high hazard activities. [MTSS]

22. Discuss with NOPSA and other regulators the possibility of accessing/using any specialised systems or software they may have for managing similar information requirements. [MTSS]

23. Propose a joint working group with NOPSA and Major Hazard Facility organisations (mostly State health and safety organisations) to co-operate on the longer-term development of shared technology platforms. [NSM]
RECOMMENDATION TWO: DRAW ON CERTIFICATION, VERIFICATION, PLANS AND NOTIFICATIONS

General observations

As a regulator, there is a wealth of information that the Department can draw upon about the current state of safety in high hazard areas - particularly in the specially regulated high hazard industries of mining and petroleum.

The New Zealand health and safety regulatory environment is broadly consistent with other, similar jurisdictions. It shares many common features with other 'performance-based' regulatory frameworks. Where there are differences, these tend to be small and appropriate.

However, one important and significant difference between the New Zealand regulatory approach to petroleum exploration and extraction and other similar jurisdictions, such as Australia, is the use of third party inspection bodies to inspect safety on-board installations and to issue certificates of fitness (see Attachment 1 for list of inspection bodies under the petroleum regulations). Independent third parties, like these inspection bodies, can also support operators to manage their own detailed verification schemes. These verification schemes take the performance-based approach to its fullest extent, placing a significant expectation on the operator to systematically and effectively manage safety.

The New Zealand regulations for both mining and petroleum\(^1\) also contain additional reporting and notification expectations on employers/operators as well as requiring additional and detailed information such as safety cases from petroleum operators and maps for mines.

These additional aspects of the regulatory environment provide a wealth of information about the operators and the places of work that may help our regulatory activities and provide a greater level of insight/monitoring for assurance purposes.

For these reasons, the Labour Group should be making full use of these additional sources of information.

At present the Department has neither the systems nor the capability to collect, collate and store this kind of data and information. As a result, it is largely unaware of this valuable information. Some key findings highlight the extent to which the Department is unaware of this:

- safety cases are not systematically stored nor are easily retrievable outside of the New Plymouth Office. Physical copies are stored and where electronic files have been submitted, they have been stored in local files and not easily accessible by the wider group
- certificates of fitness are not held systematically (or if they are, it is not known by key players) and are not easily accessed

\(^1\) This applies to the pressure equipment, cranes and passenger ropeways regulations as well – but these regulations do not apply to petroleum wells or offshore drilling installations (see Schedule 2 of PECPR Regulations for exemptions to these activities/equipment).
• records of verification schemes approved by the Department have not been maintained
• daily drilling reports and other regulatory notifiable events are received electronically by the Senior Advisor Petroleum. However, this information is not managed as effectively as it could be. Information systems, such as INSITE, are limited in capturing this kind of information and allowing the Senior Advisor to conduct analyses
• the Labour Group has not maintained updated information about third party inspection bodies after they are gazetted
• the Department does not know when, where and why third parties are using subcontractors to undertake verification or inspection work
• the Department’s information systems do not necessarily help the Labour Group to store, access, analyse and share information.

This last point is important to note because it helps temper the enthusiasm for additional information with the reality of the limitations of how this information might be accessed, stored and used.

Ensure all required information is up to date

General findings

There is a range of notifications and other documents, such as safety cases, test certificates and confirmed verifications that the industry should have in place and the Department should have on record.

To ensure the Department and the industry are clear about all of the documentation and to ensure all information is up to date, the Department should update all of its information by asking operators to provide up to date copies of all documentation including:

• copies of safety cases (and alterations)
• recent notifications including all reportable well drilling events (and alterations) for current wells (petroleum)
• copies of current certificates of fitness (petroleum)
• copies of verification schemes (petroleum)
• copies of current certificates of competence (mines)
• copies of mine places copied to inspectors (mines)
• notifications made to inspectors (mines)
• accident notifications made in the last six months in accordance with the regulations (mines).

Obtaining this information provides a two-fold benefit. It:

• ensures the Department and the operators have clear and up to date information
• sends a clear signal to operators that they have a range of information requirements that they must meet.

Actions

24. The National Support Manager should advise both mine and petroleum operators that the Department intends requesting this information and follow this up with a formal, written request. [NSM]
25. Manager Technical Support Services should implement a short-term solution for indexing all information received from the operators and look for a longer-term optimal solution to hold and manage this information. [MTSS]

26. To ensure the information is maintained up to date, the Manager Technical Support Services should investigate ways of making it easier for operators to keep this information up to date. [MTSS]

27. The High Hazards Unit should review all received information to ensure:
   (a) It is comprehensive (i.e. identify any gaps, omissions or issues) [MTSS/SAHHP/SAHHE]
   (b) Ensure required elements and forms have been completed/used [MTSS]
   (c) Follow-up with the relevant operators any gaps, omissions or errors. [SAHHP/SAHHE]

28. The unit should also prioritise any issues identifiable in the information provided. [MTSS/SAHHP/SAHHE]

29. The High Hazards Unit should consider engaging a specialised third party to help identify and review any potentially unsafe issues or practices. [MTSS/SAHHP/SAHHE].

Establish a national standard for petroleum installation inspection bodies

General findings

There is currently no standard or other specification for inspection bodies issuing Certificates of Fitness under the HSE Petroleum Regulations.

The legal burden is on operators to determine what is required for safety and what needs to be inspected and certified as being fit. It would be inappropriate therefore to unduly diminish this obligation by being too prescriptive about the elements necessary for checking. However, it is likely that there is already a broad consensus about the elements of equipment necessary for ensuring and maintaining safety on petroleum operations and therefore what broad set of skills is necessary for inspection bodies to provide inspection and certification work.

Aside from being clearer about the scope, level or type of work needed to issue a certificate of fitness, the absence of clarity about the inspection activities makes it very difficult for the accreditation authorities (NATA and IANZ) to confidently accredit parties for these inspection activities. In fact, IANZ has been forced to develop its own informal set of criteria upon which inspection bodies are accredited under this regime. This informal set of expertise requirements developed by IANZ might prove a useful platform for developing a more formal set of required areas.

Of concern, there is no neat overlap of accredited skills in each of the current inspection bodies (see Attachment 2). As discussed in the body of this report, each of the inspection bodies currently accredited has differing scopes of accreditation. For example, the scope of Bureau Veritas’ accreditation includes helidecks whereas this is not the case for either Lloyd’s or American Shipping. To make up for these gaps in their scope, it is expected that inspection bodies subcontract to specialists. This subcontracting should also conform to the general accreditation standard for general inspection bodies.

This type of standard does not easily fit with the purpose of Codes of Practice under the HSE Act.
Developing standards should involve:

- industry representatives
- current inspection bodies
- IANZ
- an independent regulator (e.g. NOPSA).

This process should focus on developing a comprehensive overview of the major areas of competence that inspection bodies will be accredited for:

- defining the areas requiring assurance in order to issue a certificate of fitness
- defining the areas of expertise required by inspection bodies in order to issue certificates of fitness.

**Actions**

30. The NSM should invite industry representatives, current inspection bodies, IANZ and independent regulators to participate in a joint effort to develop a new standard to help guide accreditation. This new standard can then be used by IANZ (and NATA) to determine the sets of competencies that sit within the petroleum regulations. [NSM]

**Collect information about inspection bodies’ use of subcontractors**

**General findings**

While it is expected that inspection bodies would be able to competently undertake most of the inspection work required to support the issuing of Certificates of Fitness, requirements for inspection body accreditation in New Zealand set out that inspection bodies employing subcontractors to undertake specialised activities shall access qualified and experienced people to form an independent assessment of the results of the subcontracted activities. The general expectation is that the inspection body undertakes its own work but where it does not have the skills (or accreditation) it uses subcontractors.

Under section 14.3 of the Requirements for Inspection Body Accreditation in New Zealand, inspection bodies are expected to record and retain details of their investigation of the competence and compliance of subcontractors and that these details should be maintained in a register.

From a regulator’s point of view, finding out what subcontractors are being used to provide third party assurance and the competence of these subcontractors is useful intelligence. It helps the Department maintain an oversight of inspection bodies’ work (and the extent to which they are relying on specialist third parties) and provides a degree of comfort (through transparency) that the third parties being used are competent and that their work is being independently assessed.

Based on the inspection body standard, the information that the inspection should already be collecting and would be of interest to the Department would be:

- Name of the subcontractor
- Work undertaken by the subcontractor (when, where and what)
- Assessed areas of competence
• Explanation of competence (i.e. were they accredited etc)
• Inspection/assurance work undertaken by the subcontractor
• If the work being undertaken by a subcontractor is specialised work that the inspection body is not accredited to undertake, and if so, who provided the independent verification to the inspection body that the subcontractor's work was satisfactory.

Actions

31. Invite inspection bodies to provide details about subcontractors from their subcontractor registers. [set a reasonable timeframe] [NSM]
32. Invite inspection bodies to keep the Department updated on the use of subcontractors. [NSM]
33. This information about use of subcontractors can be incorporated and linked to particular installations/places of work. [NSM]

Encourage the use of verification schemes

General findings

Verification schemes are a powerful means of driving responsibility for health and safety back to the operator. This is wholly consistent with the Robens’ model used in New Zealand. The Health and Safety in Employment Act imposes a clear duty on employers to ensure the health and safety of people while at work. It is therefore consistent that responsibility for developing a verification scheme which includes among other things, the nature and frequency of examination and testing lies with the operator. A competent, concerned employer would probably want testing and examinations regardless of this requirement. However, the fact that inspection and third party certification can involve examination and testing allows operators to step back from this responsibility. Some jurisdictions, such as England, have moved fully over to verification.

New Zealand’s approach of having both certification and verification is not problematic, in that it provides a degree of flexibility which may be appropriate for the maturity and sophistication of the local industry. However, verification ought to remain the ultimate objective.

Rather than simply waiting for providers to adopt a verification scheme, the Department could promote the merits of verification schemes. This could be sold to providers as an in-house process (although involving a competent, independent party) enabling the operators to be more clearly focused on known risk areas and enabling scheduling and timing of verification actions to minimise impact on production schedules.

Actions

34. The Department should encourage operators who have not utilised verification schemes to do so. [Standards]
Remind operators of all notifiable requirements and pull this information to the centre

General findings

Aside from the standard HSE Act notifications (e.g. serious harm notifications) high hazard operators are, under regulations, required to provide certain notifications to the Department. Attachment 3 sets out the types of notifiable events and actions required under the HSE Act and its regulations. These notifications currently go directly to the relevant inspectors and senior adviser(s). This information should be sent to a central point, such as an email account operated by the high-hazards team and copied to the relevant local office and high hazard specialist(s).

The Department should also consider options for making it easier for duty-holders to make these types of notifications.

Actions

35. Remind all current operators of the reporting expectations under the HSE Act and regulations. [NSM]

36. Invite the operators to identify any systems or assistance they may require to comply. [NSM]

Invite petroleum operators to provide copies of reports of audits completed over the past six months

General findings

Under the Regulations, petroleum operators must ensure reports are made of any audits undertaken at the installation. In this context, ‘audit’ means any "systematic examination of any safety management system with the objective of assessing the effectiveness of that system in minimising hazards associated with the installation”. Not only must operators make a report of any audit, the operator must also record any action taken as a consequence of the audit. Under the Regulations, the operator must keep copies of these reports and records at the installation.

These reports and records have potential as a source of valuable insight and intelligence into the safety systems and safety culture at a particular installation. As well as being an obvious source of insight into issues and actions being dealt with by operations, these reports and records also have some potential to provide a broader insight into the operator’s general attitude and approach to safety. For example, it may be informative to see how frequently audits are being undertaken, the span of audits and the way in which the operators have (or have not) responded to any issues raised.

The Department does not have any rights of access to these reports or records beyond its general powers of entry and inspection. However, there is no restriction on the Department asking operators to provide this information. With electronic storage and email, it is likely the cost to operators of providing copies of audit reports and records regularly to the Department (in addition to the regulatory requirement of storing copies on-site) is likely to be inconsequential.
On the face of it, this seems like a useful potential source of information and intelligence about installation safety issues and, possibly, the operator’s general approach and attitude to safety. Given the likely small costs involved in sending, obtaining, storing and collating this type of material, the benefits seem to outweigh any costs.

However, several points ought to also be considered:

- the Department cannot require operators to comply with a request for information. If the Department was to make this kind of request, it will need the operators to agree and support the proposal
- the Department needs to be mindful about how and whether it can actually use this type of information. In principle, the idea of gaining more information about an installation is useful. However, with limited resources to analyse this information, it could be that the Department simply does not have the capacity to properly analyse and make use of this information
- perhaps the most serious concern is also the potential for this kind of request to distort the behaviour of operators. If operators knew that the Department would likely see the results of audits it may change the way operators conduct and use audits to help manage safety.

All this suggests the Department must first consider whether it can make use of this type of information and, if so, cautiously approach the industry to test whether there is any appetite for this kind of sharing.

**Actions**

37. The National Support Manager should discuss with petroleum operators the possibility of establishing an information sharing arrangement whereby all reports of audits and records of actions are proactively shared with the Department in addition to the Regulatory requirement to retain copies at the installation. [NSM]

38. If there is general industry support for this type of information provision, the National Support Manager should write to individual petroleum operators inviting them to start providing copies of reports of audits and records of action. [NSM]

39. The National Support Manager should also invite operators to support backfilling this arrangement with some historical information including:

   (a) Details of any audits completed over the past 24 months (or since operations commenced) [NSM]

   (b) Copies of reports of audits completed within the past six months [NSM]

   (c) Copies of any records of actions taken as a consequence of any audits completed within the past six months. [NSM]

40. The Manager Technical Support Services and the Senior Advisers High Hazard Petroleum should develop systems and processes for collecting, collating, indexing and reviewing the audit information. [MTSS]

**Refresh inspection bodies and ensure they are kept current**

**General findings**

The Secretary of Labour recognises inspection bodies (via Gazette) to issue Certificates of Fitness to petroleum operators. However, examining the Gazette notices, it would appear several inspection bodies currently gazetted are no longer operating. It is also clear that the Labour Group has ‘lost sight’ of the
various inspection bodies. As a matter of house-keeping, the Department should move to update its record of inspection bodies.

Accordingly, the Department should contact all currently gazetted and recognised inspection bodies and invite them to confirm that they are still operating as inspection bodies. It is expected a couple of inspection bodies will no longer be operating. In these cases, the Department will need to initiate the process for withdrawing recognition. This involves writing to inspection bodies and setting out concerns.

The Department may also want to request IANZ review and refresh the accreditation of all inspection bodies.

The Department should also be open to trying to expand the number of inspection bodies operating in New Zealand. A greater diversity of inspection bodies would provide a greater level of comfort about independence and broad sets of skills available to the industry.

**Actions**

41. National Support Manager writes to all currently recognised inspection bodies:

(a) inviting currently recognised inspection bodies to confirm they are still operating as inspection bodies (it is expected this will result in at least two bodies indicating they no longer operate as inspection bodies in New Zealand). [NSM]

(b) advise current inspection bodies of the Department’s intention to re-evaluate recognition of inspection bodies to ensure the recognition is still appropriate. This should be done in a way that makes it clear that our expectation that we have no issue with their performance – just good practice to periodically review. [NSM]

**Open the possibility of self-inspection or industry-provided mutual inspection**

**General findings**

Under the standards for accredited inspection bodies it is not necessary for them to be wholly independent from providers. There are three general types of inspection bodies envisaged in the standards:

- **Type A:** an inspection body fully independent of the parties involved
- **Type B:** an inspection body that is part of the organisation it supplies services to but operated as a separate and identifiable part of the organisation
- **Type C:** an inspection body that is part of an organisation involved in design, manufacture, supply, installation, use or maintenance of items and it provides an inspection service to other organisations.

Currently, the inspection bodies involved in the petroleum regulations are Type A bodies. There is nothing to prevent operators from having Type B inspection bodies or providing Type C services.

The advantage of this is that it allows operators with the ability to undertake the inspection work themselves to possibly save money but it has the added advantage of expanding the pool of inspection bodies in New Zealand and the pool of talent available in the inspection business.
While there is no requirement for inspection services under the mining regulations, if the government did introduce an inspection/certification regime in extractives, one way of dealing with the small size and maturity of the local industry would be for a major operator, like Solid Energy, to provide Type C services to smaller mines.

**Actions**

42. The Department should raise awareness with industry that they themselves can operate inspection bodies and also provide inspection body services to others. [NSM]

**Encourage reporting near misses and major events**

**General findings**

The Health and Safety in Employment Act requires employers to notify the Department of all incidents that result in serious harm.

Duty-holders may also face other notifications under Regulations - this is the case for both petroleum and mining. There is also a requirement on all duty-holders to maintain a register of any accidents that resulted in serious harm or accidents that “might have harmed” people. While employers must record near misses, there is no requirement to provide this information to the Department. However, information about near-misses is useful information about the safety practices at a place of work.

There is no restriction on the Department asking high hazard operators to provide information about near misses in addition to their other statutory and regulatory requirements.

On the face of it, this seems like a fairly trivial request that operators ought to find reasonably easy to comply with. However, there are some issues the Department ought to consider before requesting this information from operators:

- the Department cannot require high hazard operators to comply with a request for this information. If the Department makes this kind of request, it will need the operators to agree and support the proposal
- the Department needs to be mindful about how and whether it can actually use this type of information. As discussed earlier, in principle, the idea of gaining more information about accidents is useful. However, with limited resources to analyse the information, the Department may not have the capacity make sensible use of this information.

One of the concerns for requesting audit information (see above) is that there is a potential for this to impact negatively on the way operators initiate, conduct and use audit information. However, there is no such concern with near misses. Operators have a statutory obligation to record details of near misses in a register.

The Department might want to consider whether it wants to collect this information in a reasonably timely fashion (within a number of days of the incident) or whether it would want to have operators provide this information in large chunks, periodically.
If coupled with the mandatory notifications under Regulation 19 (failure of containment) and serious harm events, the reporting of near misses would provide a reasonably comprehensive picture that substantially covers the same sort of span of reporting required by NOPSA.

**Actions**

43. The National Support Manager should discuss the idea of high hazard operators voluntarily submitting ‘near miss’ information to the Department. [NSM]

**Develop lead and lagging indicators for high hazards**

**General findings**

The Department generally focuses on ex post factors to analyse and understand health and safety performance. This includes analysing injury and complaints. This retrospective analysis helps identify emerging risk areas and provides a useful lens for identifying the relative ‘riskiness’ of a particular industry or place of work. However, given high hazard industries are places where there is a low probability of something significant happening. As such, ex post analyses are of only limited use. Moreover, learning lessons after a disaster is far less desirable than trying to identify issues which may indicate an elevation of risk and enable operators to act before a disaster.

Accordingly, identifying ex ante ‘leading indicators’ should be a priority. While this is likely to be challenging, the Department is not necessarily alone. Operators are likely to be interested in leading indicators. This is something ideally suited to international cooperation. Through its involvement with NOPSA and other international bodies like the IRF, the Department should encourage the development and adoption of an international set of leading indicators.

The Department currently supplies statistical information to the IRF. This information is collected and collated by the Senior Adviser High Hazards Petroleum and Geothermal. This work is time-consuming and difficult. Whatever additional reporting burdens are created, the Department needs to try to minimise the impact on businesses and front-line staff. Where possible, any new indicators should be built upon existing information and systems developed for easy collection.

**Actions**

44. National Support Manager to invite operators and other regulators to participate in the development of leading indicators that can be used locally to identify potential issues and internationally to benchmark performance. [NSM]

**Develop a new industry liaison forum focused on high hazard**

**General findings**

The Department has a good level of contact with mine operators and petroleum operators. But this contact is often at the operational/field level. As valuable as this contact is, it does not necessarily cover the full range of issues and wider discussions that might be usefully had at a managerial/strategic level. Issues like the development of standards, guidance, planned inspections, information
requirements, as well as presentations on safety issues, health & safety campaign priorities and other higher level discussions. This could be done as a ‘high hazards’ meeting or it could be done focusing on sectors (i.e. petroleum or extractives). It would be useful to expand attendance to include other New Zealand regulators and interested agencies (e.g. Maritime NZ, MfE and MED).

**Actions**

45. Once established, the high hazards team should organise annual conferences with operators. [NSM]

**Invite inspection bodies to inform the Department of conditions, limitations, qualifications on certificates**

**General findings**

Inspection bodies issue certificates of fitness for installations. Installations subject to Certificates of Fitness (i.e. have not received approval to operate a verification scheme) can only operate in accordance with Certificates of Fitness. Non-compliance can occur through damage, wear and tear and modification. If non-compliance occurs, inspection bodies may allow the employer to continue to operate in accordance with such reasonable limitations or conditions as it sees fit to impose. These limitations or conditions must be endorsed on the Certificate including the reason(s) for non-compliance.

**Actions**

46. Write to inspection bodies and invite them to
   (a) provide details on all current limitations and conditions on certificates of fitness [NSM]
   (b) keep the Department informed on all future conditions, limitations or qualifications applied to certificates of fitness. [NSM]
47. The Department reviews this information with a view to possibly generating hazard alerts or other guidance material on potential issues that operators and inspection bodies might want to know about. [NSM]
48. The Department uses this information to help focus inspections and to share with other regulators. [NSM]
RECOMMENDATION THREE: STRENGTHEN RELATIONSHIPS

General observations

The Department’s approach to high hazard industries has been reasonably introspective with not a lot of information sharing, collaboration or cooperation between the Department and other regulators and even operators.

It appears the Department’s specialist operational people (the mines inspectors and the petroleum senior advisers) have a solid interaction with local operators, particularly at a field level (i.e. those in charge of places of work). The inspectors and senior adviser(s) also routinely attend overseas conferences and have a healthy level of engagement with overseas regulators and standard setting bodies.

What is less clear, though, is the Department’s more senior engagement on strategic/collaborative and information sharing arrangements with other agencies and operators. As a regulator, it is important for the Department to ensure its work is well coordinated and ‘joined-up’ with other regulators. It is an unnecessary burden on business to have to deal with a parade of regulators where it is possible to deliver a more coordinated contact. It is also important that where the Department might have information that can help other regulators, it is in the interest of a whole-of-government approach to ensure such information is made available where appropriate and able.

By leaving the primary relationships to the front-line, the Department’s interaction with others has taken on a functional, operational aspect. To maximise its effectiveness, it needs to lift these relationships to a more strategic and coordinated level while maintaining the excellent front-line relationships already established thanks to the efforts of the mining inspectors and petroleum specialist. In short, the Department’s front-line staff need to continue to maintain excellent local, operational relationships with operators and other local regulators. However, the Department’s head office must also play a more active role in forging and maintaining effective relationships with industry, regulators, environmental agencies and international bodies.

Strengthen the relationship with third party inspection bodies

General findings

Inspection bodies primarily have a relationship with petroleum operators. This is understandable given it is up to each petroleum operator to obtain a Certificate of Fitness from a recognised inspection body. Because of this (the primary relationship between operators and third parties), the Department has allowed itself to become detached from third party inspection bodies. This is unfortunate given inspection bodies have a wealth of information about safety technology practices, best practice models and technical and operational insights.
Inspection bodies are experienced and highly knowledgeable ‘eyes and ears’ the Department does not otherwise have in this industry. Being able to build a relationship with these bodies and allow them to help the Department improve its work and identify and review possible new standards/practices necessary to lift performance will be beneficial.

Inspection bodies are not part of the Department. The Department cannot co-opt inspection bodies as part of a wider enforcement approach, for example. However, it is entirely reasonable for the Department to work with inspection bodies to share information and to focus on the development of technical understanding of the industry. Inspection bodies might also benefit from interacting with each other through a good relationship with the Department (e.g. raising alerts) and may benefit from a stronger relationship with the Department to obtain useful information about industry and regulatory changes.

The Department should also invite other regulators and interested parties (such as MfE) to participate in regular meetings with inspection bodies. This will provide a useful means for agencies such as MfE to be able to make enquiries about the state or quality of equipment and systems on particular platforms from knowledgeable and experienced people.

**Actions**

49. The Department should facilitate a regular meeting with inspection bodies to discuss standards, emerging issues and industry developments (this kind of collaboration is already occurring in some areas – PEPCR for example – the Department could possibly expand on these existing initiatives). Invitations should also be extended to other agencies and regulators. [NSM]

**Strengthen the relationship with employee representatives and health and safety representatives**

**General findings**

Health and Safety Representatives and Chairs of health and safety committees (or their equivalent) represent an excellent inside view on an operator’s approach to health and safety and the level of awareness and safety culture present in the workplace. For this reason engaging with employee representatives like health and safety representatives offers an important opportunity for gleaning real world information about the actual level of safety awareness and concerns from front line staff.

**Actions**

50. Inspectors should engage with health and safety representatives when they visit a site. [HHT]

51. At least once a year at each high hazard place of work, inspectors should engage with the health and safety representatives or Chairs of the Safety Committee or representative of whatever other employee participation scheme is in place at the workplace—without management present. [HHT]

52. Because of the importance of employee participation as a means of promoting a strong safety culture in a workplace, the high hazard team should actively promote the need for employee participation in any smaller high hazard workplace where employees have not taken up the opportunity to be involved. [HHT]
Strengthen the relationship with NOPSA

General findings

The Department has a particularly strong relationship with the Australian offshore petroleum regulator, NOPSA. This relationship has been maintained at both a strategic/managerial level as well as at an operational level.

Unlike the Department of Labour, NOPSA exclusively focuses on offshore petroleum and is funded through industry levies. As such, NOPSA’s operation is larger and considerably more sophisticated than the Department’s work with the offshore petroleum industry.

NOPSA has indicated its willingness to support the Department of Labour to the fullest of its ability. However, its ability to support the Department may be constrained by statutory limitations on NOPSA’s ability to use its resources outside of Australia and to recover funding from non-industry sources. NOPSA’s leadership has confirmed that it would support a formal approach being made from the New Zealand Government petitioning the support of the Federal Government to remove the legislative barriers preventing NOPSA from assisting New Zealand’s regulatory efforts.

Ministers have discussed the idea of using NOPSA and are keen to receive a letter that can be sent to their colleagues in the Australian Government to initiate the process of enabling NOPSA to work with the Department.

Aside from the opportunity to use NOPSA, the Department should maintain an active relationship with NOPSA and specific ideas include:

- Sharing systems and methodologies - NOPSA has sophisticated information management and decision-making systems. The Department does not have any bespoke systems for dealing with either the petroleum industry, or high hazard industries more generally. For example:
  - NOPSA’s use of the TapRoot methodology for problem solving
  - Incident and document management information management systems.

- Using NOPSA to review safety cases - Australia requires safety cases from offshore petroleum operations. Because of the size of the Australian industry, NOPSA has to process a large number of safety cases. As a regulator, NOPSA therefore has a lot of standing capacity for processing and analysing safety cases. It is only reasonable to expect that NOPSA will charge the Department for this role.

- Obtaining NOPSA’s advice (and support) on improving the guidance and systems supporting safety case development - aside from the role of reviewing safety cases, NOPSA can also help the Department improve the information and support provided to New Zealand operators to develop quality safety cases. This could include enabling New Zealand operators being able to access Australia’s operators. It should be noted that the Department already shares NOPSA safety alert information with operators as a matter of course. The Department should continue to broker NOPSA
material to operators and should look to expand it to cover other guidance material and useful information.

- Sharing incident and operator information - both the Department and NOPSA collect a wealth of information on incidents, accidents and other performance issues with operators. Sharing this information could be useful. Some of the operators working in New Zealand have similar operations or may actually have previously operated in Australia. As such, accessing information about recent issues would be informative. Also, sharing information will help identify emerging issues.

- Seeking NOPSA feedback on the safety record of any operator (and or comments on proposed technology etc) to be fed into the licensing stage. MED is looking for more up-front information about the safety record of operators when considering prospecting, exploration or extraction applications. The Department could invite NOPSA to provide commentary on the Australian experience of the operators and or the technology or approach being proposed. The Department could pass this information on to MED along with any information or views it may have.

- Cooperating with NOPSA to develop trans-Tasman performance indicators - New Zealand should be promoting and supporting the development of international indicators (through the IRF, for example). However, it would be useful to work with NOPSA to develop trans-Tasman indicators and identify levels of comparability.

- Investigate the possibility of NOPSA inspectors being used to help conduct assessments and investigations - under the HSE Act, inspectors can ‘be accompanied and assisted by any other people’. This means, that as long as a New Zealand HSE inspector leads an assessment, they may be assisted by a NOPSA inspector. There will be important legal issues to deal with. For example, the NOPSA inspector will need to genuinely assist the HSE inspector and not effectively lead the work. The NOPSA inspectors could be flown across to New Zealand on an ‘as required’ basis. The Department would need additional funding for this. This kind of arrangement would be useful for technically-complex investigations as well as comprehensive ‘top-to-bottom’ workplace assessments.

- Seconding NOPSA staff to the Department as inspectors and advisers (and vice versa). Another option for involving NOPSA staff to bolster the Department’s work with the local industry would be to second NOPSA staff as HSE inspectors or advisers. If the Department expects NOPSA staff to operate as inspectors within New Zealand, then they will need to meet the competency requirements required for warranting (e.g. sit the exams). Secondments could be for defined periods such as three or six months. The Department would need funding to support the secondments.

- Invite NOPSA to help review the Department’s systems and processes. As the Department steps up its work with high hazard industries, it will need to have effective systems and processes. As a sophisticated operator, NOPSA could play a useful role in helping identify gaps in the Department’s systems and provide advice and expertise on how to address those gaps.
• Allowing New Zealand inspectorate staff to access NOPSA training and to observe workplace visits/assessments - this is already happening. NOPSA kindly includes our Senior Adviser in on-site visits and opens training exercises.
• Working with NOPSA to identify useful guidance, codes of practice or standards that can be adapted and adopted by New Zealand - this could be the start of greater harmonisation between Australia and New Zealand.
• Inviting NOPSA to participate in any review of New Zealand’s petroleum regulatory framework with a particular emphasis on trans-Tasman harmonisation (to the extent possible).
• Drawing on NOPSA’s technical expertise and industry contacts for specialised skills - NOPSA maintains a level of technical and industry expertise that would be useful to supplement the Department.

Actions

53. Draft a letter for the Ministers of Energy and Labour that outlines the specific proposals for using NOPSA to help the Department of Labour to work with the local industry [NSM/Policy]
54. Arrange officials meetings between the Department and NOPSA to work through the specific requirements and identify whether any activities can be taken without regulatory changes [Policy]
55. Develop a draft contract with a detailed schedule of proposed work, performance criteria and costs [Policy]
56. Based on feedback from NOPSA, the Department will need to develop a detailed business case for additional funding to support compensating NOPSA for activities [NSM and Policy]

Strengthen the relationship with operators

General findings
The Department has developed very strong operational relationships with high hazard operators. The Mines Inspectors and the Senior Advisor petroleum all have good working relationships with local management. However the Department needs to strengthen its interaction with the managers and owners of the operations.

Actions

57. The Wellington-based Senior Advisers in the High Hazards Unit need to engage in a structured way with the high hazard operators. The Department’s engagement team also need to be involved in developing engagement strategies. [NSM]
58. The Department should also build strong relationships with the senior leadership of high hazard enterprises. At least once a year, the Department’s high hazard team should convene a meeting of operators to meet with regulators and each other. This annual conference can develop its own work programme of initiatives to strengthen safety culture and standards for the industry. [HHT]
**Strengthen the relationship with MED**

**General findings**

The Ministry of Economic Development (MED) is primarily responsible for the licensing of exploration and extraction activities relating to petroleum, coal and minerals. There is limited coordination between MED’s licensing and the Department’s inspection work. There is ad hoc contact often arising out of specific advice.

The licensing arm of MED and the high hazards team should form a close working relationship through regular, structured meetings and should explore the possibility of some sort of MOU setting out expectations of mutual support.

Some areas where structured, regularised contact between the two agencies would be useful are:

- MED providing the Department with details of license applications for drilling/digging
- The Department providing MED any relevant advice or insight into the safety record of applicants during the application phase (subject to legal clarification about what can be provided and how) and prior to approval
- Any concerns about licensees behaviour (e.g. identified issues with regulatory compliance)
- MED and Crown Minerals already receive daily drilling records. These agencies may also be interested in receiving all drilling and other notification reports as well as access to plans, safety cases and the wealth of information that the Department has access to. Using this information, MED and Crown Minerals can use it to ensure they are broadly consistent with license conditions - so sharing this kind of data may well be useful intelligence
- MED also regularly attends overseas conferences and seminars on mining and petroleum safety. It would be useful for MED and the Department to share any useful information and learning from these kinds of events.

**Actions**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>59.</td>
<td>The High Hazards Unit should, as a priority, draft terms of reference for a regular, formal meeting with MED [NSM]</td>
</tr>
<tr>
<td>60.</td>
<td>MED should be invited to consider developing a protocol or MOU establishing parameters and expectations for information exchanges [NSM]</td>
</tr>
</tbody>
</table>

**Strengthen the relationship with Maritime New Zealand**

**General findings**

Maritime New Zealand (MNZ) is an important health and safety regulator in relation to offshore petroleum. MNZ is responsible for enforcing health and safety on all ships, which includes when they are not anchored, mobile offshore drilling units (MODUs) and ships used as floating storage and production offloading (FPSOs). MNZ also has certain legal obligations in terms of managing spills into the ocean.
Because of this relationship and the interfaces between the Department and MNZ, both agencies need to work closely together to ensure:

- each agency has a clear understanding of the extent of each other’s roles and responsibilities and that there is no gap between the two agencies
- relevant information is shared between the two agencies (e.g., issues relating to MODUs and FPSOs should be passed to MNZ for future reference)
- MNZ expertise is used to help the Department determine the safety of MODUs and FPSOs
- The Department seeks MNZ’s comments on safety cases for MODUs or FPSOs and on well-design/construction particularly in terms of the management of spills
- MNZ is invited to provide advice and direction on any relevant shipping standards or rules that may be useful and applicable to MODUs or FPSOs
- the Department keeps MNZ up to date of any reported issues and also makes available all relevant reports including daily drilling records and Regulation 19 notifications. It could also include near miss notifications and other issues.

The current MOU could be used as a platform for setting out some clear agreements and expectations.

A specific issue relating to the containment of spills has arisen where there is uncertainty about the agency that should authorise containment plans. The Department’s Policy Group has made good progress in resolving this with MNZ. However, it illustrates the potential for confusion about the relative roles of each party. This is likely to be further complicated as additional regulatory agencies, such as the Environmental Protection Authority, become more involved in offshore petroleum drilling.

**Actions**

61. MNZ and the Department meet to identify all of the potential issues [NSM]
62. MNZ and the Department agree a work plan to resolve any identified issues [NSM]
63. The Department should involve MNZ in the development of its High Hazard work programme to ensure MNZ input into the plan is scheduled and where opportunities for joint or coordinated assessment/inspections can occur [NSM]
64. The Department should provide MNZ with the opportunity to receive routinely information such as daily drilling reports and continue to provide notifications of containment failures and any other relevant information [NSM]
65. The Department and MNZ should, as a matter of priority, resolve the issue about containment [NSM]

**Enable other regulators to access our data/information holdings**

**General findings**

As regulator, we have a lot of insight into what is happening in the high hazard industries. If enterprises are complying fully with the regulations then the Department can expect to receive detailed plans and safety cases which can
provide valuable insight into the proposed operations and how they manage safety critical hazards.

The Department also receives a regular flow of information through the serious harm notifications, notifiable events and drilling reports. This kind of information provides a valuable insight into the actual operations. This kind of information is useful to other regulators. However currently there is little, if any, proactive sharing of this information (in fact, this information is not really even readily available within the Department).

A priority should be to make all information collected available to other regulators and interested agencies such as the Ministry of Economic Development, Ministry for the Environment, Maritime New Zealand and the Environmental Protection Authority. Because of the potential sensitivity of some the information, strict security controls will need to be put in place. However, aside from having a secure interface, the general principle should be that the information is openly available to other regulators and government agencies.

**Actions**

66. As a priority, the Manager Technical Support Services and Business Support Manager should jointly investigate options for making the information immediately and securely available to other regulators. This immediate solution is likely to be an interim measure with little functionality (e.g. an index of PDFs and scanned information). [MTS and BSM]

67. The High Hazards team should, as a priority, move to develop a more sophisticated system that makes the information and data more accessible and able to be analysed and manipulated. [HHT]

**Maintain international contacts - but lift them to a strategic level while also maintaining operational contact**

**General findings**

The Department supports it work with the petroleum industry by continuing to be a member of the International Regulators’ Forum and maintaining a strong relationship with Australia’s NOPSA. The Mining Inspectors and the Senior Advisers High Hazards have attended overseas conferences and visited other jurisdictions. The Department also maintains other ad hoc interactions with international regulators and industry fora.

The Department needs to continue these relationships. However, in addition to this existing operational contact, the Department also needs to strengthen the strategic level. This means senior Labour Group officials need to play a more active role in attending international conferences and building relationships with other regulators. The emphasis of this strategic contact should be on exploring opportunities for information and support of the Department’s work with high hazard industries and pushing international collaboration and benchmarking.

However, the operational contact also must be maintained between the Department’s inspectors/senior advisers and other jurisdictions. This ought not be an either or arrangement. Where possible, strategic objectives should be pursued, but operational information is also very important.
Actions

68. The National Support Manager should be the Department’s main contact for the International Regulators’ Forum. [NSM]

69. Operational information flowing from overseas jurisdictions and requests for information should be directed to operational staff. [NSM]

70. A key focus for international contact over the next 12- to 18-months ought to be on:

(a) information exchange arrangements
(b) benchmarking opportunities
(c) standards and guidance to improve H&S practices
(d) opportunities for international harmonisation. [NSM]
RECOMMENDATION FOUR: BOLSTER THE ANALYSIS OF SAFETY CASES

General observations

Safety cases are an important aspect of New Zealand’s regulatory approach. Installation operators use safety cases to describe all of the relevant particulars set out in the Petroleum Regulations for the design, construction, operation and abandonment of installations.

Safety cases must be provided to the Secretary of Labour at least two months before the commencement of construction, operation or abandonment. While safety cases are not formally accepted or approved by the Department, they are important documents because an employer must take all practicable steps to ensure the installation is constructed, operated, and abandoned in a manner ‘consistent’ with the relevant safety case.

The Regulations are reasonably detailed in the particulars that must be covered by safety cases. However, because there is no formal acceptance or approval, there is no real check on the quality of the safety case. The implication of requiring safety cases to be provided to the Secretary of Labour two months prior to commencement of the design/construction phase or operation or abandonment indicates a general expectation that the Department has a reasonable opportunity to review the cases, and to provide any feedback to the operator.

With only one specialised petroleum resource in the Department, its ability to assess the safety case is reasonably limited unless it obtains specialist third party assistance. Other jurisdictions that operate safety cases, such as Australia’s NOPSA, are large enough to maintain a significant standing capacity to undertake safety case reviews. It is unlikely New Zealand’s inspectorate capacity for petroleum will ever be big enough to maintain such a standing capacity.

The Department’s ability to review safety cases is not specifically outlined in the Regulations. There is also no requirement on operators to make any amendments or changes suggested by the Department. However, there is every reason to believe that it is appropriate for the Department to exercise some sort of review of safety cases at the very least to ensure that they conform with the required elements set out in the Regulations and, more generally, pass a test of reasonableness in terms of their comprehensiveness. This is particularly important prior to the commencement of operations, construction or abandonment - but it ought to not just be constrained to these times. The Department can play a useful role in also reviewing current safety cases as well.

The Department can also check conformity of installations in terms of the safety cases. Elements of safety cases can be selected for inclusion in subsequent assessment/inspections.
Third party review of current safety cases

General findings

Operators of offshore installations are required to provide the Department with copies of their safety cases at least two months before the design and construction, operation and abandonment of an installation. Any subsequent revisions to these safety cases must be sent to the Department “as soon as practicable after the revision is made”. Operators must also take all practicable steps to ensure their employers are aware of the relevant parts of the safety case and that the installation is constructed, operated and abandoned in a manner “which is consistent” with the safety case. It is an offence to breach this regulation (and is liable on summary conviction to be fined up to $250,000).

This means the Department should have a clear record of the intended design, construction, operation and abandonment of a facility. The Department could engage a competent third party to review a safety case or any part of a safety case. The Department could focus this review on a particular area of a safety case to ensure it meets known international standards and is “in accordance with generally accepted and appropriate industry practice”. This is a reasonable test given that operators must also take all reasonable steps to be consistent with the standards specifically outlined in or with the generally accepted and appropriate industry practice.

Actions

71. The Department should identify particular parts of safety cases for review. [NSM]

72. The Department should advise operators that they intend to review a safety case and invite them to conduct their own review prior to the Department conducting the review. [NSM]

73. After advising operators of the intention to review safety cases, the Department should give operators at least three months to conduct any reviews and submit any revisions to their safety case. [NSM]

74. The Department should identify competent third parties capable of conducting a review of a safety case (or part thereof) against the current standards or generally accepted and appropriate industry practice. [NSM]

Third party review of future safety cases

General findings

When an operator of an offshore installation provides a safety case to the Secretary of Labour, they do so two months in advance of the construction, operation or abandonment of an offshore installation. While the Department does not have any acceptance role, it does have the opportunity to review the case and to make comments if necessary.

However, this work is technically demanding and time-consuming. With the Department’s limited internal resources, this task is a significant imposition on the Department’s other safety work with operators. Accordingly, the Department should consider the option of having third parties undertake preliminary reviews of safety cases as they are received, to enable the Department to provide advice
back to the operators on whether the Department is convinced the safety case adequately covers the particulars set out in the Regulations and reflects current standards or accepted and appropriate industry practice.

This work could be undertaken by an independent competent party (independent of the industry, that is) or alternatively could be undertaken by other regulators on the Department’s behalf. Given the length of time before NOPSA could be in a position to assist, the Department is likely to require the use of commercial third parties, at least for the immediate short-term future for activities such as safety case reviews.

**Actions**

75. The Department should advertise for a panel of potential competent bodies/persons to act as reviewers of safety cases. [NSM]

76. The Department will need to develop a business case for funding third party review. [NSM]

**Consider developing an ACOP or guidance note on safety case development and/or assessment**

**General findings**

Other jurisdictions that utilise safety cases, like the UK and Australia, have detailed information available to duty-holders about safety cases. New Zealand has very little that is similar. Outside of the matters set out in regulation that must be covered, there is very little other guidance available to duty-holders.

This effectively means it is entirely up to duty-holders to determine what is or is not satisfactory – although it should be noted most operators develop safety cases using similar international safety case standards and templates. Unlike other jurisdictions, New Zealand does not have an acceptance process for safety cases. The absence of any guidance on safety cases and the lack of acceptance is a dangerous combination. The MED comparative report highlighted the absence of a safety case acceptance regime in New Zealand, but this is an issue that would require more detailed analysis and regulatory changes. However, there is nothing to stop the Department from working with industry to develop some sort of structured guidance on the safety case process and to be clearer to itself and duty holders about its own process for considering and providing feedback on safety cases.

**Actions**

77. The high hazards team should work with the Standards team to formulate some sort of guidance on safety cases. At a minimum, this guidance will provide clear expectations about the level of detail expected to adequately address the matters needed to be covered. [NSM]

78. Industry should be involved in the development of any guidance notes. [HHT and Standards]
Selectively test conformity with safety cases

**General findings**

Given the Regulations require employers to take all practicable steps to operate consistently with safety cases and that safety cases are important expressions of how an operator intends to manage identified hazards, testing their conformity with the safety case should be an important part of any workplace assessment.

In order to keep such conformity checks focused and manageable, a selective approach could be taken where one or two critical elements are selected from the safety case and the inspectorate can test conformity with those elements during a workplace assessment/inspection. The Department could also engage third parties to assist their inspectors to undertake such conformity checks.

**Actions**

79. During the annual inspection planning of petroleum facilities, installation safety cases should continue to be used to help inform aspects to check conformity. The high hazards team should ensure systems and processes are put into place to ensure the effective continuance of this practice. [MTSS and SAsHH-P]
RECOMMENDATION FIVE: HELP HIGH HAZARD INDUSTRIES TO COMPLY

General observations

The Department has a role to play in supporting high hazard industries to comply with the HSE and HSNO Acts and the relevant regulations. These industries generally are reasonably adept at identifying and managing potential risks and hazards. Both mining (at least for larger operators) and petroleum operators can draw on sophisticated bodies of knowledge and safety practices developed overseas and locally. As ‘high reliability’ type organisations, it is likely these industries have complex and highly systematised safety programmes in place.

However, what is not clear is whether the operators and these systems fit completely with the requirements of the HSE and HSNO Acts and regulatory frameworks. Notwithstanding the level of sophistication or care operators take in managing safety on installations or wells or in mines, they still need to comply with the requirements of New Zealand law. This includes, for example, meeting all the reporting incidents requirements and applying all of the relevant HSNO controls. Moreover, the appearance of smaller, lower budget operators introduces additional risks as these smaller providers tend to have more difficulty supporting sophisticated safety systems and may not have the same level of access to international best practice as major international firms.

The Senior Adviser High Hazards Petroleum has indicated his belief that, while petroleum operators are generally careful at having and applying systems and processes to manage safety effectively, they can sometimes be less aware or compliant with specific regulatory requirements. Essentially, operators are effective at implementing company/industry safety systems but may lose sight of the wider regulatory context. This review has not been able to confirm this observation. However, the Department does try to help educate and enable workplaces to be safe and to meet the necessary regulatory requirements.

Even without testing the Senior Adviser’s observation, there is a good reason for the Department to provide assistance and information to high hazard operators to help them comply.

For smaller operators, such as the smaller mine operations, the Department’s review has confirmed a need to provide simplified systems to help the mines systematically identify and manage hazards.

Identify any international standards that can be adopted within the current regulatory framework

General findings

In collaboration with other regulators and international bodies, the Department could identify any standards or evolving best practice models that can be used within high hazard industries.

For example, the US Bureau of Ocean Energy Management has issued an updated Drilling Safety Rule which addresses both well bore integrity and well control.
equipment in deep water (continental shelf). With the emergence of deep water exploration in New Zealand, the application of this Rule to New Zealand operators and inspection bodies, for example, ought to be considered (as a guide to expected industry practice).

The Department has an active role to play alongside the industry, to identify whether there are any overseas practices or standards that can be helpfully utilised in New Zealand.

**Actions**

80. The Department should identify any overseas standards, rules or practices that might be adopted in New Zealand. [MTTS]

81. The Department should consider circulating any identified standards to inspection bodies and operators. It should also consider and prioritise formally issuing these as guidance. [MTSS]

**Help mines complete a safety assessment/report by providing a simplified template**

**General findings**

The 2008 Department of Labour Mining Review recommended that the Department help smaller mines to comply with the statutory/regulatory requirements by developing simplified assessment/reporting templates that the operators could use.

This makes sense, as smaller operators struggle to have the necessary capability and capacity to work through detailed Approved Codes of Practice and detailed standards. However, the general point of simplifying complex rules is a reasonably well made one and is also applicable to larger operators. In keeping with any moves to help high hazard operators (all operators) comply with the regulatory requirements, thought should be turned to how the Department can assist compliance generally by simplifying and providing assistive tools.

**Actions**

82. The Department should action the development of a simplified template as recommended under the Mines Review. [NSM]

83. The Department should consider the wider applicability of simplified tools and information to help all high hazard operators comply with the regulatory requirements. [NSM]

**Provide high hazard providers with targeted information on requirements of HSE, HSNO Acts and applicable regulations**

**General findings**

The Senior Adviser High Hazards Petroleum indicated that while petroleum operators are generally careful at having and applying systems and processes to manage safety effectively, they can sometimes be less aware or compliant with specific regulatory requirements.
Essentially, operators are effective at implementing company/industry safety systems but may lose sight of the wider-regulatory context. This review has not been able to confirm this observation. However, the Department does try to help educate and enable workplaces to be safe and to meet the necessary regulatory requirements.

Even without testing the Senior Adviser’s observation, there is a good reason for the Department to provide assistance and information to high hazard operators to help them comply.

**Actions**

- **84.** Prioritise the development and distribution of targeted information and campaign information to operators. [NSM]

- **85.** Develop an “orientation” pack for health and safety managers in high hazard industries that provide an overview of the legislative and regulatory requirements. [NSM]

- **86.** Facilitate workshops and other training sessions for health and safety managers and health and safety representatives from high hazard industries. [NSM]
RECOMMENDATION SIX: SUPPORT ENVIRONMENTAL OUTCOMES AND REGULATION

General observations

The Government has announced it intends to extend environmental regulation and protection out as far as the extended continental shelf. The main agency that will responsible for enforcing this new legislation will be the Environmental Protection Authority (EPA).

Cabinet is also expecting the Ministers for the Environment and Energy and Resources, in consultation with other relevant Ministers, to report back by the end of July 2011 with "a proposal to address the potential environmental impacts of activities, including oil and gas activities, in the EEZ and the extended continental shelf that occur before the legislation and a complete set of regulations come into force."

The Department is not an environmental regulator. The focus of the HSE Act is on preventing harm to people at work. HSNO does focus on impacts on people and the environment, but in terms of petroleum installations and mines, the regulatory framework is provided ostensibly under the HSE Act.

However, in the context of both mines and petroleum operations, managing health and safety effectively tends to promote environmental outcomes as well.

Actively support interim measures to promote environmental outcomes while legislation is underway

General findings

The Department needs to support the current work being done to extend environmental protections out beyond the territorial limit. Agencies are currently working together to identify what can be achieved under the current regulatory framework to promote environmental outcomes while legislative measures are in train to formalise the role of the Environmental Protection Authority in New Zealand’s deepwater frontier zones.

The Department needs to consider how it can contribute to the optimal environmental outcomes. While the Department has only limited responsibility for considering environmental issues (via the HSNO Act), it can work closely with environmental agencies to support environmental outcomes. There is a significant overlap between safety legislation such as the HSE Act and environmental outcomes. While the focus of the HSE legislation is on protecting people at work, many of the hazards on petroleum installations present both a risk to workers and the environment (leaks, explosions and spills for example).

As one of the main regulatory authorities working with the petroleum industry and the recipient of a lot of intelligence and knowledge on offshore drilling activities, the Department should ensure it supports environmental agencies by sharing this knowledge and information.
Actions

87. The Department needs to engage with the EPA, MfE and MED to actively support environmental outcomes through its work with petroleum operators. [NSM and Policy]

88. The Department needs to be mindful of environmental risks and concerns when reviewing information received from operators and keep the environmental agencies informed on these emerging risks/concerns. [SAsHH-P, MTSS and Policy]

89. The Department needs to ensure any relevant information or data (such as daily drilling reports) are provided to environmental agencies (or agencies are provided access). [Policy, MTSS]

90. The Department should support the establishment of a working group with environmental agencies and other regulators to work through all of the data and information available and to agree sharing arrangements. [Policy]
RECOMMENDATION SEVEN: HOLD OFF FURTHER WORK ON FUNDING UNTIL THESE PRACTICAL SUGGESTIONS ARE IMPLEMENTED OR PROGRESSED

General observations

The Department has only limited resources available to support its high hazard work. With only one Senior Adviser in place, the Department is spending about as much as it gets from the petroleum industry by way of its contribution to the health and safety levy. This is because the levy is a flat rate of $0.05 on every $100 of liable earnings.

The Department already prioritises most of its activities on places where harm is occurring. This effectively means, low risk, low impact activities - like administrative work - effectively cross-subsidises the Department's work on high risk, high impact industries like construction.

However, because the levy is a finite pool of money, any additional expenditure on high hazard industries necessarily impacts on the funding available for other, non high hazard activities.

Flag the issue of funding but take it no further for now

General findings

Many of the recommended actions will not cost a significant amount of money to implement. However, some - such as those relating to additional resources through expanded staffing and the use of third-parties - will place significant burdens on the Department’s ability to fund this area.

What these costs are and how they can be accommodated can not be confirmed until further work has been completed. However, rather than hold up implementation of any of these recommendations, it is suggested that work progress as far as possible without seeking additional funding. Instead, the Department should focus its attention on determining what level of additional funding it actually requires.

Funding for these expanded high hazard works could come from a number of sources including:

- shifting resources from other areas within the Labour Group (will necessarily impact on its service delivery in its other HSE work)
- obtaining agreement to utilise unallocated ‘headroom’ within the HSE levy funding. The HSE levy historically yields more money than is actually appropriated for health and safety activities. The excess is described as “the headroom”. Freeing up this headroom funding into the Labour Group’s baseline - if not offset elsewhere in the Department - represents a net increase in the Department’s overall baseline
- obtaining additional funding from government. This would also expand the Department’s baseline (unless off-set elsewhere in the Department’s budget)
• seeking funding from other agencies—such as Crown Minerals. Although how this would work in a practical sense is hard to determine

• seeking industry funding—although it is likely that there would be constraints on achieving this under legislative framework (i.e. the Department has no power to levy an industry fee or collect money from industry).

**Actions**

91. Flag with the Minister of Labour and other agencies that the Department intends to raise the issue of resourcing at a later date as and when it has a clear idea of proposals and costs. [NSM]
Attachment one: Inspection bodies

The Secretary of Labour may recognise a person or organisation as an inspection body as long as they are effective, have appropriate experience and background, are accredited by International Accreditation New Zealand on behalf of the Testing Laboratory Registration Council or by the National Association of Testing Authorities Australia, they are reliable (i.e. carry out their work in the interests of the public and of safety) and there is no foreseeable conflict between their inspection work and any other work they may do.

By searching the Department of Internal Affairs’ online Gazette resource, there appear to be five bodies Gazetted by the Secretary of Labour as inspection bodies:

- Lloyds Register of Shipping (year of notice - 2000)
- Lloyds Register Asia (year of notice - 2003)
- SGS M&I (year of notice - 2003)
- Bureau Veritas (NZ) Ltd (year of notice - 2004)
- American Bureau of Shipping (year of notice - 2005)

It is unclear whether all of these inspection bodies are still operating in New Zealand as inspection bodies. Lloyds Register of Shipping notified its intention to cease operations in New Zealand in 2003, which presumably were taken over by Lloyds Register Asia. It is unclear whether SGS M&I is still operating as an inspection body under the Petroleum Regulations.

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<tr>
<th>Name</th>
<th>Gazetted</th>
<th>IANZ accredited/ when</th>
<th>Current?</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Lloyds Register of Shipping</td>
<td>2000</td>
<td>No/-</td>
<td>x</td>
<td>Does not appear to be currently operating in New Zealand. Not currently accredited with IANZ and gave notice under the Companies Act in 2003 of its intention to cease operations in New Zealand. Presumably, its operations were picked up by Lloyds Register Asia (confirmation required).</td>
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<td>SGS M&amp;I</td>
<td>2003</td>
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<td>Appears to be a subsidiary of SGS New Zealand. However, it does not appear to be accredited with IANZ for work under these Regulations.</td>
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## Attachment two: IANZ accreditation and scope

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</tr>
<tr>
<td>Process inspection (review of process): Design Review</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Process inspection (review of process): Structural inspections</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Process inspection (review of process): Major hazards</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Process inspection (review of process): Control hazards</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Process inspection (review of process): Emergency systems and facilities</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Process inspection (review of process): Escape Evacuation and Rescue</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Plant (equipment) inspection: Fabrication: boilers</td>
<td>-</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Plant (equipment) inspection: Fabrication: Pressure vessels</td>
<td>-</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Plant (equipment) inspection: Fabrication: Pressure piping</td>
<td>-</td>
<td>✓</td>
<td>-</td>
</tr>
</tbody>
</table>
## Attachment three: Notifiable events

<table>
<thead>
<tr>
<th>Information</th>
<th>Regulation</th>
<th>When</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy of emergency procedures and any revisions</td>
<td>R8(3)</td>
<td>Before commencement of the operation and as soon as practicable after any revisions are made</td>
<td>-</td>
</tr>
<tr>
<td>Notification of initial discharge of petroleum vapours or gases requiring flaring</td>
<td>R11</td>
<td>24 hours prior to initial discharge</td>
<td>Notified in writing</td>
</tr>
<tr>
<td>Notification of certain events relating to well drilling operations</td>
<td>R14</td>
<td>20 days before the day on which the operation commences As soon as practicable after any alteration</td>
<td>Particulars set out in Schedule 1 (parts 1, 2, 3 and 4 – as appropriate)</td>
</tr>
<tr>
<td>Well drilling summary report</td>
<td>R16</td>
<td>Copies of daily records and summary report are supplied as soon as practicable</td>
<td>Daily record particulars set out in Schedule 2 Summary report Particulars set out in Schedule 3</td>
</tr>
<tr>
<td>Notification of certain events</td>
<td>R19</td>
<td>As soon as practicable</td>
<td>- failure in any part of primary pressure containment system of a well - steps the employer proposals to take in order to remedy the failure</td>
</tr>
<tr>
<td>Safety case</td>
<td>R22(2)</td>
<td>All practicable steps ensure copy set at least 2 months prior to construction, operation or abandonment</td>
<td></td>
</tr>
<tr>
<td>Revisions to safety case</td>
<td>R22(3)</td>
<td>All practicable steps ensure copy of any revision of safety case is sent to Secretary as soon as practicable after revision is made</td>
<td></td>
</tr>
<tr>
<td>Particulars of verification system</td>
<td>R26(1)(a)</td>
<td>Suitable verification scheme detail for approval</td>
<td>As an alternative to Certificate of Fitness. Must contain particulars set out in Schedule 6</td>
</tr>
<tr>
<td>Safety case revision</td>
<td>R27(d)</td>
<td>Provide copy of revised safety case as soon as practicable after the revision is made</td>
<td></td>
</tr>
<tr>
<td>Certificate of fitness</td>
<td>R28(4)</td>
<td>A copy of the certificate of fitness one month before the commencement of operations</td>
<td></td>
</tr>
</tbody>
</table>
## Attachment four: Current Resources Associated with High Hazard work

<table>
<thead>
<tr>
<th>Table</th>
<th>Resources</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extractives (mining)</td>
<td>1 x Senior Adviser High Hazards (Extractives)</td>
<td>The Senior Adviser currently reports to the Chief Adviser HSE</td>
</tr>
<tr>
<td></td>
<td>2x HSE inspectors (Mines)</td>
<td>The two inspectors report to Team leaders in Service Offices</td>
</tr>
<tr>
<td></td>
<td>General H&amp;S Inspectors when required</td>
<td></td>
</tr>
<tr>
<td>Petroleum exploration, extraction and</td>
<td>0.8 x Senior Adviser High Hazards (Petroleum)</td>
<td>Managed through the New Plymouth office (New Plymouth-based)</td>
</tr>
<tr>
<td>processing</td>
<td>As required: General H&amp;S Inspectors when required</td>
<td></td>
</tr>
<tr>
<td>Pipelines</td>
<td>Technical leader (fraction of time)</td>
<td>Part of the Technical Support team (Wellington-based)</td>
</tr>
<tr>
<td>Geothermal</td>
<td>Partial FTE of Senior High Hazards (Petroleum)</td>
<td>Bay of Plenty Service Office (Rotorua-based)</td>
</tr>
<tr>
<td></td>
<td>Service office/manager (fraction of time)</td>
<td></td>
</tr>
<tr>
<td>Technical advice</td>
<td>Technical</td>
<td>General advisory call service</td>
</tr>
<tr>
<td>Technical Support team</td>
<td>Standards, specialists with occupational hygiene, asbestos, pipelines and</td>
<td>Manager Technical Support Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>