

<p>Report into the Regulation of Occupational Health and Safety in Victoria's Earth Resources Industries.</p>																									
<p>Neil Pope May 2006</p>																									

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Chapter 1

THE EARTH RESOURCES INDUSTRIES

Throughout this Report reference is made to Victoria's earth resources industries. This is a convenient term used to describe a range of activities including mining, quarrying and the exploration for and exploitation of on-shore petroleum.

Mining

Number and types of mines

According to the Department of Primary Industries (DPI) there are 266 mines operating in Victoria.¹ Of these less than 20 are significant or prescribed mines. These include:

- underground mines at Ballarat, Bendigo and Stawell;
- three large open pit coal mines in the LaTrobe Valley;
- gold mines that use cyanide;
- tourist mines,
- and small (intermittent) underground mines.

¹ DPI, *Submission to Inquiry into the Regulation of Occupational Health and Safety in Victoria's Resource Industries*, [hereinafter referred to as DPI Submission], March 2006, page 4.

The tourist mines include Sovereign Hill in Ballarat, Central Deborah in Bendigo, the Walhalla Long Tunnel Extended and the Wonthaggi Coal Mine.

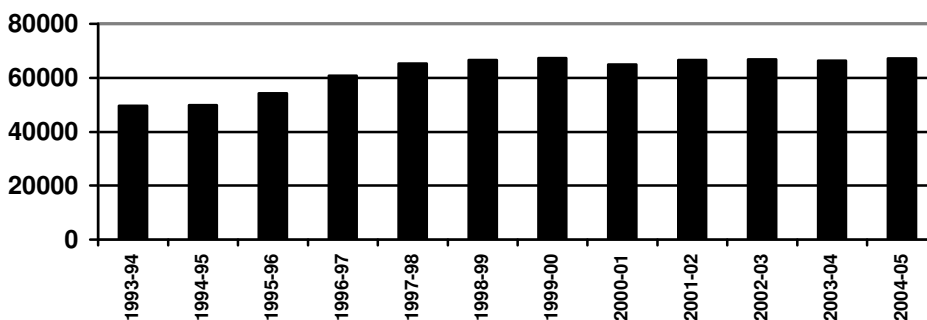
There are approximately 320 exploration licences and 300 mining licences across Victoria.² In all there are 203 currently authorised exploration sites in Victoria.³

Output

Mineral production in Victoria is dominated by brown coal (open-cut mining) and gold.

Last year more than 65 million tonnes of coal was mined providing fuel for the provision of around 85% of Victoria’s electricity.⁴ Output has been quite stable over recent years.

BROWN COAL PRODUCTION ('000 tonnes)



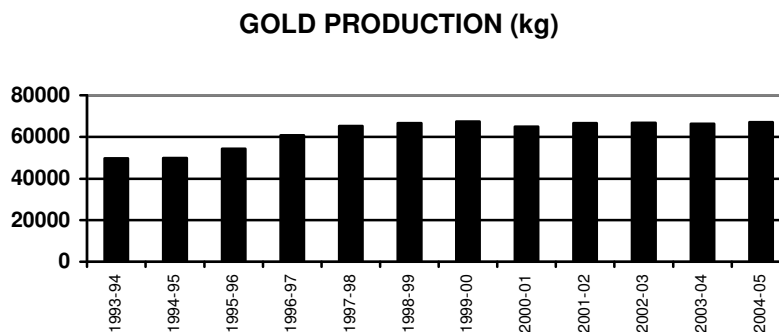
Source: *Victoria’s Mineral, Petroleum and Extractive Industries 2004/05 Statistical Review*, DEPARTMENT OF PRIMARY INDUSTRIES, March 2006.

² Minerals Council of Australia, Victorian Division., *Submission: Inquiry into the Regulation of OHS in Victoria’s Earth Resources Industries*, [hereinafter referred to as MCA Submission], March 2006, page 4.

³ MCA Submission, page 4.

⁴ MCA Submission, page 4.

So, too with gold production.



Source: *Victoria's Mineral, Petroleum and Extractive Industries 2004/05 Statistical Review*,
DEPARTMENT OF PRIMARY INDUSTRIES, March 2006.

Gypsum, kaolin and feldspar are the other significant contributors to mineral production in Victoria.

The submission from the Minerals Council of Australia, Victorian Division, notes:

*“According to the national accounts prepared by the Australian Bureau of Statistics (ABS), the Mining industry contributed \$2.6 billion to the Victorian economy in 2004-05, as measured by its contribution to total state production (total factor income at current prices).”*⁵

⁵ MCA Submission, page 4.

Employment

The Victorian minerals industry directly employs approximately 5,000 people including over 2,000 people employed in national and international mining head offices located in Melbourne.

Nevertheless, by national standards Victoria is not a large mining employer. In 2003-2004 employment at mining sites was:

Metalliferous mining	669
Coal mining - all surface mining	1,485
Underground mining	511
Exploration	241
TOTAL MINING EMPLOYMENT	2,395
Source: MCA - Safety & Health Performance Report of the Australian Minerals Industry 2003-2004.	

All of Victoria's underground mining activity is in the metalliferous sector, but even in this sector employment in Victoria is the lowest of any State or Territory. We account for 3.67% of employment and 2.32% of hours worked in this sector.

Australian employment in underground mining	22,766
Victorian employment in underground mining	511
	2.25%
Hours worked in underground mining - Aust	48,371,508
Hours worked in underground mining - Victoria	746,276
	1.54%
Source: MCA - Safety & Health Performance Report of the Australian Minerals Industry 2003-2004.	

The extractive industry

This sector covers the extraction and processing of construction materials. These include sandstone, freestone, basalt, granite, limestone, quartz, slate, gravel, clay, sand, earth and soil.

Output

Given that it provides low-cost rock, clay, sand and gravel to the construction, building and allied industries for the construction of roads, bridges and buildings, this industry is crucial to the development of Victoria's physical infrastructure.

In 2004-05 hard rock, clay, sand and gravel production was reported as 41.7 million tonnes. This is slightly higher than production in 2003-04 of 38.9 million tonnes and is the highest output recorded since data collection commenced in 1996-97.⁶

Employment

Victoria is the largest extractive industry employer in Australia – 2,218 workers are employed in Victoria out of a national total of 6,614. (33.5% of national employment.)

⁶ DPI, *Victoria's Minerals, Petroleum and Extractive Industries, 2004/05 Statistical Review*.

State/Territory	Employment	Hours worked
Victoria	2,218	2,870,365
Queensland	1,201	2,685,100
New South Wales	1,129	2,010,910
South Australia	1,059	1,928,349
Western Australia	651	1,350,000
Tasmania	190	305,403
Northern Territory	166	323,841
TOTAL EXTRACTIVE INDUSTRIES	6,614	11,483,968
<i>Source: MCA - Safety & Health Performance Report of the Australian Minerals Industry 2003-2004.</i>		

At present there are 856 current Work Authorities under the Extractive Industries Development Act (EIDA)⁷, and around 550 operating quarries.

The industry in Victoria comprises some large operators and many medium and small operators, including one or two person operations, often in remote locations. Although extractive resources are finite, quarries are typically planned well in advance and operated over a number of decades. They can often be located close to residential areas and can, accordingly, impact closely on the community.

On-shore petroleum

The level of activity in the onshore petroleum industry in Victoria is low. Development activity is limited to the Iona gas storage facility and processing

⁷ DPI Submission, page 3.

plant and three other small gas and carbon dioxide operations (wells and processing plants) in Western Victoria.⁸

“Exploration activity is also at a low level, with around 8 wells drilled and one or two seismic surveys carried out each year.”⁹

Victoria, of course, has a significant off-shore oil and gas industry and although the Victorian Government retains some regulatory responsibilities for non-safety issues, health and safety on off-shore petroleum facilities was transferred to a national organisation, the National Offshore Petroleum Safety Authority (NOPSA) in January 2005. Accordingly, Victoria’s off-shore petroleum industry is not the subject of this Review.

⁸ DPI Submission, page 4

⁹ *ibid*, page 4

Chapter 2

OCCUPATIONAL HEALTH AND SAFETY IN VICTORIA

Workplace health and safety in Victoria had historically been dealt with on a reactive basis with legislation passed to deal with particular problems and specific industries. In the case of mining, safety issues had been covered by the Mines Act, a piece of legislation dating back to the very earliest days of the Colony of Victoria.

The Robens Revolution

The 1970s and 1980s saw a revolution internationally in the way that governments approached workplace health and safety. The 1972 Report of a British Government Committee of Inquiry into Health and Safety at Work, chaired by Lord Robens, launched a new approach to the regulation of occupational health and safety.

It was critical of the extent to which workplace health and safety was prescriptive and reactive to issues and problems as they arose. The Report was also critical of a preoccupation with physical hazards and the almost total neglect of human and organisational factors as contributors to workplace health and safety.

Robens' criticisms were very much a reflection of the kind of systems that had developed in Victoria – piecemeal, prescriptive and reactive.

Lord Robens advocated a unified focus on occupational health and safety and the replacement of prescription and direction with a performance-based approach that sets out broad duties of care and the performance outcomes

required to meet those duties. It did not specify how those outcomes should be achieved. Importantly, the Robens approach sought to give employers and employees a central role in and ownership of the responsibility for a safe and healthy workplace.

The beginnings of this new approach in Victoria was seen in 1981 with the introduction of the Industrial Safety, Health and Welfare Act, but the major breakthrough came in 1985 with the passage of the Occupational Health and Safety Act and the establishment of the Occupational Health and Safety Commission.

The Occupational Health and Safety Act 1985 exempted mines and quarries in Victoria. Instead, occupational health and safety matters in licenced mines continued to be regulated under the Mines Act. This reflected the industry's view of the time that health and safety in the mining industry was already well-developed and should be regarded as a special case.

The health and safety imperatives of the Mines Act were largely of a prescriptive nature and were enforced by a mining inspectorate employed within the DPI (or its equivalent at the time).

When, in 1990, the Mines Act was replaced by the Mineral Resources Development Act (MRDA) an attempt was made by the Government of the day to bring the mining industry under the Occupational Health and Safety Act. This was rejected by the Opposition-controlled Legislative Council that, with the support of the industry at the time, wanted the retention of specific mine safety provisions, policed by a Mines Department and its mining inspectorate.

The Accident Compensation (Amendment) Act of 2001 changed that arrangement by:

- Amending the MRDA to remove the exemption of mines from the OHS Act, and
- Amending the OHS Act to enable the Victorian WorkCover Authority (VWA) to appoint DPI staff as health and safety inspectors in mines and quarries.

At the time of the 2001 amendments there was apparently an understanding with the Minerals Council, Victorian Division (then VMEC) and its members that mines would continue to be regulated by the DPI. This was achieved with the development and signing of a Memorandum of Understanding between the Victorian WorkCover Authority (VWA) and the DPI.

The DPI Inspectors were subsequently trained and accredited as WorkCover inspectors.

On 28th October 2002 new Occupational Health and Safety (Mines) Regulations were introduced to replace the old mine safety regulations – the Mineral Resources (Health and Safety) Regulations and the Mineral Resources (Health and Safety in Large Open-cut Mines) Regulations - that had been in place under the MRDA.

Occupational Health and Safety (Mines) Regulations 2002

These regulations are currently in operation but will be replaced by new Regulations being developed at the moment. These are expected to take effect in 2007.

In contrast to the regulations that applied previously, the 2002 Regulations are largely performance-based. They set out broad duties of care:

- Duty to control risk, and
- Duty to identify mining hazards and assess risk

and the performance outcomes required, without specifying how these must be achieved.

Duties are also specified in relation to:

- who may enter mines
- strategies to protect persons at mines from any risk from the consumption of alcohol, drugs and fatigue. (Operators had until 28th October 2003 to develop and implement such strategies).

In addition, an element of prescription still exists. This is in order to address hazards that are seen to be unique to the mining sector. These relate to:

- shafts and winding
- progress of underground workings
- emergency exits
- filling of mined out areas
- air quality
- ventilation, and

- prohibitions on internal combustion engines and materials that produce toxic fumes when burning

This approach applies to all mines; however, there is a further layer of regulation that applies to prescribed mines. These prescribed mines include all underground mines, tourist mines with underground operations and the major coal mines.

Operators of these mines must establish, document and implement a comprehensive and integrated Safety Management System (SMS) for the control of risk to health and safety associated with mining hazards.

An SMS must document:

- the operator's safety policy
- systems, procedures and other control measures
- performance standards for measuring effectiveness
- the way in which performance standards are to be met
- a comprehensive audit process

Prescribed mines associated with major mining hazards (that is, hazards with the potential to cause an incident resulting in, or posing a significant risk of causing, more than one death) must also conduct a systematic Safety Assessment. This is a rigorous and detailed process.

The Regulations also require consultation by operators with health and safety representatives, and training for employees.

Specific duties of employees are prescribed. These include:

- the wearing and use of safety, protective and rescue apparel
- alerts re: hazards, and
- prohibitions on alcohol and drug usage

The Maxwell Enquiry

In September 2003 the Victorian Government commissioned Chris Maxwell QC to conduct the first major review of the OH&S Act since its introduction in 1985. His report, in April 2004, reaffirmed what he called the safety consensus:

“...there is a consensus across all interested groups and “stakeholders” that the fundamental assumptions on which the legislative scheme is based are sound....The paramount importance of health and safety in the workplace is acknowledged on all sides.”¹⁰

This reflects what this Review has found. That notwithstanding differing views about particular mechanisms and processes, the Occupational Health and Safety Act is more than ever before widely accepted as the appropriate vehicle for the regulation of workplace safety in Victoria.

¹⁰ Maxwell, Chris QC., *Occupational Health and Safety Review*, March 2004, page 20.

Occupational Health and Safety Act 2004

The Maxwell Report resulted in the passage of the Occupational Health and Safety Bill 2004 in December 2004.

Key aspects of this new Act include:

- The explicit recognition of a public interest in workplace health and safety. The Act now recognises the importance of protecting members of the public from risks created by the activities conducted at a workplace. It also

“...enshrines in legislation, for the first time, the aspirations of the Victorian community concerning workplace health and safety.”¹¹

- A new duty of care on the designers of workplaces.

“This new duty is intended to ensure that hazards and risks that may be inherent in the design of a workplace are eliminated or reduced at the design stage.”¹²

- A general duty on employers to consult with their employees about health and safety issues.
- The express inclusion of psychological as well as physical health
- Clearer rights for access to training

¹¹ Hon. Rob Hulls, *Occupational Health and Safety Bill – Second Reading Speech*, October 2004.

¹² *ibid.*

- Specific provision for inspectors to provide advice on how to comply with the OH&S Act, and
- An improved process to enable the review and appeal of decisions made by the VWA

Chapter 3

THE DEPARTMENT OF PRIMARY INDUSTRIES

Corporate aims and goals

The DPI sees its role in terms of the sustainable development of Victoria's mineral, petroleum, extractive and geothermal industries. In pursuit of this role it has developed a number of key strategies. These are to:

- Manage and regulate natural resource use
- Facilitate investment in the sustainable use of natural resources
- Drive improvements in the productivity and sustainability of primary industries, and
- Promote trade by protecting and enhancing access to markets.¹³

In practice these strategies have required the DPI, and in particular, its Minerals and Petroleum Division, to:

- Provide strategic policy advice on oil and gas, geothermal, mining, extractive and minerals development
- Regulate the exploration and development of these resources
- Promote the exploration and development of these resources

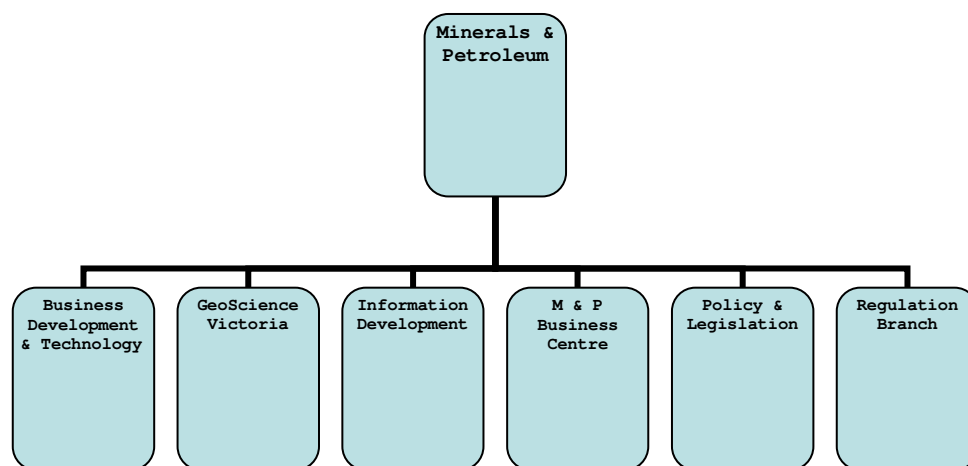
¹³ DPI., *Corporate Plan 2004-2007*.

- Facilitate increased investment in the exploration and sustainable exploitation of these resources.

It also acknowledges and has committed itself to ensuring that community expectations for health, safety and environmental management are met.

The Minerals and Petroleum Division (MPD)

The MPD is structured into six branches.



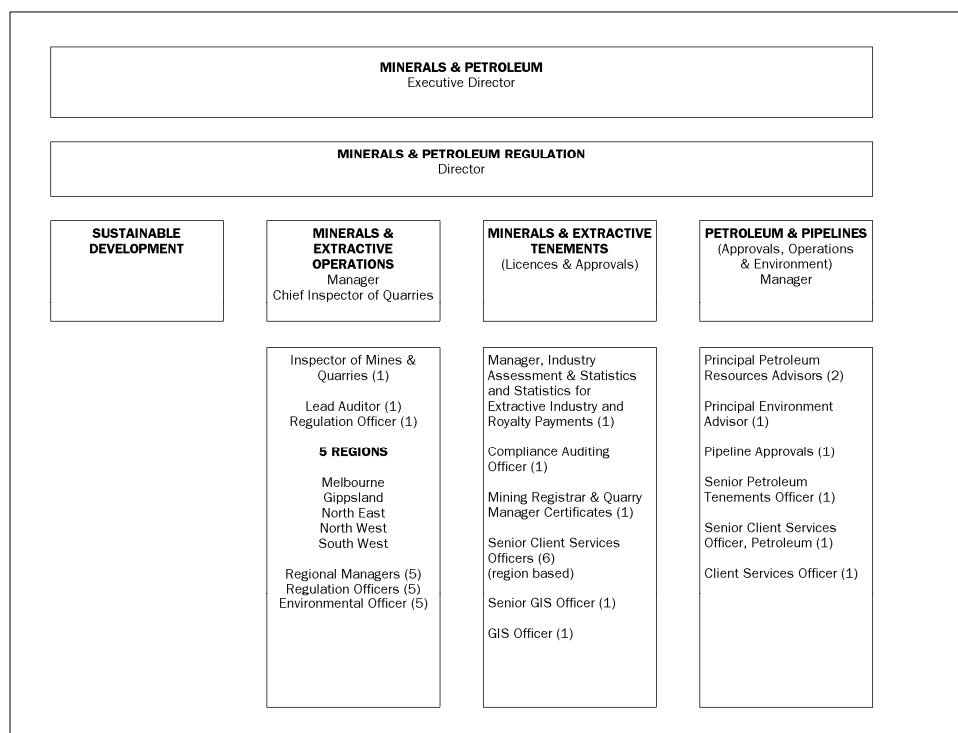
The Business Development and Technology Branch takes the lead role in the attraction of resources investment into Victoria, and promotes the development and application of technologies relevant to Victoria's resources. In performing these roles, this Branch works closely with GeoScience Victoria in promoting investment, and liaises with the Regulation Branch in facilitating approvals.

GeoScience Victoria collects, enhances and provides geoscientific information to attract new minerals and petroleum explorers to Victoria and to increase investment in and understanding of Victoria's minerals and petroleum resources.

Minerals and Petroleum Business Centre is the Division’s shop front for licence applications, the Mining Register, Miners Rights and other information.

The Branch charged with the regulation and administration of occupational health and safety is the Minerals and Petroleum Regulation Branch (MPRB).

Minerals & Petroleum Regulation Branch



This Branch administers, regulates and inspects operators for a range of purposes, including occupational health and safety, site rehabilitation, safeguarding of the environment and royalty collection. Its tenements section has specific responsibility for the administration of licensing and resource allocation.

The Branch describes its key responsibilities as being to:

- provide a consistent, transparent and secure tenement administration regime
- provide health, safety and environment standards, monitoring and enforcement to ensure that industry operations meet community expectations
- partner industry and provide leadership in achieving regulatory reform.¹⁴

The Department's multi-faceted role – an initial observation.

The all-embracing role that the DPI plays in relation to the earth resources industries can be seen in a number of ways. It can be seen as a product or accident of history. From the starting point that there should be a focussed caretaker or protector of the Crown's natural resources has evolved an entity that has grown accustomed to overseeing every aspect of the industries that have emerged to explore and exploit those resources.

Sustainability can also be used to justify the clustering of a variety of roles and functions under the one umbrella. In other words, the stewardship of the Crown's resources requires not just a focus on exploitation and economic benefit, but an ingrained recognition of the need to do so in ways that are socially and environmentally sustainable.

Of course, sustainability or 'meeting community expectations' should not mandate any department as the 'jack of all trades'. In its most basic term it

¹⁴ DPI., website at www.dpi.vic.gov.au, May 2006

should point to a mindset that embeds a more global and forward-looking vision into the roles it performs, not as the rationale for an organisational structure.

The clustering of roles and responsibilities could, alternatively, be simply a matter of convenience. Those who seek to safeguard the Crown's resources and those who seek to explore them and exploit them might find it simpler and more convenient to gather all tasks under the one umbrella – a 'one-stop shop' where minds can meet and 'do the business'.

So, the work of this Review is not to challenge the breadth of the Department's horizons or the need for its essential contribution to sustainability. Nor, in a more specific light, is it to question whether the DPI should contribute to the health and safety of those who work in the earth resources industries. History, collective (and collected) experience, convenience and the imperatives of sustainable industry development would all tell us that it should. Rather, it is to explore what it does best and how it can best and most effectively contribute to a healthier and safer industry.

Chapter 4

OCCUPATIONAL HEALTH AND SAFETY AND THE DEPARTMENT OF PRIMARY INDUSTRIES

The broader context

Each State and Territory has chosen to adopt a different approach to the regulation of occupational health and safety in the earth resources industries. Queensland, New South Wales, the Northern Territory and Victoria currently have models of regulation administered by their relevant industry-specific departments.

On the other hand, South Australia and Tasmania have chosen to locate their responsibilities principally within their lead occupational health and safety agencies. Western Australia has also transferred its occupational health and safety responsibilities for these industries to its Department of Consumer and Employment Protection. However, it is currently considering the establishment of a separate, independent mine safety authority funded by levies imposed on the industry.

Such differences will inevitably occur and it is difficult to identify from the basic occupational health and safety data whether one approach has been more successful than any other. In many reviews that have been conducted the approach has been to identify the appropriate principles and best apply them to the circumstances that exist in each jurisdiction. That is the approach that has been adopted by this Review.

A significant initiative in this context is the development of a National Mine Safety Framework that aims to guide the evolution of occupational health and

safety in the mining sector, not by specific debates over mechanisms and structures, but on the basis of broader goals and principles. Each jurisdiction will then be able to construct its processes accordingly.

National Mine Safety Framework

The National Mine Safety Framework has been produced and endorsed by the Ministerial Council on Mineral and Petroleum Resources (MCMPR) that comprises Federal, State and Territory Ministers responsible for minerals and petroleum.

It originated from a growing consensus in the mid 1990s of the priority that needed to be accorded to health and safety and recognises the growing human and economic cost of deaths and injuries in the mining industry and the impact of safety on its competitiveness and sustainability.

On Victoria's initiative MCMPR set up a taskforce in 1998. This taskforce, chaired by Victoria, produced an agreed set of draft principles and key goals in 2000. These were endorsed by the Council in March 2002.

What it hopes to achieve.

The Framework is recognition that although health and safety is the primary responsibility of employers and employees, governments have an important contribution to make in support of both parties.

It is also recognition that because many employers operate in more than one State and that employees move between companies and jurisdictions, there are significant benefits in adopting consistent best practice nationwide.

The Framework seeks to achieve a uniform nationwide approach to mine safety based on:

- Legislation that is consistent, clear and unambiguous
- The removal of duplication of effort in compliance and administration, and
- An environment that encourages innovation and improvement.

Government's role

The Framework agrees that the contribution of government should be:

- Nationally consistent
- Encouraging of action by stakeholders at the enterprise level
- Focussed on best practice, innovation and continuous improvement, and
- To recognise that responsibility for health and safety at mine sites rests with employers and employees, with senior management being accountable for leadership.

The goals for government

The Framework accordingly sets out seven goals for government in mining:

- The establishment of a **consistent legislative framework** based on a general “duty of care” approach

- Support for the development of occupational health and safety **competencies** within a national training framework
- A co-operative approach to the provision of information that will assist in achieving **compliance**
- The development of a nationally consistent approach to **enforcement**, based on consistent standards and equitable outcomes
- To collect and use consistent, reliable and useful **data** about occupational health and safety performance
- Promote improvement through fostering **consultation** with and among stakeholders, and
- Foster effective **research** into occupational health and safety in mining

Implementation

Implementation of the NMSF is meant to allow for flexibility within individual jurisdictions, and should also encourage individual enterprises to go beyond basic measures.

Responsibility for driving the implementation of the Framework lies with the MCMPR's sub-committee of Chief Inspectors of Mines.

The Framework is intended to be consistent with the National Occupational Health and Safety Strategy adopted in May 2002 by the Workplace Relations Ministers Council.

The Beaconsfield disaster

During the course of this Review the issue of health and safety in underground mines became the focus of national attention as a result of the incident at the Beaconsfield gold mine in Tasmania. This resulted in the death of one miner and the rescue of two others after being trapped underground for almost two weeks.

This incident was neither a catalyst for this Review nor the focus of it. However, it is worthy of special mention in setting a context for this Report because it was a compelling reminder to all of us of the ever-present risks and hazards in mining and other earth resources industries. It is a stark reminder that the workplace can be a very dangerous place.

It is also a reminder that when health and safety is threatened its impact is widely felt. It affects all of those who bravely participate in rescue operations. It affects managers and companies. It especially affects the communities involved, as well as the wider public.

Beaconsfield tells us all over again that, for whatever reason, the dangers faced by workers in the mining and associated industries strike a particular and unique chord in all of us.

The Government's view of occupational health and safety

The Ministerial Statement 2003, "*Promoting Victoria's Prospects: The Challenge for the Mining, Extractive and Petroleum Industries.*" makes it clear that the Victorian Government regards health and safety in the workplace as a fundamental priority.

“Health and safety

Our goal is to ensure Victorian workplaces are safe. Victoria has an enviable record of safety in the extractive, minerals and petroleum industries, however, the Government and industry must continue to strive for even safer workplaces. The Bracks Government is determined to ensure that workplaces are safe for all employees and the whole of the community.”¹⁵

Occupational Health and Safety Act

The Department of Primary Industry derives the bulk of its occupational health and safety responsibility from the Occupational Health and Safety Act 2004 and its Regulations. This requires it to oversee and enforce both the duties of care specified under the Act based on performance outcome, as well as the more prescriptive aspects of the Regulations.

The DPI inspectorate derives its authority under the Occupational Health and Safety Act from an agreement reached in 2000 between the two responsible Ministers at the time – the Minister for Energy and Resources, and the Minister for WorkCover - under which the VWA delegated to the DPI (then the Department of Natural Resources and Environment) powers to administer the OH&S Act in the minerals, extractive and petroleum industries. It was agreed:

¹⁵ DPI., *Promoting Victoria's Prospects: The Challenge for Mining, Extractive and Petroleum Industries.*, 2003, page 15.

“...that administration of the Act [by the DPI] will be consistent with its administration in other Victorian workplaces by the Victorian WorkCover Authority.”¹⁶

DPI inspectors were appointed as inspectors under the OH&S Act.

Underpinning this agreement was a Memorandum of Understanding signed by the VWA and the DPI agreeing the specific jurisdictions within the affected industries (at the time the DPI also had responsibility for off-shore petroleum), and establishing general, rather broad guidelines for co-operation between the two agencies.

Although there would seem to be good, and improving relations and levels of co-operation between the DPI and the VWA, the Memorandum seems to have been more of a vehicle for establishing boundaries than a dynamic means of interaction. The current Memorandum expires on 31st December 2006.

Industry-specific legislation

In addition, however, the DPI is the lead agency for a series of industry Acts that add further powers and responsibilities to its role in occupational health and safety.

Mineral Resources Development Act

This is the main vehicle for the DPI's stewardship of Victoria's mineral resources, and puts in place the licensing regime for this purpose.

¹⁶ Letter from Minister for WorkCover, Hon. R.Cameron to Minister for Minerals and Energy, Hon. C.Broad, 14th September 2000.

“The purpose of this Act is to encourage an economically viable mining industry which makes the best use of mineral resources in a way that is compatible with the economic, social and environmental objectives of this State.”¹⁷ [Act, s.1]

Three processes are at the heart of this legislation – exploration, access for mining purposes and exploitation. These mechanisms address various land management, environment and planning issues, including the use of Crown land, native title and the appropriation of agricultural land for mining purposes. The Act is also the vehicle for securing royalties on behalf of the Crown.

The MRDA oversees the manner in which resources can be exploited and includes a strong focus on occupational health and safety.

Exploration Licence

This is essentially a vehicle under the MRDA for controlling access to the State’s resources. It is mostly concerned with land management and environment issues, although a general outline of an exploration work program is also required. Once the licence is granted low impact exploration can commence. Low impact exploration refers to exploring for minerals on land without:

- Using equipment to excavate the land
- Using explosives
- Removing or damaging any tree or shrub

¹⁷ *Mineral Resources Development Act 1990*, Section 1.

- Disturbing any Aboriginal place or object
- Disturbing any place or object on the Victorian Heritage Register.

Where there will be exploration over and above low impact a much more detailed Work Plan is required.

Mining licence.

The mining licence principally controls access to the Crown's mineral resources for the purposes of its exploitation. Its grant relies on a series of land management issues, including clear identification of the resource being claimed, the status of land ownership, probity clearance and an initial indication of how the resources would be exploited.

The grant of a licence does not, of itself, allow mining operations to commence. The key link in this process is the approval of a detailed Work Plan and the granting of a Work Authority.

Work Plan and Work Authority.

Before mining on a mining licence grant or high impact exploration under an exploration licence can occur, a Work Plan providing detailed information about the design and operation of any mining or exploration activity must be prepared and approved.

For exploration over and above low impact

Schedule 12 of the MRDA Regulations specifies the information required for an exploration licence Work Plan. It includes, inter alia:

- A description of the proposed works
- Details of any specific sites that have been identified for drilling or other earthworks.
- Proposals for rehabilitation of areas disturbed by exploration, including revegetation and any proposals for the removal of plant and equipment
- Proposed arrangements for consultation with landowners etc., and
- Information about the proposed methods of monitoring, auditing and reporting impacts on the environment.

Once the Work Plan has been approved exploration can commence.

For mining

Schedule 13 of the MRDA Regulations specifies the information required in such a mining licence Work Plan. It includes:

- Geological information
- A site plan showing, inter alia, proposed building and surface facilities
- The sequencing of extraction from the site
- Access roads, and
- In the case of underground mining, a schematic drawing showing underground development and proposed extent of stoping.

The plan must also describe the metallurgical and mineral recovery methods to be used, a rehabilitation plan and an environmental management plan.

Significantly, both these Work Plans must also include:

“An occupational health and safety plan that demonstrates, so far as is practicable, that the works are designed and will be operated so as to be safe and without risks to health.”¹⁸

The Work Plan process is rigorous and comprehensive and is very significant in its coverage of safety on a mining site. It is also a significant document in the context of proper environmental policy and management, including the rehabilitation stage of a mining operation.

In practice the mining licence Work Plan also forms the basis of securing planning permission from the responsible authority (usually the local municipality). Indeed, section 40 of the MRDA prohibits a Work Plan being approved until any required planning approval has been granted. (Alternatively under Section 42 of the Act permission can be given for the preparation of an Environment Effects Statement instead of a planning permit.)

Once the Work Plan has been approved and other land management, environment and rehabilitation matters have been satisfied, a Work Authority is issued. This authorises the licensee to carry out mining work in accordance with the Work Plan.

Under current arrangements the Department of Primary Industry, as the regulator, advises licensees in the preparation of these Work Plans, assesses

¹⁸ Mineral Resources Development Act 1990 Regulations, *Schedule 13*.

and approves them and then, in the case of a mining operation, issues the Work Authority.

These processes, and the requirements of Work Plans, are shown in Appendices A, B, C and D.

Extractive Industries Development Act (EIDA)

The processes applicable in relation to mining are similar to those set out for the extractive industries under the EIDA.

In the first instance, permits are required to search for stone and to carry on an extractive industry. These form the basis upon which the State controls initial access to this resource.

In order to undertake an extractive operation a Work Plan must be developed and approved before a Work Authority is granted. The content required in a Work Plan is set out in Schedule 3 of the EIDA regulations.

As with the Work Plans required for mining, an extractive industry Work Plan also has to address a range of matters. These include an indication of site layout and structure, the anticipated extent of extraction, the sequencing of extraction and a description of processing methods to be used. A rehabilitation plan, including the concepts for the possible end use of the site, and a detailed environmental plan are also mandated. Many of these matters have significant safety implications, but are also integral to impacts of the extractive operation on the environment.

Unlike the MRDA, there seems to be no specific requirement to include an occupational health and safety plan in these extractive industry Work Plans,

although Clause 8 as a catch-all provision does allow for “Other information that may be relevant to the application but not included above.”¹⁹

Planning approval is required before a Work Plan can be approved.

Work authority for an extractive operation is granted by the Minister “...when all requirements have been satisfied. These include planning approval, landowners consent, approved Work Plan and rehabilitation bond.”²⁰

Conditions can be imposed on a Work Authority addressing a wide range of matters including rehabilitation, environmental issues and ensuring the safety of workers and the public.

As is the case with mining, the DPI plays a multi-functional role and offers an integrated approach to the approval of Work Plans in the context of such issues as planning approval.

The processes and requirements for a Work Plan are shown in Appendix E.

In the preparation and submission of Work Plans in relation to mining and the extractive industries the DPI offers what it calls an integrated approach and advises that the licensee should prepare their Work Plan in consultation with the Department before they apply for a planning permit. For example, in relation to holders of a mining licence they state:

“This Department has developed an integrated mining Work Plan and planning approval process to ensure that all issues that will

¹⁹ Extractive Industries Development Act 1995 Regulations, *Schedule 3*.

²⁰ DPI, *Guidelines to the Extractive Industries Development Act 1995*, August 1999, page 7.

affect a mining proposal are raised at the earliest possible stage rather than emerge during the planning permit process.”²¹

The Department further points out that,

“Municipal councils must refer planning permit applications for mining to a number of agencies within the Department. The integrated mining Work Plan process brings these referrals forward so that all issues are raised ‘up front’.”²²

This Review accepts the argument put to it by all parties that occupational health and safety must be integral to a mining, quarrying or petroleum site from its very inception. Health and safety must be built into the design of the site. It must also, of course, be the principal focus of that site’s subsequent construction, development and operation. Accordingly, it sees the Work Plan as a significant vehicle in ensuring that this occurs.

Petroleum Act

The DPI operates under the Petroleum Act 1998 in its stewardship of the on-shore petroleum resources of the State.

In similar vein to the principal Acts governing mining and the extractive industries, the Petroleum Act addresses two imperatives. The first is resource management under which permits and licences are required in order to gain access to the resource. Permits are required for exploration and a Production licence is required for production and/or storage.

²¹ DPI, *Work Plan, Planning Consent and Work Authority – Mining Licence*, DPI website, www.dpi.vic.gov.au, May 2006.

²² *ibid.*

The second is an operational imperative under which permit and licence holders must gain approval of detailed Operation Plans in order to act on the permit or licence.

These Operation Plans relate to:

- Exploration - all geophysical and geochemical operations
- All drilling and workover operations
- All production and storage operations.

The Act is based on a very stringent approach to health and safety and effectively requires the making of a safety case in order to operate under the permits and licences it mandates. Under the Act's Regulations operators are also required to establish and maintain a health, safety and environment management system (HSEMS). This must form part of the Operation Plan (or HSE case).

Operation Plan

The Operation Plan includes:

- A description of the HSEMS
- Description of the site environment, the facilities and the operation
- A formal HSE assessment, hazard and effects analysis
- Performance objectives, identified shortfalls, remedial measures
- An implementation strategy, and

- Performance standards

These processes are shown diagrammatically in Appendix F.

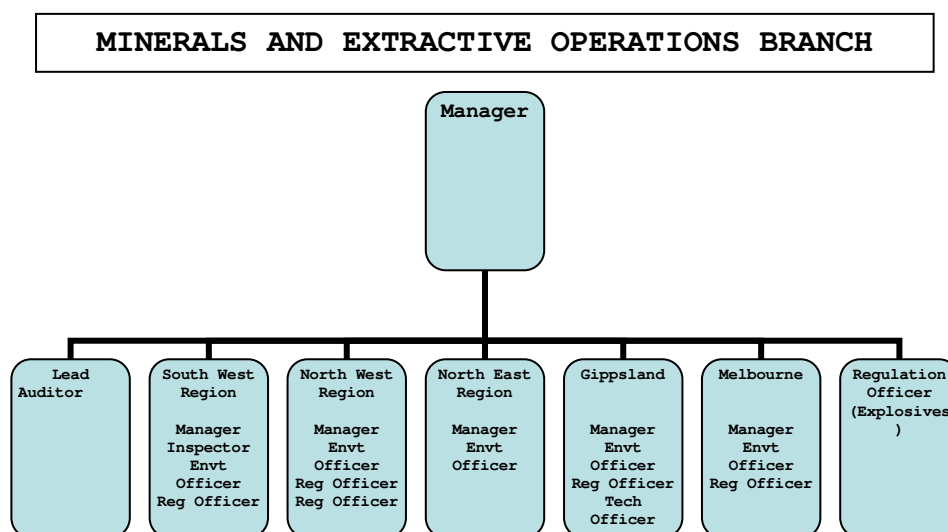
Dangerous Goods Act

The Dangerous Goods Act is the responsibility of the Victorian WorkCover Authority. However, DPI officers are appointed as inspectors under the Dangerous Goods Act, largely for the regulation of explosives and security sensitive materials in mines and quarries.

DPI inspectors have been trained and assessed as competent by VWA under the OHS Act 2004 and Dangerous Goods Act 2005.

OH&S inspection

The principal role in inspecting and enforcing occupational health and safety in the mining and extractive industries lies with the Minerals and Extractive Operations Branch of the Minerals & Petroleum Division.



This Branch is spread across five regions of Victoria where occupational health and safety issues are handled by a Regulation Officer and the Regional Manager. Each region also has an Environmental Officer but their duties are generally not specifically related to occupational health and safety.

It is difficult to provide an entirely accurate indication of the time devoted by each of these staff to occupational health and safety. However, the DPI submission makes the following assessment:

“DPI has a team of 13 inspectors spending part of their time (a total of about 5 Full Time Equivalent staff (FTE)) on OHS field regulation of some 1350 workplaces in the earth resources sector. In addition, support staff (2 FTE) provides assistance in policy, auditing and explosives regulation.”²³

On the basis that the Regulation Officers spend most of their time on occupational health and safety inspection, this implies that the Regional Managers devote, on average, up to 25% of their time on occupational health and safety-related issues and inspection.

Inspection in the on-shore petroleum sector.

This is conducted under the auspices of the Petroleum and Pipelines Branch.

The DPI currently administers twelve Petroleum Product Licences in Victoria, all of them located within the Otway area. The licences have been granted for extraction and recovery of petroleum and may have a processing plant included in the licence.

²³ DPI Submission, page 5.

The DPI submission explains,

Until January 2005, DPI had responsibility under delegation for petroleum safety offshore, in both Commonwealth and State waters. However, this responsibility has now passed to the National Offshore Petroleum Safety Authority (NOPSA). DPI still has responsibility for petroleum safety onshore and non-safety regulation offshore. There are some anomalies in relation to regulation of some onshore petroleum industry sites, particularly in relation to processing plants. For example, the Iona gas plant in southwest Victoria is OHS regulated by DPI because the site has an underlying Petroleum Production Licence which is required under the Petroleum Act for underground gas storage and recovery. By contrast, similar nearby gas processing plants (Otway Gas and Minerva), which only process gas from offshore, are regulated by VWA.²⁴

DPI's approach to occupational health and safety

The DPI explains its approach to its regulatory and enforcement role in occupational health and safety in the following terms:

DPI's approach to OHS is multi faceted and includes a proactive auditing and inspection program that targets the higher risk sites. The coordinated approach of licensing and regulating for OHS and the environment provides for opportunities for the department and industry to ensure that safety management is integrated in all

²⁴ DPI Submission, page 3.

phases of the operation from the design stage through to operation and finally closure.

Managing safety and health effectively requires a systematic approach and to that end DPI has provided industry with practical advice and guidance on how to set up safety management systems. DPI's auditing program is followed up to ensure that the safety management systems are implemented and effective.

Implementation of the safety management systems and having the appropriate controls for those major mining hazards that have the potential for fatalities and multiple fatalities is a key to improving safety performance. The DPI auditing program focuses on ensuring the critical controls are in place and effective.²⁵

In terms of safety auditing the DPI applies its resources according to risk, which it describes in its Submission:

DPI's proactive approach to auditing of safety systems has been successful in raising the quality and application of these systems by industry. Over the last four years DPI has carried out just over 100 major audits per year, heavily focussed on health and safety, across the State's mining and quarrying sites.

However, such an approach is very resource intensive and DPI has implemented a risk based approach to auditing and inspection that has resulted in a lowering of regular inspector presence on many of the smaller mining and extractive operations.

²⁵ DPI Submission, page 6.

*Sites are categorised according to risk - P1 being the highest risk and P5 the lowest. Based on the current number of inspectors within MPR, regular audits occur for P1 and P2 sites (which make up around 16% of all sites) and a small number of P3 sites. **This results in approximately 80% of sites not able to be audited regularly. These sites will only be visited in response to an incident or complaint, to perform a bond review or an approval.** [Emphasis added.]*

To increase inspector presence on site and focus on high-risk safety issues, in 2005 DPI introduced targeted “blitz” auditing campaigns into its auditing mix. This approach is widely employed by VWA and allows DPI to visit more mining and quarrying sites, at the expense of the “depth” of auditing. Blitz audit campaigns are publicised in advance to promote voluntary compliance, although visits to particular sites are unannounced.

The first blitz campaign was on mobile equipment, which has been the subject of numerous incidents and accidents over the past 12 months. The campaign resulted in 54 unannounced visits of mines and quarries across Victoria. A number of notices and directions were issued as a result. The second blitz campaign on plant and equipment guarding is now under way. Further campaigns are planned.²⁶

These blitz campaigns have been welcomed by the industry:

²⁶ DPI Submission, page 7.

Targeted or campaign audit programs by the OHS inspectors are also a most important tool that is supported by the MCA. A recent campaign audit by the MPR inspectors of mobile plant operations at mine and quarry sites across the state helped everyone focus on the importance of managing the risks associated with mining equipment.²⁷

The introduction of these blitz campaigns has caused a re-prioritisation of the Department's inspection and audit resources and has been at the expense of its regular audit programme.

²⁷ MCA Submission, page 19.

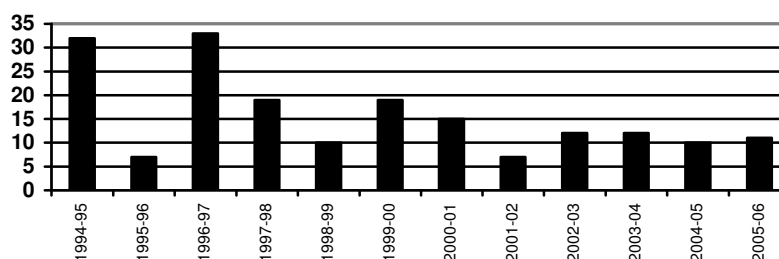
Chapter 5

FATALITIES AND INJURIES IN VICTORIA'S EARTH RESOURCES INDUSTRIES

Fatalities

There is widespread recognition throughout the mining sector that too many people are still losing their lives in the workplace. Throughout this Review all stakeholders have emphasised this problem and have indicated that it remains the most serious issue facing these industries.

FATAL INJURIES - AUSTRALIA



Source: Minerals Council of Australia, *Safety and Health Performance Reports*

The Minerals Council of Australia notes in its submission

*“These are distressing statistics and indicate that we have a long way to go to achieve our vision of an industry free of fatalities.”*²⁸

²⁸ MCA Submission, page 11.

It is a sobering fact that in this current year alone [2005-2006] 11 people have been killed in the mining and quarrying industries.

These statistics, supplied by the MCA, indicate the extent of the continuing fatality problem.

Fatalities by State

STATE	2005-06 TO DATE
WA	5
QLD	3
NSW	0
VIC	1
TAS	1
SA	1
NT	0
TOTAL	11

Fatalities by Sector

SECTOR	2005-06 TO DATE
Metalliferous	7
Coal	2
Smelting/Refining	1
Extractives	1
Exploration	0

Breakdown by Fatality Area (2004/05 - 2005/06)

Mobile Equipment	7	Rockfall	4
Fall from Height	3	Other Equipment	2
Explosion	2	Electrocution	1
Tyre Explosion	1	Fire	1

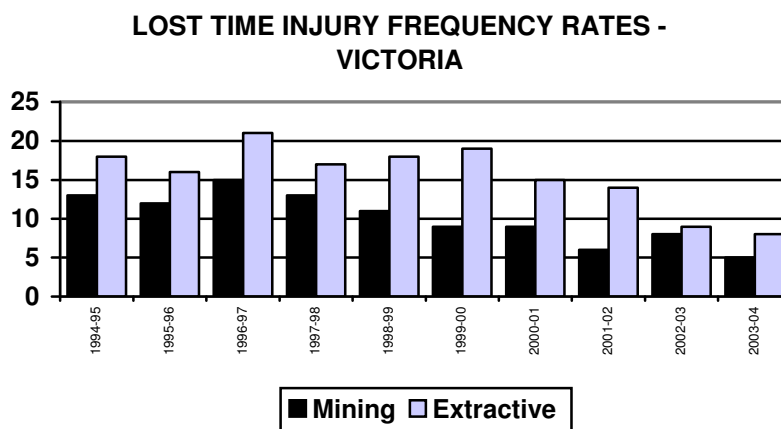
Source: Adapted from information provided by the Minerals Council of Australia

Fortunately, in Victoria, fatalities are rare. Victoria’s Fatal Injury Frequency Rate (FIFR – the number of fatal injuries per million hours worked) of 0.04 is half that of the 10 year national average of 0.08.²⁹

There were no deaths in 2003-04 or 2004-05, however, one person has been killed in the Victorian quarrying industry in this current year.

Injuries

At first glance Victoria has a good record of low and declining injury rates in the mining and quarrying industries. For example, this graph, taken from MCA data, indicates the decline over most of the past decade of the Lost Time Injury Frequency Rate (*LTIFR – the number of lost time injuries per million hours worked*) in both the mining and the extractive industries.

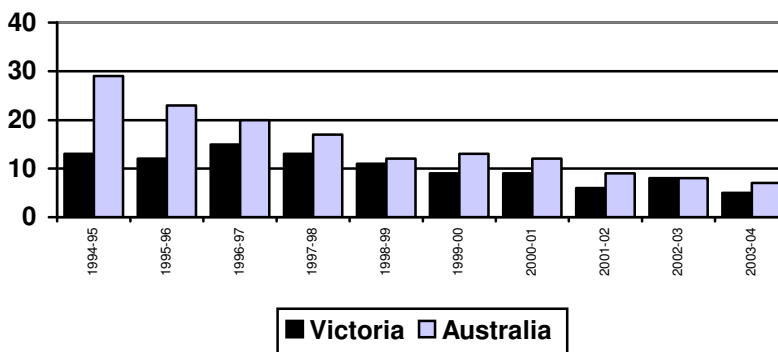


Source: Minerals Council of Australia, *Safety and Health Performance Report*

²⁹ Department of Primary Industries, *2004/2005 Statistical Review*, Victoria, March 2006., citing data from the MCA, Health and Safety Performance Report 2003-2004.

The mining sector in Victoria (that is, excluding extractive) has been consistently below the national figures.

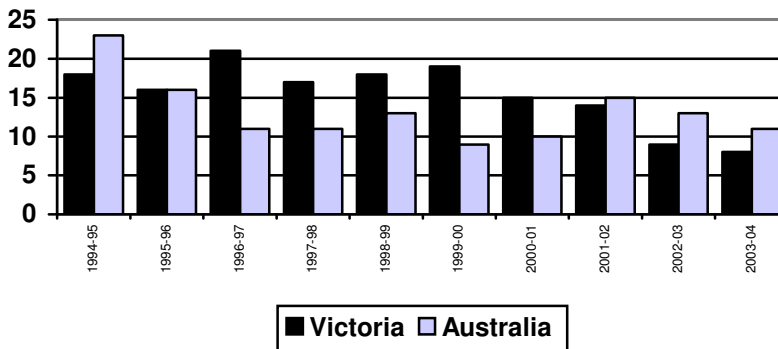
LOST TIME INJURY FREQUENCY RATES - MINING



Source: Minerals Council of Australia, *Safety and Health Performance Report*, 2003-2004

This has not always been the case with the extractive industry where Victoria is the largest employer of any State or Territory. Nevertheless, the LTIFR in Victoria has been lower than the national figure since 2001-02.

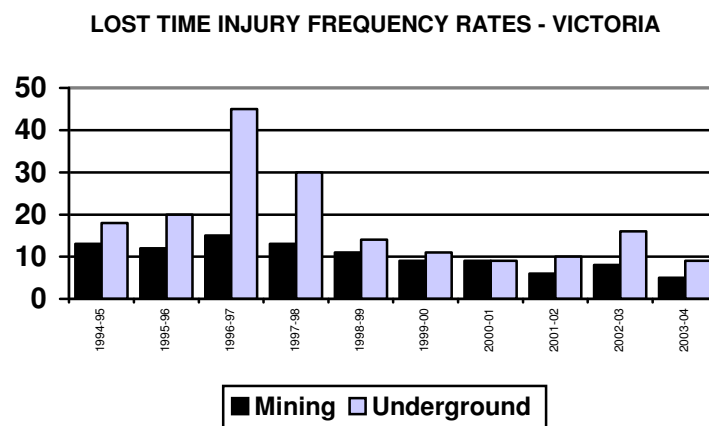
LOST TIME INJURY FREQUENCY RATES - EXTRACTIVE



Source: Minerals Council of Australia, *Safety and Health Performance Report*, 2003-2004

The LTIFR for Victoria's extractive industry rose marginally in 2004/05 from 7.7 in 2003/04 to 8.3.³⁰

The underground mining sector that, in the case of Victoria, is exclusively metalliferous mining also has a mixed record over the past decade.



Source: Minerals Council of Australia, *Safety and Health Performance Report*

In 2004/2005, the LTIFR for the mining sector in Victoria remained fairly steady at 5.0. For the same period, the underground rate was 9.8.³¹

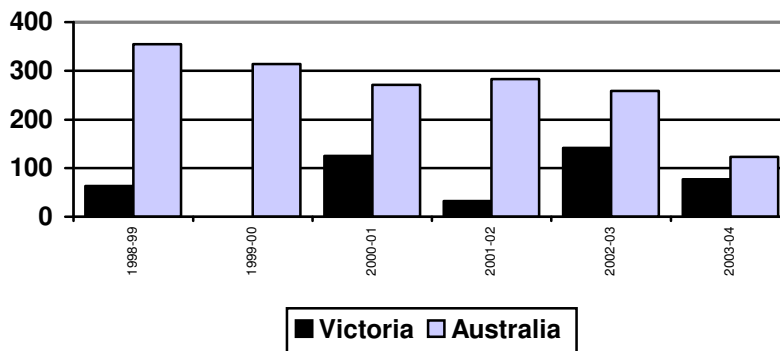
It is also instructive to look at the injury severity rates for key segments of the industries. The severity rate is the average number of days lost per one million hours worked, and reflects not only the incidence of injury in the workplace but also the severity of the injuries incurred.

³⁰ Department of Primary Industries, *2004/2005 Statistical Review*, Victoria, March 2006.

³¹ *ibid.*

Open-cut coal mining, which is Victoria’s largest employer in the earth resources industries, performs the best; this in an industry sector that nationally has a relatively high severity rate.

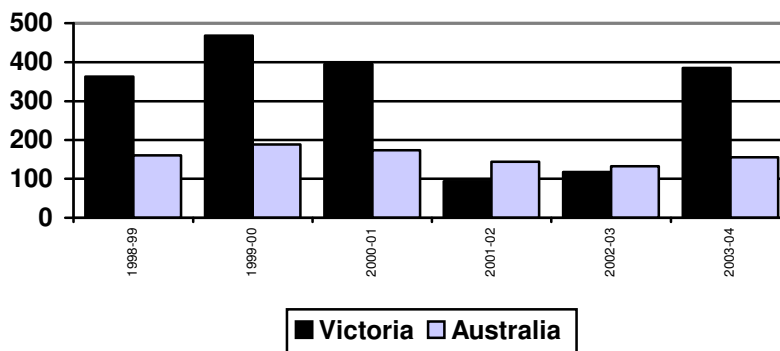
SEVERITY RATE - OPEN-CUT COAL



Source: MCA, *Safety and Health Performance Reports 1998-99 to 2003-04*.

The underground metalliferous mining has a poorer severity rate.

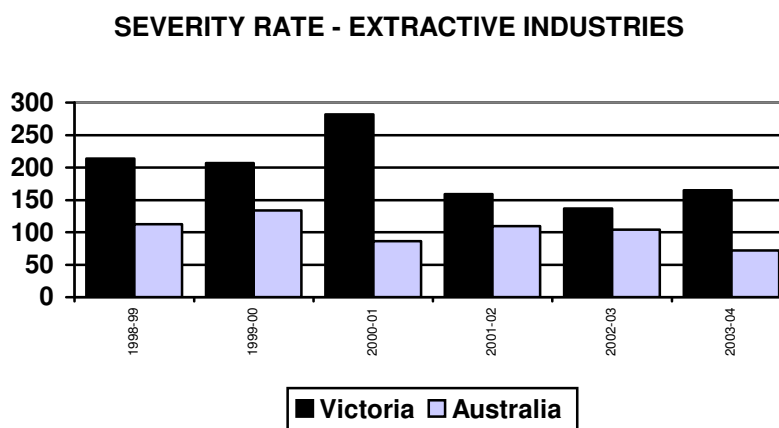
SEVERITY RATE - UNDERGROUND METALLIFEROUS MINING



Source: MCA, *Safety and Health Performance Reports 1998-99 to 2003-04*.

The underground metalliferous severity rate for Victoria in 2004/2005 as reported by the DPI has fallen substantially. In 2004-2005 it was 24.6.³²

The extractive industries also perform relatively poorly.



Source: MCA, *Safety and Health Performance Reports 1998-99 to 2003-04*.

The severity rate in the Victorian extractive industry is slightly improved in 2004/05 where the average number of days lost per one million hours worked fell to 151.4 from 165 in 2003/04.³³

It is pleasing that fatalities are such a rare occurrence in Victoria's earth resources industries. Victoria can also point to an improving occupational health and safety performance in these industries, at least in terms of the actual incidence of injury, and a generally downward trend in lost time injury frequency rates. For the mining industry the LTIFR has been below the national average for at least the past decade.

³² Department of Primary Industries, *2004/2005 Statistical Review*, Victoria, March 2006.

³³ Department of Primary Industries, *2004/2005 Statistical Review*, Victoria, March 2006.

There are segments of both the mining industry and the extractive industry where injury performance has not been as good relative to the national average. Over the past decade, for example, injury severity rates have been high in both actual and comparative terms in some important industry segments. When some of these segments are looked at, the broader comparisons become less compelling.

Nevertheless, Victoria has achieved a relatively good performance in both fatalities and injury rates.

Chapter 6

DEVELOPING THE BEST OCCUPATIONAL HEALTH AND SAFETY APPROACH FOR VICTORIA'S EARTH RESOURCES INDUSTRIES

In order to assess the performance of the current arrangements for the delivery of a safe and healthy workplace in Victoria's earth resources industries and to reach conclusions about the future shape of occupational health and safety arrangements it is necessary to identify a number of key criteria that should be used.

These criteria should reflect the broad direction of occupational health and safety in Victoria and nationally, and should also address the demands and expectations of all the stakeholders in this sector of the Victorian community.

To this end the Review has taken into account a number of key developments. These include, in no particular order:

- the introduction of a new Occupational Health and Safety Act in Victoria
- the emergence of a National Mine Safety Framework at the national level
- the views and priorities of employers and their industry representatives
- the views and priorities of employees and their unions, and
- the policy agenda and priorities of the Victorian Government.

Accordingly, this Review has identified a number of criteria that should be the basis upon which to build a contemporary, sensitive and synergetic approach to occupational health and safety in the mining, quarrying and on-shore petroleum industries in Victoria.

It is the view of this Inquiry that the occupational health and safety regime for Victoria's earth resources industries must be

- comprehensive in reflecting the full economic, social and environmental life cycle of Victoria's earth resources industries from licensing through to rehabilitation, and in embracing the broadened principles and duties of the Occupational Health and Safety Act 2004
- independent, transparent and open, and perceived to be such
- contemporary and proactive; able to embrace new technologies, processes and emerging occupational health and safety issues and risks
- consultative and empowering; able to provide all stakeholders with a sense of shared ownership of health and safety processes and outcomes
- sensitive to the special and historical health and safety imperatives of the earth resources industries and fully mindful of the catastrophic potential of these industries
- based on competent and experienced personnel and built on a structure able to secure a critical mass of appropriate and necessary skills
- adequately and appropriately resourced
- based on fair and appropriate enforcement

- best placed to benchmark itself against other jurisdictions and industries so as to pursue continuous improvement and the optimum development of occupational health and safety in the earth resources industries
- able to effectively and clearly communicate information and advice on performance, and implementation of workplace health and safety practices.

Explaining the key criteria

Comprehensive in reflecting the full economic, social and environmental life cycle of Victoria's earth resources industries from licensing through to rehabilitation, and in embracing the broadened principles and duties of the Occupational Health and Safety Act 2004.

Each of the industries at the centre of this Review has a distinct life cycle each phase of which have health and safety imperatives and implications. However one puts it – from cradle to grave; from exploration to rehabilitation or from set-up to closure – health and safety is crucial at all stages of the evolution of a mine, a quarry or a petroleum site. These industries are not totally unique in this respect, but in the context of this Review this criteria is important.

Health and safety in a mine or a quarry doesn't just begin when the first shift dons their safety gear. It starts with a concept or a search, continues through the design and construction stage and is still not complete even when the resource runs out. It is only complete when the workings have been closed or

secured. Throughout that cycle lives are at risk – a brave workforce, builders, managers and, of course, the public.

One of the recurring themes of the submissions made to the Review was the importance of addressing health and safety at all stages of the exploitation of earth resources. Emphasis was given to building safety and a healthy environment into these facilities from the very outset.

That is why an occupational health and safety regime for these industries must be comprehensive and holistic.

The Review is reinforced in that view by the direction of the new Occupational Health and Safety Act in Victoria.

When one of the architects of that Act, Chris Maxwell QC, said that

“...if an activity cannot be carried on safely, it should not be carried on at all;”³⁴

he was pointing in that direction. It was followed through when the legislation provided for the inclusion of a duty of care for the designers and builders of sites and structures. It was effectively underlined when a duty to protect the public entered the legislation for the first time.

The Act also announced the need for occupational health and safety to be seen in a more global and comprehensive way when it explicitly expanded the breadth of the law to make it clear that health means psychological health and not just physical health.

³⁴ Maxwell, Chris QC.,op cit, page 23.

The need for a comprehensive view of occupational health and safety was reinforced in almost all of the Submissions put to this Review. Typical of this was from the Minerals Council of Australia:

“The MRD Act requires all mines to submit a detailed Work Plan for approval by the MPR inspectors before being authorised to commence work. This is an important feature of mining administration and a feature that is entirely consistent with the new OHS Act requirements covering design. Whilst many of the larger mine operators have access to competent mining engineering advice, including mine designers, mine planners and mine production schedulers, many smaller operators do not. The proactive advice provided by the mines inspectors is invaluable in ensuring that mine designs are sound and that all potential hazards are effectively managed.

The MCA expects mine safety regulation in the future to continue to provide advice on mine Work Plans.”³⁵

Independent, transparent and open, and perceived to be such.

For a regulatory process to have credibility it must, of course, be independent, transparent and accountable. Any agency taking on the responsibility for

³⁵ MCA Submission, page 18.

overseeing workplace health and safety has that clear obligation to the workforce that it is seeking to protect.

Companies and employers are also, of course, entitled to know that a regulator with the potential to impact on their endeavours is going about its role without fear or favour.

It is also essential that this regulatory framework is able to protect the public's interests in a balanced and accountable way.

Independence is, however, not only about reality; it is also about perception. The process must not only be independent; it must be seen to be independent. This will only be compromised if the people or the agency exercising a responsibility is thought to be captive to one or other of the parties directly engaged in the workplace.

The emergence of self-regulation by workplace parties as the favoured approach in occupational health and safety policy and enforcement highlights the need for independence. As was discussed earlier in this Report, occupational health and safety regulation has increasingly moved away from prescription to self-regulation based on broad duties of care and the performance outcomes required to meet those duties. Under this approach dutyholders are accountable for their self-regulation. This makes it crucial that regulators and those with an assessment or enforcement role are not only independent from these dutyholders, but are seen to be independent from them.

Independence from government is also an important consideration. The mandate that governments receive, and the policy goals they establish, often place them in potentially contradictory positions. It is therefore necessary for

governments to address such a potential in ways that can assure all stakeholders that the public interest is being protected in an independent and unconflicted way.

This was clearly one of the important foundations upon which the Occupational Health and Safety Act and the structures it establishes were built.

contemporary and proactive; able to embrace new technologies, processes and emerging occupational health and safety issues and risks

The workplace is a dynamic environment and the regulation of health and safety must reflect that.

The significance of this criterion can be seen in the change of emphasis that emerged as a result of the Robens Report in the 1970s. The abandonment of an essentially prescriptive approach to health and safety occurred in large part because prescription was not able to keep up with new work methods, new technologies and changes to the way the workplace was being organised. In many instances new sets of prescriptive regulations designed to make the workplace healthier and safer were obsolete or at least inadequate as soon as they were proclaimed. The regulatory framework had become hopelessly reactive.

Introducing general duties and performance-based regulation was a way of making occupational health and safety more proactive and better able to address issues and risks as they emerged and developed. It follows from this

that the structures and regimes used to oversee this approach must also be proactive and able to reflect contemporary and emerging needs and risks.

Whatever occupational health and safety regime is applied to the earth resources industries in Victoria, it must be able to quickly identify new technologies and work practices, anticipate new threats and risks and creatively relate risks and issues that might be emerging in other industries to the earth resources sector.

***consultative and empowering;** able to provide all stakeholders with a sense of shared ownership of health and safety outcomes and processes*

One of the fundamental principles of the reforms to occupational health and safety that occurred as a result of the Robens Report in the 1970s was that workplace health and safety could not be simply imposed by government but must be effectively owned by all parties – employers, managers, employees and their representatives. It particularly recognised that real advances in workplace health and safety could not occur without the full co-operation and commitment of employees. Accordingly, these reforms opened the way for greater employee participation in improving and maintaining health and safety.

These reforms were entrenched in Victoria's occupational health and safety legislation through the introduction in the original 1985 legislation of such measures as the establishment of a tri-partite Occupational Health and Safety Commission and the empowerment of workplace health and safety representatives.

Changes were subsequently made in 1992 when the Commission was abolished and replaced by a consultative multi-partite WorkCover Advisory Committee, and in 2001 with the establishment of a tri-partite Health and Safety Working Group.

The new 2004 Act has, once again, strengthened the participation of and consultation with employees and employers by the establishment of a new Occupational Health and Safety Advisory Committee, comprising representatives from industry, employees, other parts of government and occupational health and safety specialists.

Significantly the new Act also introduces a duty to consult and detailed requirements for consultation between employees, employee representatives and employers. There are also enhanced rights of access to the workplace of unions where occupational health and safety breaches are reasonably suspected.

Clearly, then, the expectation of government and of the wider community is that occupational health and safety is enhanced by effective consultation and employee empowerment at all levels. This should be reflected in an occupational health and safety regime for the earth resources industries.

***sensitive** to the special and historical health and safety imperatives of the earth resources industries and fully mindful of the catastrophic potential of these industries*

An occupational health and safety framework must be sympathetic to the special nature and needs of each of its workplaces. Mining, quarrying and the work associated with exploration and exploitation of earth resources all have their own threats and dangers. History records these and should not be overlooked in the framing of an appropriate occupational health and safety regime.

The history of workplace safety, both in this country and elsewhere, sees many of the earth resources industries to the fore, especially mining. They often pioneered, willingly or otherwise, fundamental changes to workplace well-being and safety. In particular, the sometimes catastrophic nature of these industries, especially underground mining, were crucial catalysts for change and reform that have produced healthier and safer workplaces for all workers. They can still play that role.

This criterion is, however, more than just recognition of history. An occupational health and safety regime that does not accord protection based on the merits and special needs of each activity will be inadequate.

*based on **competent and experienced personnel** and built on a structure able to secure a critical mass of appropriate and necessary skills*

One of the enduring debates over occupational health and safety regulation has centred on the qualifications of those who administer and enforce compliance with occupational health and safety laws. The Maxwell Report made the comment in relation to the qualifications for appointment as an inspector that

“...views have fluctuated as to whether any particular qualifications were required and, in particular, as to whether academic qualifications (whether in occupational health and safety or in a relevant scientific discipline) or trade qualifications were more appropriate.”³⁶

The Act that emerged from that Report broadens the need for a wider range of skills and competencies. This includes, for example, the specific recognition of psychological health as part of occupational health.

For this Review, however, the issue is slightly different. If, as discussed earlier, an occupational health and safety regime in the earth resources industries is to be comprehensive in its coverage and scope, a range of competencies will be required. These will need to include:

- Training and formal qualifications in occupational health and safety law and processes
- Industry-specific knowledge and skills
- Competencies in specialist areas of occupational health and safety including such issues as dangerous goods, explosives, psychological health and human movement.

At the very least any occupational health and safety regime would need to be able to adequately access such skills and competencies.

This is also one of the goals for government agreed nationally under the National Mine Safety Framework.

³⁶ Maxwell, Chris QC., op cit, page 294.

*adequately and appropriately **resourced***

An occupational health and safety regime for the earth resources industries in Victoria must be adequately resourced. Direct funding for occupational health and safety oversight and enforcement must be realistic and adequate. There must also be adequate levels of funding for related activities, including training for compliance and enforcement personnel, industry-specific prevention, (education, awards etc) and industry-specific advice and communications.

Considerable resources are already applied for the purposes of occupational health and safety in these industries and this situation should, as a minimum, be maintained.

*based on fair and appropriate **enforcement***

The legislation in Victoria provides for a range of enforcement measures ranging from advice through to prosecution. In addition, industry-specific licensing arrangements also offer the opportunity for the cancellation of a licence or tenement.

An effective occupational health and safety regime should see all of these sanctions as viable possibilities and be prepared to apply them in a fair and proportionate way.

Further, appropriate sanctions should be assertively applied in response to the full range of compliance circumstances, including breaches leading to high or recurring compensation claim rates, persistent non-compliance, accidents and catastrophic incidents.

*best placed to **benchmark** itself against other jurisdictions and industries so as to pursue continuous improvement and the optimum development of occupational health and safety in the earth resources industries*

An effective capacity to identify areas of inadequate performance and potential for on-going improvement in the performance of an occupational health and safety regime must be a priority. This recognises the value that can be gained from experience in other earth resource industry jurisdictions as well as in other industry sectors.

The value of developing an effective benchmarking capability is also identified under the National Mine Safety Framework as one of the key goals of occupational health and safety regulation.

*able to effectively and clearly **communicate** information and advice on performance, and implementation of workplace health and safety practices.*

The full range of information about workplace health and safety policies, practices and incidents is crucial to having an occupational health and safety regime that is relevant and understood by all stakeholders.

This requires a capacity to not only generate such material but to ensure that it is readily accessible and pertinent to life in the workplace.

Chapter 7

OPTION 1 – THE STATUS QUO

ASSESSING THE ROLE OF THE DEPARTMENT OF PRIMARY INDUSTRIES

In seeking the best occupational health and safety regime for these industries this Review has been asked to assess the role and performance of the DPI. Accordingly, this assessment should be seen as the initial Option in considering the way ahead for occupational health and safety in the earth resources industries.

Having identified the key criteria for identifying the best occupational health and safety regime for these industries this Option considers maintaining occupational health and safety regulation in the DPI.

Comprehensive

There is little doubt that the DPI currently has global coverage of and responsibility for the regulation of each of these industries. Under the responsibilities given to it by its key industry Acts, it is an experienced licensor of the mining (Mineral Resources Development Act), extractive (Extractive Industries Development Act) and on-shore petroleum (Petroleum Act) industries.

As has already been noted, most of these Acts also specifically embrace notions of a systematic approach to occupational health and safety. On top of all of this, of course, are its delegated duties under the Occupational Health and Safety Act and its regulations.

The Department also plays a role with other government and community stakeholders (e.g. planning, environment, local government, and community consultation.) and is well used to providing detailed guidance to operators.

So, in short, the Department is able to offer a cradle to grave coverage of all aspects of these industries including through:

- Resource identification and allocation
- Licensing, including of exploration
- Advice and consent in relation to site layout and design, a role that is consistent with the emphasis of the new OH&S Act on the duty of designers and constructors
- Environmental oversight
- Operational activity through its involvement in the development and approval of Work Plans, Operation Plans and the issuing of Work Authorities
- On-going occupational health and safety inspection, audit and enforcement, and
- Site rehabilitation

This comprehensive involvement is clearly attractive to many in the industry who have become well used to working with the Department in all of those functions.

They also see this all-encompassing role as beneficial to occupational health and safety because it ensures greater visibility and a stronger on-site presence of the Department and its inspectors. The Department has emphasised this view,

“These visits [for non-OH&S purposes] increase the visibility of inspectors on the site, the likelihood that an inspector will see or become aware of any unsafe situations or non-compliances and commonly results in incidental OHS enforcement actions.”³⁷

The Department itself argues that its holistic involvement with these industries offers some key synergies

“...by having one regulator administering the major regulatory requirements, including OHS, environment, licensing, and operational plans and approvals.”³⁸

Independence

In public policy terms the Department performs a number of key roles. These include:

- identifier of earth resources
- facilitator and promoter of investment in these industries
- custodian of mineral, extractive and petroleum resources
- protector of revenue from these sources

³⁷ DPI Submission, page 15.

³⁸ *ibid*, page 15.

- environmental auditor, including rehabilitation processes,
- the recipient of delegations from other departments or agencies, and
- regulator of occupational health and safety.

The Department argues that there are occupational health and safety efficiencies and synergies in having these roles under its umbrella. As has already been mentioned these include a greater on-site presence, input into site design and layout and the use and retention of specialist mining and petroleum engineering skills.

While some of these roles are consistent, or are conducted by separate Branches of the DPI, it is clear that the DPI is tasked with potentially contradictory roles. It is expected to encourage, facilitate, develop, regulate, assess and enforce a wide range of activity in the earth resources industries, and even if it is able, in practice, to reconcile these roles, it cannot be seen to meet this criterion of independence.

The challenge of an integrated approach.

In an earlier chapter, the potential for the DPI to offer an integrated approach to the development of Work Plans was explained. This approach is designed to co-ordinate both the Work Plan and planning approval processes and comes at an important stage of the establishment of a mining proposal. In particular, issues that can well affect the subsequent safe and healthy operation of a mine or a quarry are being determined.

It is entirely understandable that at such a stage an applicant is attracted to having one agency, in this case, the DPI, regulating a range of issues,

including occupational health and safety. Indeed some have seen this as an effective means of industry facilitation.

The DPI, for its part, is able, under its role in the planning approval process, to insist on the inclusion of matters for which it has responsibility.

Nevertheless, it is one thing to integrate a range of regulatory responsibilities under one umbrella. But, an occupational health and safety plan for a proposal should be integral to all aspects of the operation of a mine or a quarry. It is not only important for working practices, but has implications for, and can be affected by, the design, layout and construction of the site, the amenity of adjacent property (e.g. dust, noise) and even aspects of the ultimate rehabilitation of the site. It may well have imperatives that can bring it into conflict or competition with other regulatory responsibilities under the Work Plan process.

On the basis that the regulation of occupational health and safety must not only be independent, but be seen to be independent, the involvement of an agency, other than one seeking to integrate a range of responsibilities, some potentially conflicting, would significantly enhance the independence of the occupational health and safety regime.

Accordingly, it would be preferable to have the occupational health and safety aspects of the Work Plan assessed, prior to its approval, at arms length from the DPI.

It can also be argued that the more explicit focus of the new OH&S Act on the public interest in the conduct of workplace health and safety in Victoria heightens the importance and urgency of ensuring an independent regime, one that separates occupational health and safety regulation from a department

specifically tasked with a range of roles including the promotion of the industry.

The role of perception

It is clear to this Review that not all stakeholders always see Victoria's current arrangements as independent, open or transparent. This is an indication of the role of perception on the confidence or otherwise of stakeholders.

For example, the AWU makes the comment:

There is the clash of the DPI being the safety authority, a position that requires strong individuals to make decisions that will not be popular with management, decisions that could impact on production, and then the DPI is responsible for royalties to the government. This duopolistic role requires this department to perform a very unique balancing act that it more often than not gets wrong.³⁹

The claim of "industry capture" is also often made. As often as not this is based on concerns that the specialist skills utilised by the DPI mean that those charged with the enforcement of occupational health and safety compliance come from essentially industry and/or management backgrounds. This, it is claimed, produces a narrower view of occupational health and safety.

The claim of perceived "capture" also arises in the context of the Department's industry facilitation role and, indeed, was specifically recognised at the time of the agreement in 2000 between the then Minister for WorkCover and the then Minister for Energy and Resources. One of the proposed arrangements was:

³⁹ Australian Workers Union (AWU), *Submission to the Inquiry*, page 1.

“NRE and WorkCover recognise the imperative need to avoid the reality or perception of “industry capture” – i.e. a situation where a regulating agency is or is perceived to be too close to the industry and persons being regulated, so that enforcement actions are compromised.”⁴⁰

It was then agreed that certain measures would be taken to address this concern.

Nothing encountered by this Review would suggest that any of the industry parties, including those within the DPI, have anything less than a real and genuine concern for the health and safety of everyone in these industries. Indeed, the measures agreed in 2000 would seem to have been implemented.

However, it is hard for the Department to have it both ways. On the one hand it points, for example, to the clear structural separation between its Business Development arm and its Regulation arm – they are separate branches – but, on the other, boasts of its integrated approach to regulation and the provision of advice and assistance as a selling point for industry development.

The compelling and decisive concern of this Review is not that there is real bias, capture or compromise, but that such a perception is at all possible. With the best will in the world this perception will persist as long as occupational health and safety regulation remains under the DPI umbrella.

⁴⁰ Letter from Minister for WorkCover, Hon. R.Cameron to Minister for Minerals and Energy, Hon. C.Broad, 14th September 2000.

Independence from government

The Victorian Government's clearly preferred model of occupational health and safety regulation of the Victorian Government is one at arms length from government. Successive changes to occupational health and safety legislation and its implementation through WorkSafe indicates this. This preference has been further enhanced as a result of the changes made to the Act in 2004.

In the case of the earth resources industries, the regulatory function is being performed by a Government Department that has to compete with other government priorities for finance, personnel, operational direction and enforcement.

Whilst the Review believes that the DPI seeks to reconcile these potential conflicts with integrity, it cannot be said to meet the test of being perceived as independent.

Contemporary and proactive

Much of the discussions on occupational health and safety with the Department have centred on the specialist technical skills that reside within the Department and the benefits these bring to the regulation of occupational health and safety. This underlines the Department's strong emphasis on the physical, engineering and geological aspects of the industries.

The Department deals well with those safety aspects, including areas where there is still a high degree of prescription.

It has also sought to be proactive in its introduction of blitz campaigns in an attempt to address emerging or priority risks. However, it is unclear as to what emphasis is placed by DPI on emerging occupational health and safety issues

such as repetitive use injury or the extent to which it has been proactive in addressing such issues as fatigue, alcohol and drugs. There has also been, for example, some criticism made to the Review of its lagging response to silica as an emerging issue.

The DPI argues that it has been proactive on many of these issues including the preparation of draft guidance materials and discussion documents, the conduct of seminars, including on silica, and the establishment of a silica database.

The Department does, however, seem to acknowledge that it does struggle to meet the changing demands of its occupational health and safety role:

However, as a small specialised OHS regulator operating in an increasingly complex environment, DPI is undoubtedly at a disadvantage by comparison with a large organisation such as VWA in maintaining a wide range of specialist skills and policy and infrastructural support.⁴¹

Consultative and empowering

The DPI is well used to a close working relationship with industry. It seems very comfortable assisting and supporting industry operators in finding their way through licensing arrangements, planning requirements and compliance with a range of issues, including occupational health and safety. Indeed there is a strong perception of DPI as an industry mentor.

This observation is not made as a criticism of the Department's role or performance, but as a measure of its consultative relationship at an operational level.

⁴¹ DPI Submission, page 14.

It does not, however, have a particularly strong track record of multi-partite or tri-partite consultation in relation to occupational health and safety. Indeed it often appears uncomfortable, even defensive with such forums.

Perhaps indicative of this is a comment from its own Submission to this Review:

In 2004, DPI established a Stakeholders Regulatory Forum involving industry peak bodies representing the prospecting, mining and extractive industries. The forum does not include trade union representatives, its main purpose being to discuss administration of the MRD Act and EID Act.⁴²

It is perhaps surprising to observe that it did not occur to the Department in the first instant that there might be stakeholders in the administration of the MRDA and EIDA other than industry peak bodies. They seem to have come to a partial realisation belatedly:

However, safety issues have been raised and discussed at this forum and, through VTHC, the trade unions were invited to participate in 2005. This offer was declined, with the trade unions preference being for a separate safety forum.⁴³

One of the industry unions, the Australian Workers' Union was highly critical of the Department in relation to this criterion:

“DPI was until recently holding a ½ day consultation session with employer groups every month on safety matters. The AWU (or any

⁴² DPI Submission, page 9.

⁴³ Australian Workers Union (AWU), op cit, page 2.

other union) were never once invited to these sessions. Upon hearing of these consultation sessions with bosses the AWU approached the DPI to be told they would hold separate sessions with the union movement. This is an appalling attitude to consultation by the lead safety authority in the mining and quarrying industry.”

The Department is now seeking to address this problem:

DPI is currently in the process of convening a separate tripartite safety forum....Preliminary discussions have been held with the parties to establish a framework for the forum. This will be largely modelled on the successful “Foundations for Safety” forum established by VWA for the construction industry. The new forum will provide a framework for consultation between the parties on a range of matters affecting health and safety in the resource industries, including review of the OHS regulations, industry health and safety guidelines, DPI compliance and enforcement approach, etc.⁴⁴

The Department seems much more comfortable in participating in externally-driven multilateral consultations and has been a willing participant in many forums organised under the auspices of the VWA.

Sensitive

The DPI has a strong sense of the historical importance of safety in the mining industry. It is difficult not to be impressed with the genuinely deep-seated concern held by those Departmental personnel with whom the Review met

⁴⁴ DPI Submission, page 9.

about issues of safety in these industries. It was instructive to have been undertaking this Review during the Beaconsfield disaster in Tasmania and to note the genuine concern and empathy felt within the Department for what was happening.

There is a sense that this empathy reaffirms some within the Department in the view that occupational health and safety in these industries requires an insider knowledge and expertise. It is, after all, the main reason why the occupational health and safety regulatory role has remained within an industry department.

Competence and skills

The Department has a strong pool of experienced mining engineers and others with related technical skills and qualifications. It also has staff skilled in such specialist areas as explosives and dangerous goods.

It describes its capacity in the following terms:

The DPI inspectorate is made up of mining and other engineers, and health and safety professionals with extensive knowledge of the mining and extractive industries. Skills in mining engineering are essential to understanding safety issues, in particular relating to major mining hazards, for example ground stability, ventilation, ore handling and underground excavation in underground mines, larger opencut mines and quarries. All inspectors dealing with OHS matters have either undertaken or are currently completing undergraduate or postgraduate OHS, risk management and auditing courses. DPI has also agreed that all inspectors and environmental officers will undertake the Diploma of Government (Workplace Inspection). This course is based on national

*competency standards and will provide government, industry and the community with assurance that the inspectors are competent.*⁴⁵

The skills resident within this regulation area of the Department extends, of course, well beyond the scope of occupational health and safety. For example, it is also well-used to working within a prescriptive licensing environment where land management, environmental and planning skills are also important.

It should be noted that the DPI has been very successful in retaining highly-valued engineering and related skills. The point was made to this Review on a number of occasions that in the climate of the current resources boom it is often difficult to attract qualified mining engineers to this area of regulation.

What is less clear is the extent to which the Department is equipped to bring other occupational health and safety skills to its regulatory activity. An example of this would be the extent to which the Minerals and Petroleum Division is skilled enough to be able to cope with an issue such as psychological health in the workplace.

To the extent that the Department has to rely on the broader skills of WorkSafe to address many of these emerging issues it is pertinent to question the continued role of the Department in the regulation of an area requiring an ever-broader, more complex skillset.

By way of further observation, the potential role of this Department for the development of greater competencies and skills for managers and staff within each of these industries would seem to be significant. Submissions to this Review have highlighted the need for greater industry training and although

⁴⁵ DPI Submission, page 9.

some support has been provided by the DPI (for example, some limited funding to the CMPA), this is an area with occupational health and safety significance that could be given greater priority by the Department in the future as part of its industry support and development role.

Resources

The Department is able to point to a very low inspector to workplace sites ratio in its stewardship of occupational health and safety. [It claims a ratio of 1:270, compared with around 1:1175 for WorkSafe.]⁴⁶

Although resources are usually never adequate, the Review believes that the Department has provided well for its occupational health and safety role. This is especially so given that it receives no direct contribution from the premium income generated from these industries by the Victorian WorkCover Authority. The DPI has estimated that this income amounts to approximately \$196,000 per annum.⁴⁷ Nevertheless, the VWA does provide some in-kind support and resources to the Department in relation to its occupational health and safety role.

The Department is probably in a strong position to be able to secure good funding into the future because, although licensing revenue is not hypothecated, the capacity of DPI to derive income for the consolidated fund from these industries, through both licence fees and royalties, gives it significant budget leverage.

⁴⁶ DPI Submission, page 6.

⁴⁷ *ibid*, page 10.

Enforcement

The Department has been a strong advocate of a graded enforcement approach involving multi-layered interventions and/or sanctions. Its inspection and enforcement regime is principally risk-based.

It explains its enforcement policy, in the following terms:

DPI – Minerals and Petroleum Enforcement Policy

The Department will:

- *develop and maintain, and keep under review a strategy for industry compliance with legislation and regulations and the enforcement of acceptable safety, health and environmental standards in industry;*
- *promote acceptable safety, health and environmental standards and provide advice on compliance;*
- *maintain a program of industry surveillance (assessment) and investigation;*
- *consider a response in every instance where non-compliance becomes known;*
- *respond in a fair, transparent and consistent manner, taking into account the seriousness of the non-compliance or the imminence of danger, in a cooperative manner where appropriate;*

- *respond in an escalating fashion where previous responses have not met with satisfactory response;*
- *make a high level response where the severity of imminent of danger warrants such action; and*
- *prosecute as appropriate as part of the enforcement strategy.*⁴⁸

This has resulted in the following enforcement profile in 2004-2005:⁴⁹

Activity	2004/2005
Inspections	311
Completed Compliance Audits	90
Site Visits	697
Complaints	150
Investigations	39
Prohibition Notices	20
Improvement Notices	141
Dangerous Goods Directions	16
MRDA Notices	17
EIDA Notices	95
Major Stakeholder Engagement	99
Total Regulatory Activities	1675

The Inspectorate is well-versed in the conduct of accident investigations and, from examples of such investigations examined by this Review, they execute that responsibility in a detailed, thorough and painstaking way.

⁴⁸ DPI Submission, page 7.

⁴⁹ *ibid.* page 8.

Notwithstanding the inspector to work site ratio noted earlier, the DPI acknowledges that

“...approximately 80% of sites [are] not able to be audited regularly. These sites will only be visited in response to an incident or complaint, to perform a bond review or an approval.”⁵⁰

It is interesting to note that in enforcing its occupational health and safety obligations there is little or no resort to prosecution, except as a result of specific serious accidents.

The DPI’s resort to blitz campaigns in recent times represents a change in emphasis for this inspectorate. Resources for these campaigns have been at the expense of the wider compliance audit process.

Benchmarking

The Department uses and provides detailed lag data on fatalities and injuries within the earth resources sector. In doing so it has relied strongly on and contributed to industry-collected data.

Although detailed comparisons and benchmarking with other industries and jurisdictions seem not to have been a high priority, it is an area of increasing interest to the Victorian Department.

Indeed Victoria has been tasked with database and benchmarking development under the National Mine Safety Framework.

⁵⁰ DPI Submission, page 6.

Information and communications

The Department has taken its role in providing occupational health and safety guidance material seriously. Detailed guidance notes have been prepared, some more current than others, and they have co-operated with WorkSafe in the development of other material.

Much of this material is very useful and is often targetted to smaller operators who have less on-site contact with the Department. A good example of this would be an occupational health and safety management system template prepared for the extractive industries.

Especially useful is the preparation and distribution of safety alerts. These include detailed, but user-friendly information on accidents that have occurred as a useful means of preventative occupational health and safety.

The DPI as an occupational health and safety regulator does not have its own awards programmes, but does support and participate in workplace health and safety award programmes operated by other bodies, including the Minerals Council of Australia, Victorian Division.

Conclusions

There are many aspects of the DPI's administration of occupational health and safety regulation in the earth resources industries that have been extremely well handled.

In overview it can be said that it has

- taken a global, holistic view of how a safe and healthy workforce should be developed and maintained

- sought to build safe practices into the industries as they set up and develop
- been highly sensitive to the role that health and safety has played in industries with the potential for catastrophic incidents
- been able to recruit and retain some highly valued skills within its inspectorate, and encouraged its members to acquire the more generalist occupational health and safety skills
- well resourced its responsibilities arising from its delegated occupational health and safety role
- carried out its accident investigation role effectively, and
- generated useful information, including safety alerts, guidance notes and occupational health and safety templates

On the other hand, given the growing importance of occupational health and safety throughout all workplaces and the positive evolution of occupational health and safety practices in Victoria, there are aspects of the Department's performance that are of concern. Foremost among these are its

- tendency to focus on structural and infrastructural safety
- limited potential to meet the challenges of emerging issues and workplace risks.
- limited participation in the development of new policies in its area of occupational health and safety responsibility, and

- failure to properly identify and embrace the role of all stakeholders to its occupational health and safety responsibilities.

What is of greatest concern to this Review, however, is that the credibility of its role in occupational health and safety is seen as fundamentally compromised and conflicted because of its location within an industry-based government department with a range of diverse and often conflicting roles and responsibilities.

This crucial issue of independence has already been canvassed at some length and although the DPI in general and the Minerals and Petroleum Division in particular have sought to deal with the reality of this conflict with commendable integrity, the mere perception of a lack of independence and a conflict of interest is highly significant.

It must, in the belief of this Review, cast substantial doubt about the appropriateness of this Department continuing to exercise its formal occupational health and safety responsibilities, both those specific to legislation for which the Department is directly responsible and those delegated to it.

Chapter 8

OPTION 1 – A FURTHER CONSIDERATION

ARE THE EARTH RESOURCES INDUSTRIES A SPECIAL CASE?

The previous chapter considered the Option of retaining occupational health and safety regulation in DPI by assessing the DPI against the key criteria identified by this Review. From that it is the firm conclusion of this Review that the regulation of occupational health and safety in the earth resources industries will be seen as compromised and conflicted for as long as it remains the responsibility of the Department.

However, before reaching a final conclusion about the place of the DPI in regulating occupational health and safety it is important to revisit a long-standing assertion that the mining, quarrying and petroleum industries are a special case. This is commonly based on two main claims.

1. A better appreciation of health and safety because of the historical emphasis on these issues within these industries
2. The unique risks involved in these industries, and the specialist skills required understanding them and dealing with them.

The historical and integral nature of health and safety

There were specific pieces of health and safety legislation in place for the mining industry long before the modern era of occupational health and safety. The Mineral Resources Development Act, the modern day manifestation of the

Mines Act, has one of the oldest pedigrees of any law on Victoria's statute books. This was the vehicle for protecting workers working in mines. However adequate or inadequate those protections might have been, even as late as 1985 they were seen to be better and more advanced than the protections the new OH&S Act introduced. Certainly the mechanisms for enforcing safety were well-established and probably better placed at that stage.

Victoria now has a 20-year track record of a co-ordinated and concerted focus on occupational health and safety. It has now established its occupational health and safety credibility. It has a well-respected, independent agency in WorkSafe that has built a record of being able to effectively cope with a comprehensive agenda of occupational health and safety and the challenges of ever-changing workplaces.

Victoria has a modern, well-honed legislative framework. It is a framework that now has an even broader reach and requires a wider range of health and safety skills and expertise. The fact that the occupational health and safety imperatives of the earth resources industries are now fully subject to Victoria's OH&S legislation and regulations reflects this.

The approach is now quite different as well. Self-regulation, based on clear duties and specified outcomes has largely replaced detailed industry-specific regulation. As legislation and regulation has become less prescriptive and processes more expansive, access to a wider range of networks and skills are required. Significantly, many workplaces associated with the mining, extractive and petroleum industries are already regulated and inspected by WorkSafe.

The significance of occupational health and safety to mining, quarrying and petroleum is just as strong as ever. However, the history that might once have

justified a stand-alone approach to regulation now has more than two decades experience of a dedicated, well co-ordinated system that is serving Victorian workers and their workplaces well.

Does unique risk require a unique response?

The hazards, dangers and risks of the earth resources industries are still ever present. Recent tragic events attest to that reality. So, too, the possibility of a catastrophic event. Certainly these are industries with unique risks.

The mining and extractive industries can claim to be different from most in that the processes at work must cope with the uncertainties arising from geological and geomechanical properties of an ore body and its surrounds. These uncertainties and unpredictabilities are often the cause of incidents and accidents (e.g. rock falls, bench collapses etc). However, most industries, especially those of a hazardous or potentially catastrophic nature, have their own unique risks and challenges. Increasingly the response of a modern occupational health and safety system is to develop specific responses within the framework of a central, co-ordinated agency. This is well illustrated by the development within WorkSafe of specialist processes and expertise in a Major Hazards Facility capability. This locates potentially catastrophic and perhaps even unique risk management alongside the more generalist streams of occupational health and safety.

It is also said that many of these earth resources industries present a special case because of their reliance on hazardous substances and material. Explosives, and their correct application, and dangerous substances (e.g. cyanide) certainly present serious risks; however, this is also the case in many other industries. Again, specialist skills in these areas are an integral component of the central agency, WorkSafe.

The issue then would seem to be whether the presence of serious and/or unique risk presents an occupational health and safety challenge requiring a unique regulatory response. Increasingly it is felt that there are stronger synergies and benefits in locating the handling of such risks firmly within a dedicated occupational health and safety agency.

It is the conclusion of this Review, therefore, that the administration and enforcement of the occupational health and safety responsibilities of the earth resources industries in Victoria should now become part of the central agency role of the Victorian WorkCover's occupational health and safety arm, WorkSafe.

Chapter 9

SUBSEQUENT OPTIONS FOR CHANGE

Having considered, as the principal Option, the retention of occupational health and safety regulation as the responsibility of the DPI, this Review believes that there is the need to bring the administration and enforcement of occupational health and safety responsibilities in the mining, extractive and petroleum industries under the umbrella of WorkSafe. Consequently, this Review now proposes three further Options for achieving this.

Option 2 - Transfer of all aspects of earth resources regulation and enforcement to VWA

This Option would see VWA take responsibility for all aspects of the regulation, licensing and enforcement of the earth resources industries in Victoria. It would not only require the Authority resuming its specific roles and responsibilities for these industries under the OH&S Act, but, in line with the notion that occupational health and safety in these industries must be global and holistic, would see VWA, through WorkSafe, take carriage of all of the regulatory, licensing and enforcement responsibilities under the MRDA, the EIDA and the Petroleum Act.

This Option would see the DPI focus solely on the promotion and facilitation of the earth resources industries' development.

Option 3 - A transfer of occupational health and safety inspection to VWA.

Under this option the occupational health and safety tasks currently delegated to the DPI under the Memorandum of Understanding with the VWA, would be resumed by the VWA. This could see the Regulation Officers currently located within the Minerals and Resources Division of the DPI transferred to WorkSafe as industry-specific occupational health and safety inspectors.

Option 4 - A realignment of responsibilities, tasks and processes between the DPI and the VWA to provide a clearer focus on occupational health and safety.

This Option would see all tasks and processes with a principal occupational health and safety focus undertaken by the VWA. This would not only require the resumption by the VWA of responsibilities delegated to the DPI under the OH&S Act, but also the delegation by the Minister responsible for the MRDA, the EIDA and the Petroleum Act of some tasks currently conducted by the DPI. These would be:

- assessment and enforcement of occupational health and safety requirements of Work Plans and Operation Plans, and
- the assessment of or provision of advice on any other aspect of Work Plans and Operation Plans considered by the Minister responsible for the MRDA, the EIDA and the Petroleum Act to have occupational health and safety implications.

If necessary such a delegation could be underpinned by a Memorandum of Understanding between the DPI and VWA.

As explained earlier in this Report a Work Plan for a mining operation or an extractive operation cannot be approved unless the proposed activities have been given planning approval. This can be in the form of either a planning permit from the relevant municipal council or an Environment Effect Statement (EES) process. (Note: planning permission is not required for mining exploration.) At the moment, as part of DPI's integrated approach, the Work Plan is, in effect, substantially endorsed prior to the planning permission stage.

Under this Option the licensee, with the guidance and support of the DPI, would still prepare a draft Work Plan. The occupational health and safety components of this draft Work Plan would then require endorsement from the VWA prior to it being submitted as part of seeking planning approval. The final package, a Work Plan with planning permission, would still need to be given final approval by the DPI.

This Option would also require the resumption by the VWA from the DPI of delegated occupational health and safety responsibilities under the OH&S Act. This would include the responsibility for the licensing and inspection of explosives and dangerous goods.

In recognition of the unique risks of these industries and in order to provide reassurance that this realignment will not diminish or dissipate the focus on health and safety within these industries, this Option would be enhanced by the location of these transferred and resumed responsibilities to a discrete unit within WorkSafe.

Given the catastrophic potential of these industries, consideration should be given to locating such a unit within the Major Hazards group of WorkSafe. Such a location does not, however, imply that these industries should be

subject to the rigorous safety case regime applicable to Major Hazard Facilities.

The realignment proposed under this Option would also need to be accompanied by the transfer of a number of skilled, experienced staff currently within the DPI. This should include at least two qualified mining engineers and those staff currently employed as Regulation Officers within the Minerals and Extractive Operations Branch.

Such a transfer would ensure that a discrete earth resources unit within WorkSafe has, from its inception, a critical mass of appropriately skilled staff and is well placed to be staffed at no worse than the 1:270 inspector to worksite ratio that currently applies within the DPI.

Under this Option the DPI would retain responsibility for:

- Approval of Work Plans and Operation Plans, subject to the endorsement by the VWA of any occupational health and safety requirements of those Plans
- Enforcement of all matters contained in a Work Plan, an Operation Plan or Work Authority other than occupational health and safety requirements delegated by the Minister responsible for the MRDA, the EIDA and the Petroleum Act to the VWA.
- The stewardship of the Crown's interest in Victoria's earth resources, including the imposition and collection of royalties. This would include remaining the lead agency for the issuing and control of exploration, mining and extractive licences.

- Industry development and facilitation.

These options should be assessed in accordance with the occupational health and safety regime criteria outlined earlier in this Report.

Chapter 10

ASSESSING OPTION 2

Transfer of all aspects of earth resources regulation and enforcement to VWA

Comprehensive

VWA has already demonstrated an ability to perform its occupational health and safety responsibilities in a holistic and comprehensive context. It plays a major licensing role in relation to Major Hazard Facilities (chemical plants). This requires a rigorous involvement from the inception of such facilities.

In addition to this its occupational health and safety horizons have been broadened as a result of the new Occupational Health and Safety Act, including the need to regulate and enforce the new duty of care on builders and designers of workplaces and structures.

It has been argued that WorkSafe's targetting of hazards would be biased towards compensation claims, not catastrophic risk. However, it is clear that the mandate of the organisation is to address and target all risks to workplace health and safety and to oversee the outcomes of workplaces in meeting their duties of care.

On the other hand, to accept the complete transfer of licensing functions under legislation such as the MRDA, the EIDA and the Petroleum Act would be to introduce roles and responsibilities into the VWA that are not consistent with its core activity.

For example, taking responsibility for the stewardship of Victoria's earth resources, land management issues and the regulation and collection of royalties are not responsibilities appropriate for the VWA or WorkSafe.

Independence

It is clear that the VWA is an independent regulator. That was the very rationale of its establishment and has been secured ever since.

Its occupational health and safety arm, WorkSafe, has a clear, focussed and unequivocal role – occupational health and safety.

This issue was addressed in the Maxwell Report in 2004:

*“In its report *Independent Regulators*, published in October 2003, the U.K. Better Regulation Taskforce defined an independent regulator as:*

A body which has been established by an Act of Parliament, but which operates at arm's length from Government and which has one or more of the following powers: inspection; referral; advice to a third party; licensing; accreditation; or enforcement.

By this definition, the Authority [VWA] undoubtedly qualifies as an independent regulator. [Emphasis added] *The legislation establishing the Authority clearly intends that the Authority should operate at arm's length from Government, and it confers powers of inspection and enforcement.”*⁵¹

Contemporary and proactive

⁵¹ Maxwell, Chris QC., op cit, page 54.

The breadth of VWA's industry coverage lends itself to a strong understanding of all occupational health and safety issues and places the organisation in a good position to quickly and proactively identify and engage in emerging areas of risk. This would be likely to produce a stronger focus on non-structural issues such as repetitive use injuries and emerging issues such as fatigue, alcohol and drugs and psychological health.

Consultative and empowering

The VWA has a strong record of consultation, including multi-partite and tri-partite consultation. It is well-versed and seemingly comfortable in its relations with both industry organisations and trade unions and is the lead agency in the development of the new OHS Regulations 2007.

The new Occupational Health and Safety Act 2004 further entrenches involvement of the Authority in consultative and empowering processes through the establishment of a formal Occupational Health and Safety Advisory Committee.

One of the major industry sector unions has indicated its confidence in the ability of WorkSafe to actively involve all stakeholders in its work:

*“WorkSafe Victoria ... has a very structured, pro-active approach to consulting with industry. All stakeholders are given ample opportunity to voice their opinions on all matters. WorkSafe should be commended for the way the OH&S regulations have been consulted upon, a vast task that has been effortless.”*⁵²

Sensitive

⁵² Australian Workers Union (AWU), op cit, page 2.

Although primary carriage of earth resources industry occupational health and safety has historically rested with DPI and its predecessor departments, WorkSafe has had an increasing involvement with these industries. This has come from both its involvement in the regulation and inspection of non-mining aspects of these industries, as well as through its growing co-operation with the DPI on issues relating to mining, quarrying and petroleum. Some on-shore petroleum operations are already regulated directly by WorkSafe.

WorkSafe is also accustomed to the licensing, regulation and supervision of industries with catastrophic potential, especially through its lead role in Major Hazard Facilities.

Competence and skills

As the central agency tasked with responsibility for occupational health and safety WorkSafe has developed a wide range of skilled personnel to deal with both industry-specific issues and the broader, more generalist health and safety priorities.

Some would argue that the enforcement of occupational health and safety in the earth resources industries does not require specialist skills. However, to the extent that WorkSafe is deficient in mining engineering skills and expertise it would need to demonstrate an ability to integrate and retain this skill within the transferred entity.

It already has a range of expertise in areas such as explosives and dangerous goods and would also argue a track record of being able to acquire and access appropriate specialist skills.

WorkSafe already has a wide portfolio of occupational health and safety-related skills, including in areas of policy, education, communication and repetitive strain occupational health and safety.

Resources

WorkSafe overall does not match the same overall inspector to site ratio to that offered by the DPI. This point was made by a number of submissions, including from the Minerals Council and the CCAA. It was also highlighted by the Department itself.

However, in its principal area of catastrophic industry oversight (through Major Hazards Facilities), VWA has a much lower inspector to site ratio than DPI.

The VWA has advised this Review that:

“Major Hazard Facilities are licensed once every five years with significant “through life” oversight amounting to 22 full-time staff for the approximately 50 facilities.”⁵³

Given the sensitive and catastrophic nature of mining and quarrying, a low ratio would need to be retained.

In terms of funding the VWA already collects an industry levy from most earth resources employers. However, this amount would not be sufficient to meet the additional cost to the VWA of the transfer of responsibilities.

⁵³ Victorian WorkCover Authority, Material provided to the Inquiry.

Accordingly, the functions transferred from DPI would require additional funding by VWA.

In the event of the total transfer from the Department of licensing and enforcement requirements under each of the industry Acts, further staff would be required with skills not related to the core activities of WorkSafe.

Enforcement

WorkSafe would also apply graded enforcement measures to its occupational health and safety responsibilities.

Although it could be argued that under the VWA there would be a higher likelihood of prosecutions, especially in relation to non-compliance not related to accidents or incidents, the DPI submission suggests that this is unlikely:

DPI's prosecution rate will vary from year to year because of the relatively small size of the industries it regulates and fluctuations in the numbers of serious accidents. But on the basis of (say) two prosecutions per year for the 1350 workplaces it regulates, DPI's worksite/prosecution ratio (675) is comparable with VWA, which launches around 200 prosecutions per year in relation to the 200,000 workplaces it regulates (worksite/prosecution ratio 1000).⁵⁴

Once again, under a total transfer of responsibilities as proposed in this Option, enforcement functions outside of occupational health and safety requirements would also need to be put in place.

Benchmarking

⁵⁴ DPI Submission, page 8.

With responsibility for occupational health and safety in these industries under the one umbrella, including, of course, the workers' compensation function, there would be enhanced potential for the generation and development of a greater range and depth of statistical data and comparison

By virtue of its broader occupational health and safety brief VWA is also well placed to develop a wider range of benchmarks, including across industries and jurisdictions.

Information and communications

An ability to communicate the message of workplace health and safety is, of course, integral to WorkSafe's core role. It is also well-versed in the development and production of industry-specific guidance and advice, and already plays a major role in this respect under current arrangements in its co-operation with the DPI.

WorkSafe also has a strong record of direct involvement in occupational health and safety award programmes.

Conclusion

Many of the issues raised in assessing the VWA and WorkSafe in the context of this Option 2 will equally apply to the other Options put forward. However, in considering the possibility of transferring all the functions of the Minerals and Petroleum Regulation Branch, including licensing arrangements under the MRDA, the EIDA and the Petroleum Act, to the VWA, a number of specific points can be made.

A total licensing function is not necessarily foreign to the Authority. As it points out in comments made to this Review, the Authority performs

essentially that role in relation to the chemical industry in relation to its Major Hazard Facilities responsibilities.

The complete transfer of the MPRB to the VWA would also address the issue of independence whilst keeping together a group of people well versed in all aspects of the earth resources industries. Unlike the conclusion reached in relation to the DPI's role, there could be absolutely no doubt that the VWA is at arms' length not only from industry or union influence, but also from Government and an industry-based Department.

As the assessment of criteria indicates there are many other strong occupational health and safety reasons for contemplating this transfer. These include the broader, more holistic view of occupational health and safety likely to be experienced under the VWA umbrella, and its ability to proactively embrace emerging issues and risks.

However, this Review rejects Option 2 on the basis that it would be imposing onto the VWA roles and responsibilities that are either totally outside the core role of the Authority or are not reasonably incidental to the comprehensive regulation of occupational health and safety in the earth resources industries. Nor does the Review believe that the unique risks inherent in these industries justify the total transfer of the regulation of these industries.

Further, it is the conclusion of this Review that it is reasonable and sensible for certain functions currently administered by the DPI and its Minerals and Petroleum Regulation Branch to remain with the Department. These include:

- the stewardship of Victoria's earth resources,

- its associated planning and environmental management duties and delegations, and
- the administration and enforcement of royalties

This Review rejects Option 2.

Chapter 11

ASSESSING OPTION 3

Transfer of occupational health and safety inspection to VWA

As has already been pointed out in Chapter 10 many of the issues covered in assessing the VWA applies to this Option as well. Unless specifically relevant to a consideration of this Option, they will not be repeated in this Chapter but are no less important in considering this Option.

Comprehensive

This Option would provide a clearer focus on the role of the OH&S Act in the earth resources industries. It would underline the stand-alone duties of care that the Act specifies and would allow occupational health and safety inspectors to concentrate on other industry-specific requirements prescribed by the Act and its regulations. As such it would allow for a more comprehensive assessment of occupational health and safety in each of these industries.

The recent reforms to the OH&S Act will significantly add to a 'cradle to grave' approach being taken by the relocated inspectorate, including occupational health and safety issues relating to design and construction, as well as the stronger focus in the new Act on protecting the safety of the public.

On the other hand, it would not produce a better co-ordinated coverage of occupational health and safety in this industry sector. It would retain a number of occupational health and safety issues within the purview of the DPI without

the capacity of VWA or its inspectors to be directly involved. This would be a particular problem in relation to the occupational health and safety requirements of Work Plans and Operation Plans.

For example, a Work Plan for a Mining Licence must, under Regulation 25(8) of the MRDA include:

“An occupational health and safety plan that demonstrates, so far as is practicable, that the works are designed and will be operated so as to be safe and without risks to health.”

It would, in the belief of this Review, be inappropriate for the assessment and enforcement of this requirement to be separated from the role of the principal occupational health and safety regulator. This would detract from the comprehensive and holistic nature of the health and safety regime.

Independent

By distinctly separating occupational health and safety inspection responsibility from other aspects of the DPI's roles this Option would produce a more independent regulatory approach to occupational health and safety. Certainly, having the lead agency for health and safety resume a distinct inspection and enforcement role would enhance the perception of independence.

However, other conflicts of interest, actual or perceived, would remain within DPI. As has already been indicated this would be especially so given that the DPI would, under this Option, retain the power to approve the occupational health and safety requirements of Work Plans and Authorities and Operation Plans.

Consultative and empowering

Operators would be required under this model to engage with two agencies in pursuit of good occupational health and safety – the DPI in respect of the occupational health and safety components of their Work or Operation Plans, and WorkSafe in respect of compliance and enforcement under the OH&S Act.

In the absence of effective co-ordination this could tend to dissipate the impact and usefulness of consultation, produce significant confusion and possible contradiction and compromise the extent to which each workplace is sensibly empowered to address its occupational health and safety responsibilities.

Sensitive

The DPI would retain a continuing operational interest in occupational health and safety issues through their continued oversight of Work Plans, Operation Plans and Work Authorities.

To the extent that current personnel were transferred to WorkSafe they would presumably bring to that organisation a keener appreciation of the earth resources industries, their special needs and the potential that exists for catastrophic incidents.

Competence and skills

The transferred inspectorate would be more likely to have access to the broad sweep of occupational health and safety training and awareness and would be entering a culture more conducive to the acquisition of new and emerging skills.

On the other hand such a transfer would need to ensure that the inspectorate would have ready access to the kind of engineering and geological expertise or advice that is currently the case within the DPI.

Resources

By transferring an existing group of inspectors to a discrete unit of VWA the current inspector to workplace sites ratio could be substantially maintained.

Under this Option the inspectorate would have easier and readier access to the range of occupational health and safety resources (expertise, policy information etc) that reside within VWA.

Enforcement

A relocated inspectorate would have the potential to bring a broader approach to enforcement. This could represent a move away from incident-based sanctioning to one that more assertively enforces breaches of procedure. It could also be more likely to target health and safety deficiencies reflected in workers' compensation claims.

WorkSafe would also have a greater spread of resources across the State enabling greater flexibility and focus in the audit of workplace health and safety.

The sharing of occupational health and safety functions implied by this Option could, however, prove confusing to operators and make enforcement more difficult. This could especially arise where Work Plans that have been approved by the DPI contain occupational health and safety plans that are not acceptable to WorkSafe.

Information and Communications

This Option would have the potential to enhance the extent to which the industry would be informed about occupational health and safety. DPI would continue to provide information and advice to the industry whilst WorkSafe would have the opportunity to target its message to these industries in a more specific way.

There would, however, be the challenge to ensure that information and communication was consistent between agencies.

Conclusion

This Option would bring a clearer focus to occupational health and safety by having the direct involvement of Victoria's lead agency, WorkSafe. It would also be likely to produce at least the perception of a greater degree of independence in the assessment and enforcement of the OH&S legislation.

The major deficiency of this Option, however, is that it has the very real potential to produce confusion and conflict in the way that occupational health and safety is presented to the operators and workers within the earth resources industries.

Having formal mechanisms that require both DPI and VWA to be satisfied about various aspects of occupational health and safety policy and practice may well tend, in the end, to dilute the effectiveness of workplace health and safety.

The Review rejects Option 3.

Chapter 12

ASSESSING OPTION 4

Realignment of responsibilities, tasks and processes between the DPI and VWA to provide a clearer focus on occupational health and safety.

Comprehensive

In all of the arguments put to this Review perhaps the most compelling is that occupational health and safety should be embedded in every aspect of these industries – from commissioning to closure. It is unarguable that this should be reflected in the way the mining site or the quarry is designed and laid out. This Option provides a strong means of ensuring that happens.

Many of the functions currently residing with the DPI have quite specific purposes. The licensing function, for example, deals mainly with land management and access issues – native title, owner consent etc. In addition, the principal industry Acts from which the DPI derives its mandate over the earth resources industries – the MRDA, the EIDA and the Petroleum Act – are multi-faceted and involve the Minister and the Department in issues that are not directly relevant to workplace health and safety. Such matters should remain with DPI. So, too the oversight of royalties and the return to the Crown from these resources.

As was discussed in the previous Option, this Review does not believe that it is sufficient to simply have the VWA resume its occupational health and safety responsibilities for these industries as specified under the Memorandum of Understanding. This would not produce an effectively comprehensive, holistic regime of occupational health and safety. However, this Option addresses that deficiency.

It provides for

- the resumption by the VWA of its roles and responsibilities under the OH&S Act, and
- the delegation to the VWA by the Minister responsible for the MRDA, the EIDA and the Petroleum Act, of the assessment, approval and enforcement of occupational health and safety plans required, either expressly or implicitly, to be included in Work Plans and Operation Plans.

Providing WorkSafe with these roles and responsibilities gives it comprehensive oversight of, or involvement in all significant occupational health and safety aspects and phases of an operation.

This Option allows for the DPI to continue playing its broader role in the assessment, approval and enforcement of matters contained in a Work Plan or an Operation Plan that are not directly related to occupational health and safety. This would include matters relating to environmental management and rehabilitation as well as roles or responsibilities that have been delegated to it by other departments or agencies.

It also envisages the DPI retaining its responsibility for the final approval of Work Plans, Operation Plans and Work Authorities, subject to the approval of specific occupational health and safety plans by VWA.

Independent

This Option offers a much clearer demarcation in the roles of the DPI, and brings to the fore the primary responsibility that WorkSafe has in Victoria for occupational health and safety.

Under this Option the DPI more broadly can proceed aggressively, albeit ever mindful of safety issues, with its task of promoting and facilitating mining, quarrying and on-shore petroleum exploration and exploitation, freed from its formal role in regulating occupational health and safety. It can also remain a watchful custodian of the earth resources of the State.

WorkSafe was established as the independent custodian of the health and safety of the workplace in Victoria. It can now bring that single-minded focus to the earth resources industries.

Contemporary and proactive

This Option would place WorkSafe at the centre of all of the key occupational health and safety responsibilities of the earth resources industries.

This will ensure that contemporary and emerging issues and risks of workplace health and safety, apparent in other areas of WorkSafe coverage, can be considered and, if appropriate, incorporated in these operational plans.

Consultative and empowering

As noted previously, WorkSafe and VWA are well-used to a consultative approach to occupational health and safety.

By retaining its overall responsibilities in Work Plan, Operation Plan and Work Authority approval, the DPI is still positioned to be involved in on-going consultations on industry health and safety issues.

Sensitive

Throughout this Report the historic focus on safety in mining and earth resources industries has been emphasised. So too has its potential for catastrophic accident. WorkSafe has already been identified by government as the lead agency for other areas of catastrophic potential. It is therefore equipped to deal sensitively with these issues in the earth resources area.

The need to recognise the nature and unique risks of these industries is also addressed by locating this earth resources industries' role in a discrete unit within WorkSafe, possibly as part of the Major Hazards group within WorkSafe.

This Option still makes it possible for the DPI to ensure, through both its licensing function and its continuing role in giving final approval to Work Plans, Operation Plans and Work Authorities that the unique risks of these industries are appropriately recognised and addressed.

Competence and skills

Over and above its broad skill base discussed previously, skills in the oversight of occupational health and safety aspects of an authorising process of the kind inherent in the development of Work Plans and Operation Plans already exist within WorkSafe, including in the assessment of safety case regimes in Major Hazard Facilities.

To the extent that the oversight of the occupational health and safety components of Work and Operation Plans requires WorkSafe to access new skills and competencies it has already demonstrated its ability to successfully meet such a need.

The transfer of appropriately qualified staff from DPI would also ensure that competencies and experience in the earth resources industries are readily available to WorkSafe. As outlined in proposing Option 4, this should include at least two qualified mining engineers and those staff currently employed as Regulation Officers within the Minerals and Extractive Operations Branch.

Resources

The realignment of responsibility for occupational health and safety in this more global, holistic way to WorkSafe would mean that the resources already made available to VWA by these industries can now be directly applied.

The proposed transfer of staff from the DPI to WorkSafe also ensures that the discrete earth resources unit would, from its inception, have a critical mass of appropriately skilled staff.

The resources of WorkSafe are also distributed throughout the State and would be at least as accessible, and possibly more so, as under current arrangements.

In a more global sense, valuable and extensive resources including specialist health and safety knowledge and staff that reside within WorkSafe and its Major Hazard component can now be directly accessed by the earth resources industries.

Enforcement

In addition to the regulatory and enforcement powers vested in it by the OH&S Act, this model adds a significant element to WorkSafe's enforcement regime. This is because of the significant role played by Work Plans and, Operation Plans. Work cannot commence or continue in mining, high impact exploration, extraction or petroleum without an approved Work or Operation

Plan. Under this Option WorkSafe would now have a delegated involvement in that process.

On the other hand, WorkSafe has significant credibility in its approach to graded enforcement and responsible use of prosecution and other sanctions.

Benchmarking

VWA and WorkSafe have a well-established capacity to ensure that occupational health and safety performance in these industries are appropriately monitored and benchmarked.

Information and communications

Again, VWA and WorkSafe already play an important role in the development and distribution of occupational health and safety material and data to the industry.

Conclusion

This model more clearly than the existing arrangements identifies the core activity of relevant government agencies and realigns roles and functions accordingly.

The DPI is an industry-based agency with the brief of promoting and developing the economic use of the State's natural resources, in an economically, socially and environmentally responsible way. As such, it is the lead agency for the protection and safeguarding of the State's resources. It can achieve this through its licensing role and its industry facilitation role.

It also retains its overall responsibilities envisaged for it under its key industry Acts – the MRDA, the EIDA and the Petroleum Act.

The VWA, through WorkSafe, on the other hand is clearly the independent lead agency in promoting and securing safe workplaces. It is entirely appropriate that it should now assert that mandate and become directly and actively involved in mining, quarrying and petroleum industries.

In proposing this preferred Option it is strongly argued that the need to embed occupational health and safety in all aspects of, and at every stage of these industries is being achieved. The argument for a global approach to occupational health and safety should not be confused with those who are really arguing for all regulatory aspects of an industry to be under one umbrella.

The latter approach is an argument for convenience. What has served these industries under one umbrella for a long time might be convenient – a ‘one-stop shop’ where all things are possible. But this is rarely the best approach to take. It is not the case in almost any other industry that one could imagine. Hazardous and potentially catastrophic industries that have been encouraged to develop and flourish in this State under the auspices of the DPI and other industry-specific departments are already well supervised by WorkSafe.

The DPI and VWA both have crucial roles to play. Because this Option identifies what they do best and allows them to pursue those roles assertively and in an unconflicted way, it is the strong conclusion of this Review that the joint goals of a thriving, successful industry that is a safe and healthy place to work can be best achieved by adopting this Option.

Option 4 is the preferred model of this Review.

Chapter 13

AN ENHANCED ROLE FOR THE DEPARTMENT OF PRIMARY INDUSTRIES

It has been an important consideration of this Review that the integrity of the Department's industry mandate should be respected and secured. This is as both the protector of the State's natural resources and the promoter of industry development and investment. The preferred Option proposed by this Review achieves that.

Stewardship of resources

DPI retains its traditional role of stewardship over the earth resources of the Crown through

- the issuing of exploration licence and permits
- mining licences
- extractive licences, and
- the collection of royalties.

Exploration and mining licences and petroleum exploration permits are the principal means of allocating and retaining control over the earth resources of the Crown. Integral to this is the imposition and collection of royalties from those resources.

An inspection function associated with the licensing of exploration, mining and quarrying, together with policing the levying and payment of royalties

should be retained by the DPI. This inspection capacity would also still be required in relation to other non-occupational health and safety compliance and enforcement responsibilities.

As has previously been indicated, under the preferred Option 4, DPI also remains the lead agency in the oversight of the earth resources industries.

Industry facilitation and development

It is clearly apparent to this Review that the DPI plays an important and often integral role in providing advice and reassurance to the industry in the development and operation of mining, extractive and petroleum projects. This role is entirely consistent with the industry development and facilitation aims of the Department and the Government. It should be continued and encouraged.

DPI should continue to provide active and well-resourced advice and guidance to the earth resources industries in the development and maintenance of Work Plans and Operation Plans. It should also continue to provide direction in shepherding an applicant through planning and other approval processes, freed from the constraints of its role as occupational health and safety regulator.

An active support and facilitation role by skilled and experienced DPI staff will, in fact, add a further layer of assurance that health and safety issues will be ingrained in industry projects. Accordingly, every effort should be made to maintain and, if necessary, enhance those skills within the DPI.

In light of the organisational recommendations of this Review, the DPI should re-examine its industry development and facilitation operations to ensure that the skills and resources within the Department are used to best effect in the

promotion and development of a sustainable earth resources industries' sector
in Victoria.

*Chapter 14***A POSTSCRIPT – CRISIS MANAGEMENT
IN THE EARTH RESOURCES INDUSTRIES**

The primary focus of this Review has been to identify and assess the roles and performance of the DPI in its role as a delegate for Victoria's lead occupational health and safety agency – WorkSafe. What is clear from this, and the subsequent consideration of WorkSafe's capacity is that a wide range of valuable and specialist earth resources industry skills exist in Victoria.

In the light of the recent tragic events in Beaconsfield it occurs to this Review that it would be timely for WorkSafe, as part of establishing the earth resources industries unit and its consultative forum, and working in close co-operation with the DPI, to give an urgent priority to the development of crisis management protocols, including a stocktake of expertise, equipment and resources required to deal with a situation involving catastrophic rescue.

Chapter 15

RECOMMENDATIONS

1. VWA should resume direct responsibility for the administration and enforcement of the Occupational Health and Safety Act 2004 and its Regulations in the earth resources industries.
2. The VWA should be delegated with responsibility for the assessment of occupational health and safety requirements of Work Plans and Operation Plans. This would include, but not necessarily be limited to, assessment of an occupational health and safety plan submitted as part of a Work Plan under the MRDA Regulations.
3. DPI should retain responsibility for the approval of Work Plans and Operation Plans under the MRDA, the EIDA and the Petroleum Act. This should be subject to the approval by the VWA of occupational health and safety responsibilities delegated by the Minister.
4. DPI should retain responsibility for the issuing of Work Authorities under the MRDA and EIDA.
5. The responsibilities being delegated to or resumed by VWA should be located within a distinct earth resources industries unit established within the Major Hazards group.
6. This unit should include supervisors (mining engineers) and inspectors and should aim to be staffed at no worse than the 1:270 ratio currently applicable

7. The staffing of this unit should include the transfer from the DPI of at least two qualified mining engineers and all Regulation Officers currently within the Minerals and Extractive Operations Branch.
8. A multilateral consultative forum should be established by WorkSafe to:
 - advise on the smooth transition of the adopted model, and
 - provide an on-going forum for liaison on issues affecting the occupational health and safety of the mining, quarrying and petroleum industries.

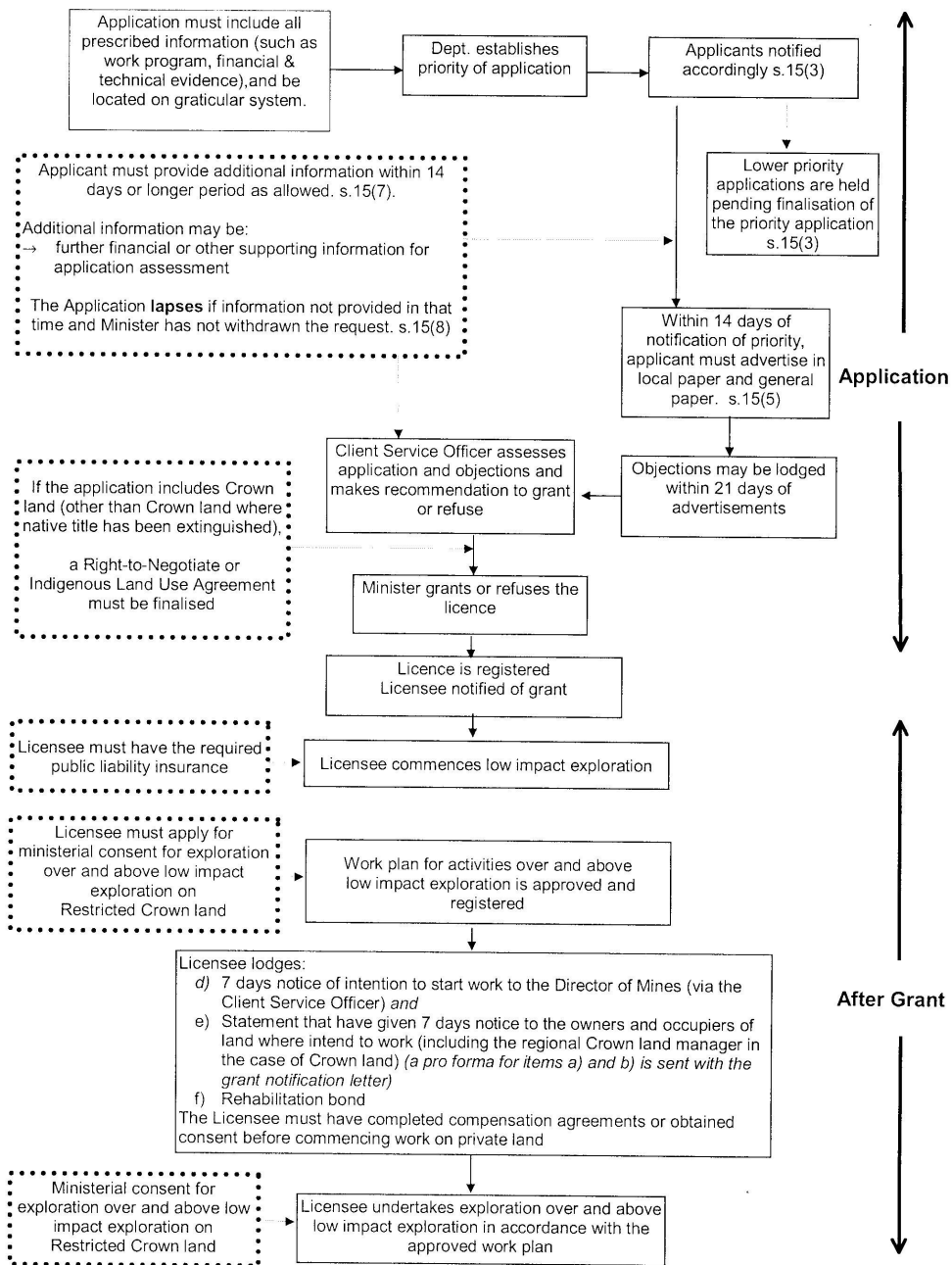
This should include representatives of VWA, the DPI, industry groups, industry unions, and should be convened by VWA

9. Resources, including adequate and appropriate funding and the retention of appropriately skilled staff, should be retained within the DPI to enable it to properly and effectively perform
 - its lead agency role under the MRDA, the EIDA and the Petroleum Act,
 - its on-going licence and resource protection functions, including responsibilities delegated to it by other departments or agencies, and
 - its enhanced facilitation and industry development role.
10. WorkSafe, as part of establishing the earth resources industries unit and its consultative forum, and working in close co-operation with the

DPI to give an urgent priority to the development of crisis management protocols, including a stocktake of expertise, equipment and resources required to deal with a situation involving catastrophic rescue.

Appendix A.

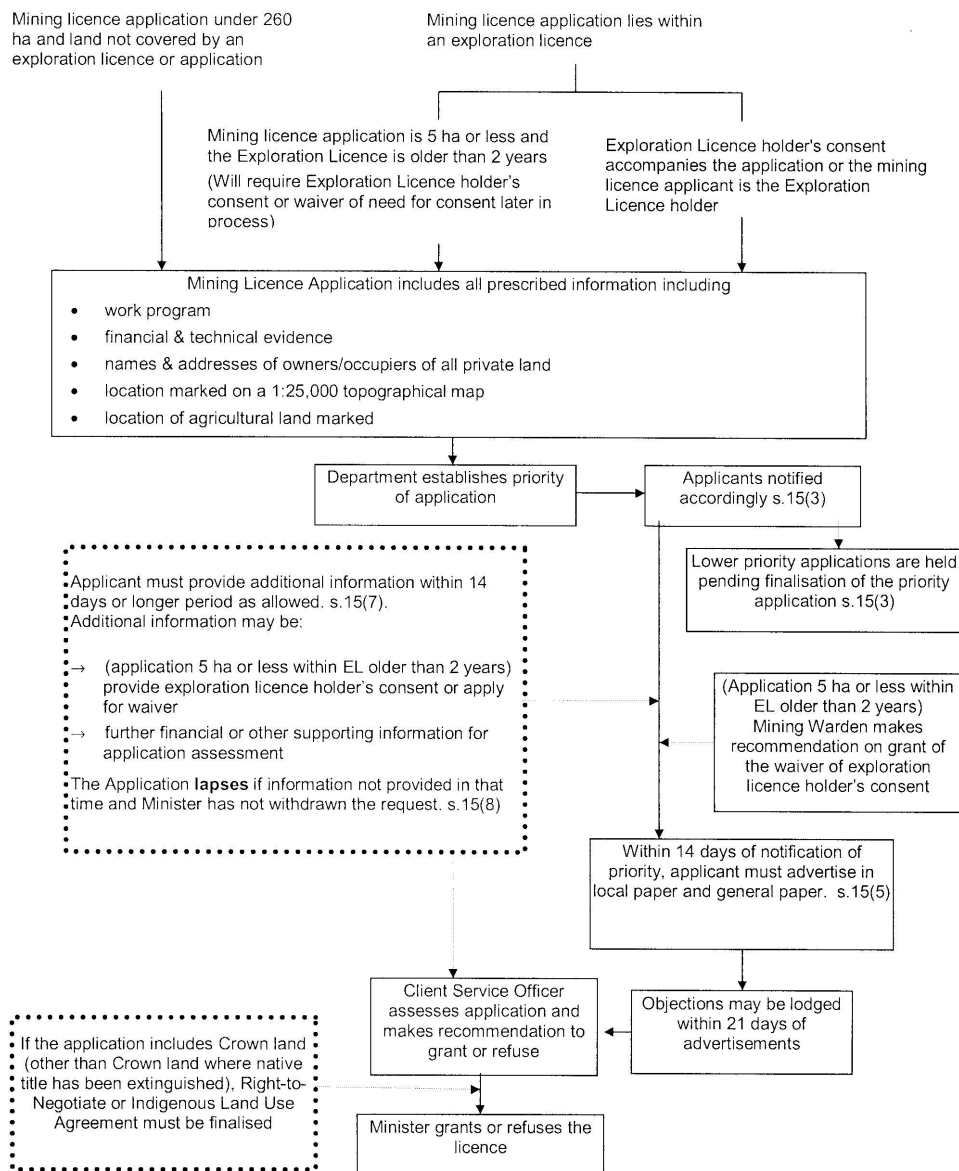
MINING EXPLORATION LICENCE PROCESS



Source: *Exploration Licence Application Kit, July 2005, DPI.*

Appendix B.

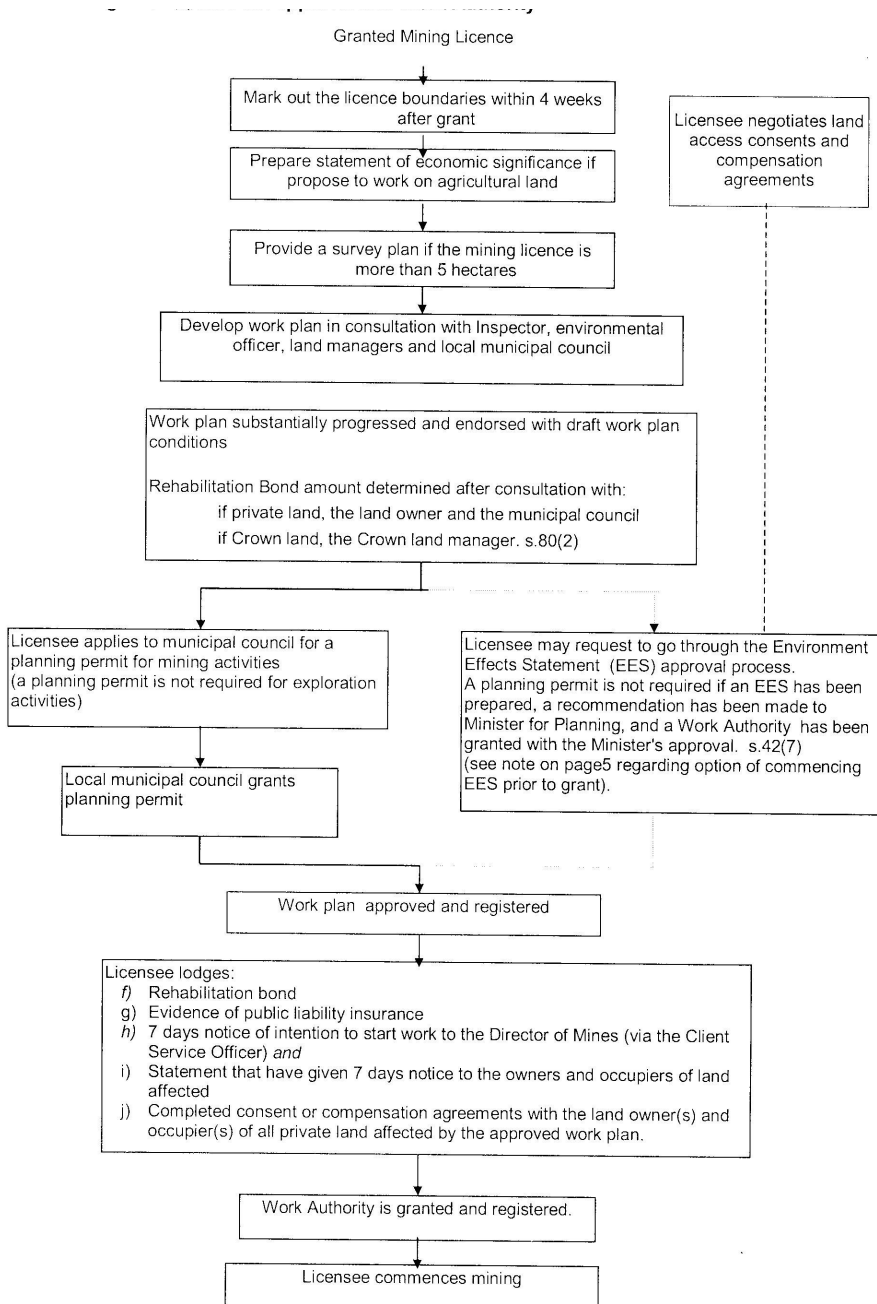
MINING LICENCE GRANT PROCESS



Source: *Exploration Licence Application Kit, July 2005, DPI.*

Appendix C.

**PROCESS AFTER GRANT OF MINING LICENCE
WORK PLAN APPROVAL AND WORK AUTHORITY**



Source: *Exploration Licence Application Kit, July 2005, DPI.*

Appendix D.

**INFORMATION REQUIRED IN WORK PLANS
FOR MINING & EXPLORATION LICENCES**

SCHEDULE 13

INFORMATION REQUIRED IN WORK PLAN FOR A MINING LICENCE
Mineral Resources Development Act 1990 Section

Mineral Resources Development Regulations 2002 - Reg. 25

For mining licences exceeding 5 Ha—

1. General description of geological information, including when available or requested, estimates of ore resources and reserves.
2. A general location plan. Scale of 1:100 000 or 1:50 000.
3. A regional plan at scale of 1:25 000 showing the extent of Crown lands, private lands, private land allotments for the proposed work plan area, and, where possible, parks and reserves, within 2 km of the site.
4. A site plan at 1:1 000, 1:2 500 or other appropriate scale, including cross-sections, showing and describing existing surface contours, etc., and also including—
 - (a) proposed building and surface facilities; and
 - (b) anticipated extent of open cut extraction, with proposed bench height, berm details and working batters; and
 - (c) sequencing of open cut extraction; and
 - (d) location of topsoil dumps, and waste dumps or stockpiles; and
 - (e) proposals for landscaping of site, including buffer zones; and
 - (f) access roads; and
 - (g) if underground mining is proposed, a schematic drawing showing underground development and proposed extent of stoping.
5. Description of the metallurgical and mineral recovery methods to be used.
6. A rehabilitation plan that—
 - (a) addresses concepts for the end utilisation of the site; and
 - (b) includes a proposal for the progressive rehabilitation and stabilisation of extraction areas, road cuttings and waste dumps, including re-vegetation species; and
 - (c) includes proposals for the end rehabilitation of the site, including the final security of the site and the removal of plant and equipment.
7. An environmental management plan which—
 - (a) identifies the key environmental issues for the proposal and includes details of background data, baseline studies or existing conditions in relation to environmental issues;
 - (b) includes proposals for the management of environmental impacts including nomination of targets and proposals for the mitigation, control or reduction of impacts;
 - (c) includes proposals for the management of wastes including consideration of the principles of waste minimisation;
 - (d) includes a proposed monitoring program addressing the key environmental issues;
 - (e) includes a proposal for reporting outcomes of the plan to the local community.
8. An occupational health and safety plan that demonstrates, so far as is practicable, that the works are designed and will be operated so as to be safe and without risks to health.

Appendix D. (continued)

For mining licences not exceeding 5 hectares—

1. A general description of any test work undertaken in the licence area.
2. A general location plan. Scale of 1:100 000, 1:50 000 or 1:25 000
3. A plan of the licence area at an appropriate scale which shows—
 - (a) the proposed buildings and surface facilities; and
 - (b) access roads and tracks; and
 - (c) the location of any proposed tailings dams and water dams; and
 - (d) the general drainage pattern of the area; and
 - (e) the anticipated sequencing and extent of any open cut extraction; and
 - (f) if underground mining is proposed, a schematic drawing showing underground development and the proposed extent of stoping.
4. A description of proposed mineral recovery methods.
5. A description of rehabilitation proposals including—
 - (a) proposals for the progressive rehabilitation and stabilisation of extraction areas; and
 - (b) proposals for the removal of any plant or equipment (if relevant).
6. An occupational health and safety plan that demonstrates, so far as is practicable, that the works are designed and will be operated so as to be safe and without risks to health.

Mineral Resources Development Act 1990 Section 40

Mineral Resources Development Regulations 2002

SCHEDULE 12

Regulation 25

INFORMATION REQUIRED IN WORK PLAN FOR AN EXPLORATION LICENCE

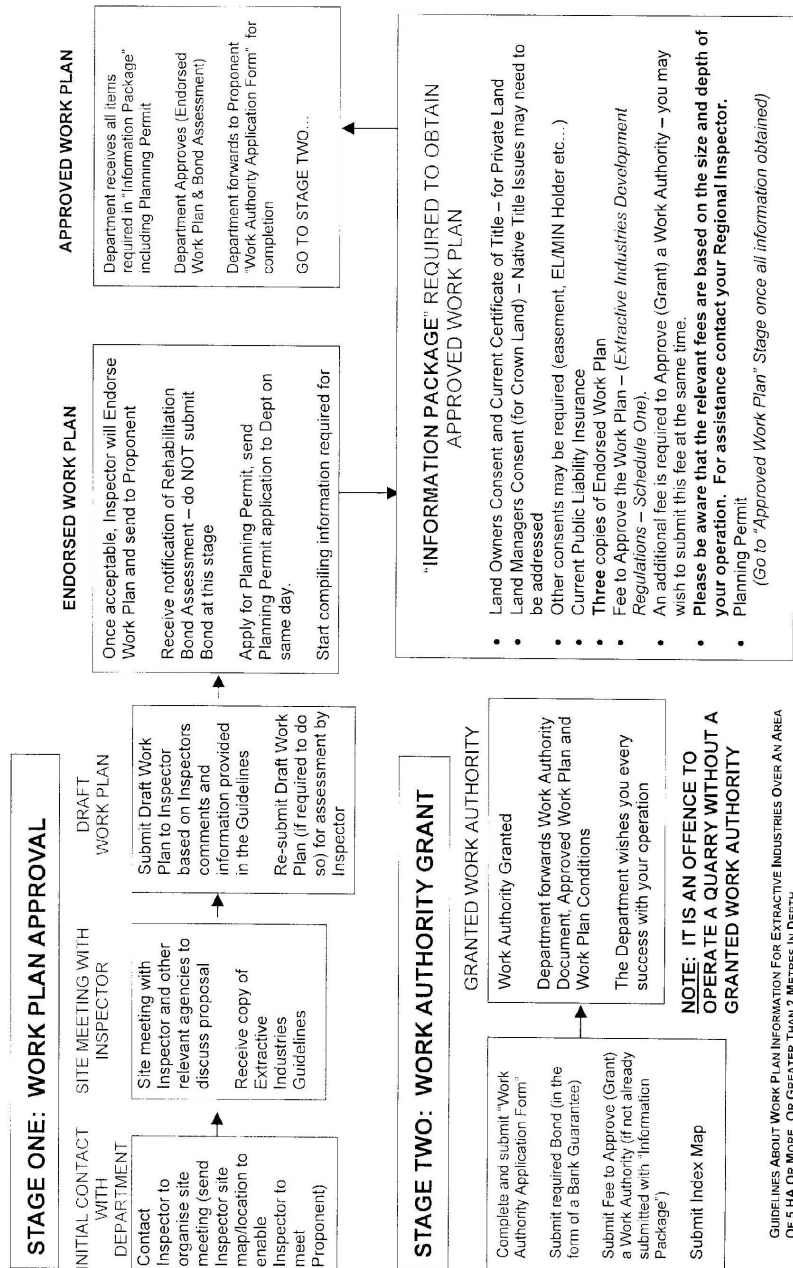
- 1 A description of the proposed works, including details of the potential environmental impacts and the measures proposed for their control or mitigation.
- 2 If specific sites have been identified for drilling or other earthworks, a map showing the general location of those works, including any details regarding the cutting of tracks or roads.
- 3 A description of the proposed rehabilitation of any areas subject to surface disturbance including re-vegetation proposals and where relevant, proposals for the removal of plant and equipment.
- 4 A description of the proposed arrangements for consultation with landowners and Crown land managers and local councils.
- 5 Information about the proposed methods of monitoring, auditing and reporting impacts on the environment.
- 6 An occupational health and safety plan that demonstrates, so far as is practicable, that the works are designed and will be operated so as to be safe and without risks to health.

Source: Exploration Licence Application Kit, July 2005, DPI.

Appendix E.

EXTRACTIVE INDUSTRIES WORK PLAN & WORK AUTHORITY PROCESSES

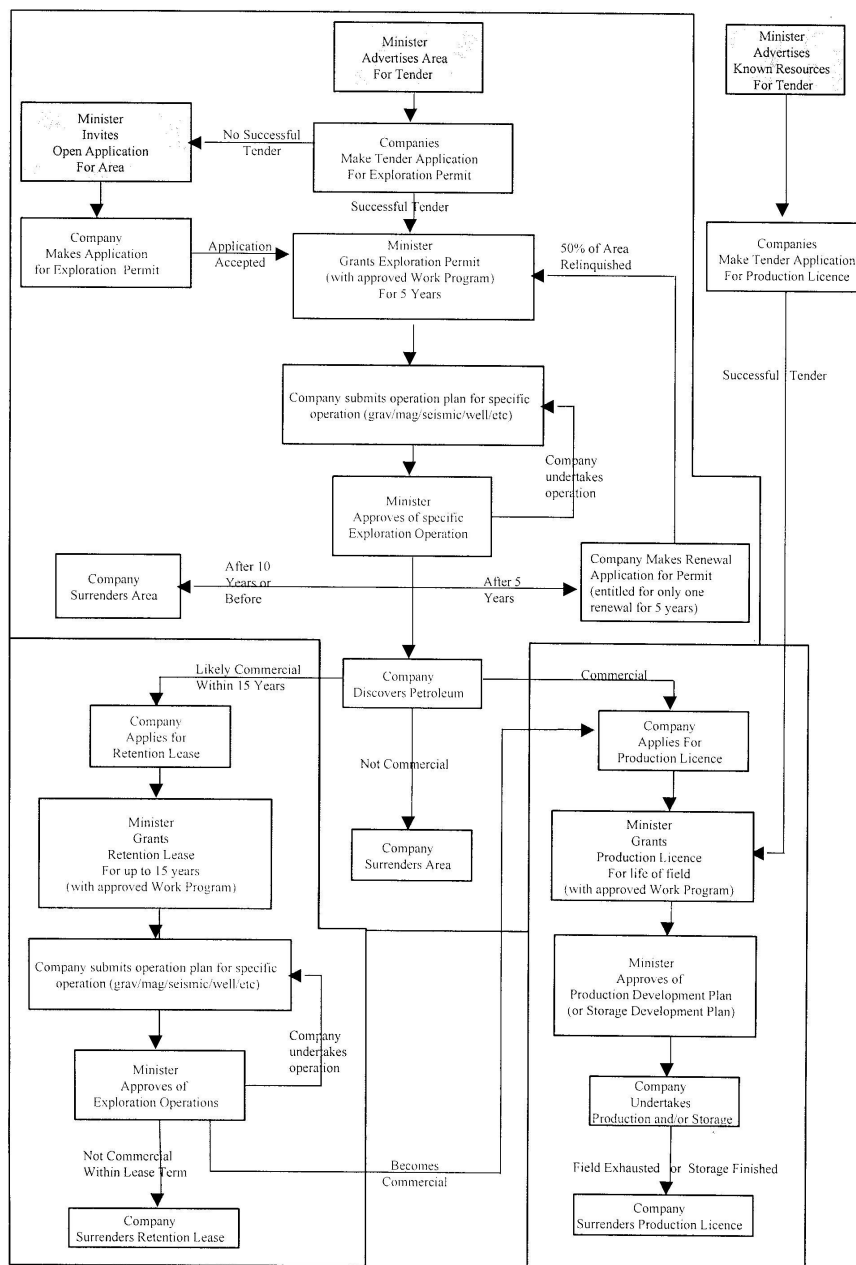
Figure 1. EXTRACTIVE INDUSTRIES (WORK PLAN / WORK AUTHORITY) FLOW CHART



Source: Guidelines about Work Plan information for Extractive Industries, DPI, August 1999

Appendix F.

**OVERVIEW OF TENEMENT PROCESS
UNDER THE PETROLEUM ACT 1998**



Source: Department of Primary Industries.

Appendix G.

WRITTEN SUBMISSIONS

Written submissions were received from:

Cement Concrete and Aggregates Australia

Construction Forestry Mining and Energy Union, Mining and Energy
Division, Victoria.

Construction Material Processors Association Inc.

Department of Primary Industries, Victoria

Minerals Council of Australia, Victorian Division

Mr. A.G. Helps

The Australian Workers' Union

BIBLIOGRAPHY

ACIL Tasman et al, *Queensland Mines Inspectorate Review – Background Paper*, September 2004.

ACT Occupational Health & Safety Council, *Occupational Health and Safety Act 1989: Scope and Structure Review – Final Report*, September 2005.

Conference of Chief Inspectors of Mines, *National Mine Safety Framework Implementation Plan.*, October 2003.

Department of Natural Resources and Environment, *Managing Health and Safety for Quarries*, Minerals and Petroleum Victoria, 2001.

Department of Natural Resources and Environment, *Overview of Tenement Process under the Petroleum Act 1998*.

Department of Natural Resources and Environment and the Victorian WorkCover Authority, *Regulatory Impact Statement – Proposed Occupational Health and Safety (Mines) Regulations 2002*, State of Victoria, August 2000.

Department of Natural Resources and Mines, *Reforms to the Queensland Mines Inspectorate*, Government of Queensland, October 2005.

Department of Primary Industries, *Assessment Criteria for Work Program Bidding Applications on Onshore Exploration Permits in Victoria*, Minerals and Petroleum Division, October 2004.

Department of Primary Industries, *Corporate Plan 2004-2007 – Sustainable Development of Primary Industries*, State of Victoria, Department of Primary Industries, August 2004.

Department of Primary Industries, *Exploration Licence Application Kit*, Minerals & Petroleum Regulation, July 2005.

Department of Primary Industries, *Guidelines about Work Plan Information for Extractive Industries over an area of 5ha or More, or greater than 2 metres in depth.*, Minerals and Petroleum, August 1999.

Department of Primary Industries, *Guidelines to the Extractive Industries Development Act 1995*, Minerals & Petroleum, August 1999.

Department of Primary Industries, *Mines Regulation Guidance Note: Overview of the Mines Regulations (2002)*.

Department of Primary Industries, *Mining Licence Application Kit*, Minerals & Petroleum Regulation, July 2005.

Department of Primary Industries, *Promoting Victoria's Prospects – The Challenge for the Mining, Extractive and Petroleum Industries*, State of Victoria, 2003.

Department of Primary Industries, *Review of the Extractive Industries Development Act 1995 – Background and Issues Paper*, State of Victoria, 2005.

Department of Primary Industries, *Review of the Extractive Industries Development Act 1995 – Background and Issues Paper*, State of Victoria, 2005.

Department of Primary Industries, *Victoria's Minerals, Petroleum and Extractive Industries, 2004/05 Statistical Review*, Victoria, March 2006.

Hopkins, Andrew and Wilkinson, Peter, *Working Paper 37: Safety Case Regulation for the Mining Industry.*, National Research Centre for OHS Regulation, Australian National University, July 2005.

Industry Commission, *Work, Health and Safety – An Inquiry into Occupational Health and Safety*, Commonwealth of Australia, 1995.

Laing, R., *Review of the Occupational Safety and Health Act 1984, Consultation Draft Report*, Western Australia, February 2002

Laing, R., *Review of the Occupational Safety and Health Act 1984, Final Report*, Western Australia, January 2003.

Maxwell, Chris QC, *Occupational Health and Safety Review*, State of Victoria, March 2004.

McKay, W.J., *National Mine Safety Policy – Strategic Framework for the Contribution of Government in realising a Safe and Healthy Mining Industry.*, Geoscience Australia, 2003.

Mine Safety Improvement Group, *Advice to the Minister for State Development on matters arising out of the Ministerial Inquiry into occupational health and safety systems and practices of BHP Billiton Iron Ore and Boodarie Iron sites in Western Australia and related matters.*, Western Australia, April 2005.

Minerals Council of Australia, *Enduring Value – The Australian Minerals Industry Framework for Sustainable Development.*, June 2005.

Minerals Council of Australia, *Safety and Health Performance Report of the Australian Minerals Industry 1998-1999, 1999-2000, 2000-2001, 2001-2002, 2002-2003, and 2003-2004.*

Minerals Council of Australia, *Safety Survey Report., Quarter 2, 2005-2006.*

Ministerial Council on Mineral and Petroleum Resources, *Realising a Safe and Healthy Mining Industry - The Contribution of Government., 2002.*

Parliament of Victoria, *Extractive Industries Development Act 1995., and Regulations.*

Parliament of Victoria, *Occupational Health and Safety Act 2004., and Regulations.*

Parliament of Victoria, *Petroleum Act 1998.*

Ritter, M., *Ministerial Inquiry into Occupational Health and Safety Systems and Practices at BHP Billiton and Boodarie Iron and Other Matters, Western Australia, November 2004.*

Stanley, B., Meredith, F. and Bishop, R., *Review of Workers Compensation and Occupational Health, Safety and Welfare Systems in South Australia., South Australia, December 2002.*

Victorian Minerals and Energy Council, *Comments by the Victorian Minerals and Energy Council on the DNRE Issues Paper: 'Review of the Regulations made under the MRDA regulating Health and Safety in Mines.', VMEC, April 2002.*

Victorian Minerals and Energy Council, *Submission to Mr. C.M. Maxwell QC, on the Occupational Health and Safety Act Review, Discussion Paper of 17 October 2003*, VMEC, November 2003.

Victorian WorkCover Authority, *Memorandum of Understanding – Victorian WorkCover Authority and Department of Primary Industries*, 2003.

WorkSafe Victoria, *Guide to the OHS Act 2004*, Victorian WorkCover Authority, November 2005.

WorkSafe Victoria, *Major Hazard Facilities Regulations Guidance Note An Overview of the Safety Case Regime under the Occupational Health and Safety (Major Hazard Facilities) Regulation*, Victorian WorkCover Authority, November 2005.

WorkSafe Victoria, *Occupational Health and Safety Act 2004 – An Overview*, Victorian WorkCover Authority, 2005.

WorkSafe Victoria, *Summary of the Occupational Health and Safety Act 2004*, Victorian WorkCover Authority, June 2005.

WorkSafe Victoria, *The Safety Case Outline under the Occupational Health and Safety (Major Hazard Facilities) Regulations*, Victorian WorkCover Authority, January 2006.

Wran, Hon. Neville QC and McClelland, Jan, *NSW Mine Safety Review.*, February 2005.