

Report of the Queensland Ombudsman



QUEENSLAND
ombudsman

The Regulation of Mine Safety in Queensland

A review of the Queensland Mines
Inspectorate

June 2008

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A Review of the Queensland Mines Inspectorate

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17 June 2008

The Honourable John English MP
Acting Speaker of the Legislative Assembly
Parliament House
George Street
BRISBANE QLD 4000

Dear Mr English

In accordance with s.52 of the *Ombudsman Act 2001*, I hereby furnish to you my report, *The Regulation of Mine Safety in Queensland: A Review of the Queensland Mines Inspectorate*.

This report relates to my investigation of the regulatory policies and practices of the Inspectorate in relation to mine safety, which I have conducted on my own initiative under s.12(a)(iii) of the Act.

Yours faithfully

A handwritten signature in black ink, appearing to read "D Bevan".

David Bevan
Queensland Ombudsman

Enc.

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Foreword

The mining industry is of enormous economic importance and is the lifeblood of many communities in regional Australia. Sadly, in a small but significant number of cases, it is also the source of tragedy.

While the Queensland mining industry may, statistically, be one of the safest in the world, mine and ancillary workers still die or suffer terrible injuries every year while helping to earn the billions of dollars the industry contributes to the economy. For example, four people died in the state's mining industry in the 2006-2007 reporting year, and two died in the 2005-2006 reporting year. Another Queensland mine worker died during the preparation of this report.

Names like Moura and Gretley remind us of the heavy personal cost that failures in mine safety practices can have for the family, friends and colleagues of mine workers. That human cost must never be forgotten. At a recent mine safety symposium in Townsville, it was said that:

Fatalities, particularly multiple fatalities, have had a major impact upon public perception of the mining industry. Mines have been forced to close. Parliamentary action has provoked significant changes to mining practices and applicable occupational health and safety legislation ... The recent worldwide coverage of the Beaconsfield incident highlights the degree of public scrutiny, and accountability, the community can demand when a disaster occurs.¹

This report focuses on the Queensland Mines Inspectorate (QMI), the body responsible for mine safety regulation in Queensland. Some of the impetus for my investigation was criticism in recent years in the media and academic forums about Queensland mine safety.

The *Ombudsman Act 2001* gave the Ombudsman the additional function of making recommendations or providing information or other help to agencies for the improvement of their practices and procedures.² Therefore, the purpose of this own initiative investigation was twofold. The first was to identify any defective administrative practices by reviewing a sample of the QMI's operational files. The second was to recommend improvements to the QMI's practices and procedures.

Some of the deficiencies identified in the investigation are similar to those described in our recent publication *Tips and Traps for Regulators*, which was prepared as a resource for public sector regulators, based on our findings over several years in investigating other regulators.

My investigation indicates that decisions about the appropriate compliance actions the QMI should take in particular situations often involve complex considerations. A decision to suspend operations at a mine is not one to be taken lightly because of the impact on contractual obligations and, perhaps, even the operator's financial viability. However, sometimes this may be the only appropriate response to a safety concern.

Of course, choosing the appropriate compliance option is a challenge not only for QMI but for mine safety regulators worldwide.

¹ Verra, Tate, Dryden, 2006. *What happens when there is a mining fatality in Queensland*, pp. 3-4

² Section 12(c) of the *Ombudsman Act 2001*

The recommendations in this report are intended to ensure that the QMI's compliance activity is supported by robust administrative framework.

While all industries and professions are unique to some degree, there is much to be learned from the experiences of others. During this investigation, I was particularly impressed with developments in aviation safety and believe there are valuable lessons for the QMI in the current systems and practices of Australia's aviation safety regulators. I refer to these in this report, as well as to lessons from other industries.

Finally, I would like to acknowledge the very positive and cooperative manner in which the Director-General of the Department of Mines and Energy (DME) and all of his officers approached this investigation.

A handwritten signature in black ink, appearing to read 'D Bevan', with a stylized flourish at the end.

David Bevan
Queensland Ombudsman

Table of Contents

Abbreviations and Dictionary	viii
Executive Summary	x
<i>Background</i>	<i>x</i>
<i>Role of Ombudsman</i>	<i>x</i>
<i>Public report</i>	<i>xi</i>
<i>Principal objects of the investigation</i>	<i>xi</i>
<i>Investigative process</i>	<i>xi</i>
<i>Outcomes of the investigation</i>	<i>xii</i>
<i>Opinions</i>	<i>xiii</i>
<i>Recommendations</i>	<i>xv</i>
Chapter 1: Investigation of the Queensland Mines Inspectorate	1
Chapter 2: Mining in Queensland	5
Chapter 3: The mine safety regulator	16
Chapter 4: The inspectors	21
Chapter 5: Safety statistics	25
Chapter 6: Deaths and serious injuries	31
Chapter 7: Routine inspections and audits	53
Chapter 8: Incident reporting	66
Chapter 9: Record keeping and reporting	71
Chapter 10: Prosecutions	88
Chapter 11: Engagement of the many, prosecution of the few	108
Chapter 12: Adding to the regulatory tool kit	117
Chapter 13: Regulatory capture	123
Chapter 14: The 2005 review of the QMI	142
Chapter 15: Directive 13/06	144
Appendix 1: Structure of the QMI	146
Appendix 2: Example QMI mine record entry	147
Appendix 3: QMI investigation process flowchart	149
Appendix 4: Example QMI safety alert to industry	150
Appendix 5: Investigative elements of the Coal Act and the Mining and Quarrying Act	152
Bibliography	154
Cases	156

Abbreviations and Dictionary

ATSB	Australian Transport Safety Bureau
AWU	Australian Workers Union
CASA	Civil Aviation Safety Authority
CFMEU	Construction, Forestry, Mining and Energy Union
Coal Act	<i>Coal Mining Safety and Health Act 1999</i>
Coroner	The State Coroner
Department	The Department of Mines and Energy, unless otherwise indicated
Director-General or DG	The Director-General of the Department of Mines and Energy, Mr Dan Hunt
DME	Department of Mines and Energy
ICAM	Incident Cause Analysis Method
LTIFR	lost time injury frequency rate
Mining and Quarrying Act	<i>Mining and Quarrying Safety and Health Act 1999</i>
Minister	The Minister for Mines and Energy (currently the Honourable Geoff Wilson MP)
MRE	Mine record entry
MSHA	Mine Safety and Health Administration (USA)
NOPSA	National Offshore Petroleum Safety Authority
OHS	Occupational Health and Safety
Ombudsman Act	<i>Ombudsman Act 2001</i>
ORR	The UK Office of Rail Regulation
QMI	Queensland Mines Inspectorate, an administrative unit within the Department of Mines and Energy

RIPS	Risk-based Inspection Performance and Scheduling Database
Serious injury	An injury which has significant consequences for the health, wellbeing and employment potential of an injured person
SIMTARS	Safety in Mines Testing and Research Station
Workplace Electrocution Project Report	A report in June 2005 on my Office's investigations of the responses of government agencies to a series of fatal electrical incidents, and on Queensland's electrical safety framework

Note 1: In this report I refer to coal mining and metalliferous mining. The term metalliferous mining is understood throughout the industry as essentially covering all forms of mining (including quarrying) other than coal mining.

Executive summary

Background

Under the *Ombudsman Act 2001* (Ombudsman Act), I have a dual role to investigate the administrative actions of Queensland public sector agencies and to assist those agencies to improve their decision-making and administrative practice. As part of my administrative improvement role, I have undertaken a series of own initiative investigations into the compliance practices of government regulators. My investigation of the Queensland Mines Inspectorate (QMI) within the Department of Mines and Energy (DME) is the latest such investigation.

While I had not received any complaints about the QMI, media and academic sources in Queensland and elsewhere have alleged in recent years that the QMI may not be adequately fulfilling its compliance roles under the *Coal Mining Safety and Health Act 1999* (Coal Act) and the *Mining and Quarrying Safety and Health Act 1999* (Mining and Quarrying Act), and that mine safety standards may be falling as a result.

I commenced an investigation on my own initiative³ into these matters. My investigation was conducted informally⁴ without exercising my coercive powers.⁵

Role of Ombudsman

In investigating the administrative actions of public sector agencies, the Ombudsman must consider whether those actions are (among other things):

- unlawful, unreasonable or unjust;
- taken on irrelevant grounds or having regard to irrelevant considerations;
- based wholly or partly on a mistake of law or fact; or
- wrong.⁶

The Ombudsman is empowered to make recommendations to the principal officer of an agency that action be taken to rectify the effect of maladministration or to improve administrative practice within that agency. The DME, as a Queensland Government department, is an 'agency' as defined in the Ombudsman Act.⁷ The QMI is an administrative unit of the DME.

³ Ombudsman Act, s.12(a)(iii)

⁴ Ombudsman Act, s.24(a)

⁵ Ombudsman Act, Part 4

⁶ Ombudsman Act, s.49(2)

⁷ Ombudsman Act, s.8(1)(a)

Public report

The Ombudsman Act provides that I may present a report to the Speaker for tabling in the Assembly, as I consider appropriate, on a matter arising from the performance of my functions. I have decided to report to Parliament on my investigation for the following reasons:

- mine safety is a matter of public interest;
- there has been criticism of the QMI in recent years in the media and from academics with expertise in mine safety;
- publication of this report will assist in informing the debate about the most effective means of improving regulatory practice in mine safety; and
- lessons from this report may be of benefit to other government regulators.

Principal objects of the investigation

The principal objects of the investigation were to:

- identify relevant practices and procedures;
- determine the extent to which QMI officers are complying with the practices and procedures;
- determine whether the practices and procedures are adequate;
- identify and recommend improvements to the practices and procedures; and
- if applicable, formulate proposals to amend legislation to enhance mine safety regulation.

Investigative process

My investigation was undertaken informally under s.24(a) of the Ombudsman Act, without the need to invoke my coercive powers.⁸ Staff of QMI (and DME more broadly) provided all information requested by my investigators and cooperated fully with the investigation.

During the investigation, my investigators recorded interviews with a number of senior QMI staff, and also held informal discussions with other persons, including representatives of unions, universities, industry associations and mine workers. Research undertaken for this investigation included a broad survey of literature on the topic of mine safety regulation, and regulatory best practice internationally.

My investigators conducted an audit of a sample of 35 of QMI's complaint and investigation files held in the Townsville, Rockhampton and Brisbane offices and also accompanied QMI inspectors on routine inspections of mine sites in north Queensland.

On 18 March 2008, I provided the Director-General of DME with a proposed report on my investigation. On 16 April 2008, I met with the Director-General, the Executive Director, Safety and Health and the Director, Legal Services to discuss the DME's response to my proposed report, and on 29 April 2008 I received a formal response from the Director-General.

⁸ Under part 4 of the Ombudsman Act

This process ensured that I complied with my statutory obligation to give the Director-General the opportunity to comment on the subject matter of the investigation.⁹

The Director-General advised me that he accepted 37 of my 43 recommendations and had reservations about the remainder.

I have extracted (or where necessary, summarised) the Director-General's response to my proposed report immediately following the relevant recommendations under the heading 'DME response'.

As provided by s.26(2) of the Ombudsman Act, the Minister for Mines and Energy, the Honourable Geoff Wilson MP, requested that I consult with him about the investigation. Accordingly, I met with the Minister on 8 May 2008. The Director-General was also present. At the meeting, the Minister indicated his general support for the investigation and the report and sought clarification of some of the proposed recommendations. I did not make any changes to the opinions and recommendations in the report as a result of this meeting, nor did the Minister ask me to do so.

Outcomes of the investigation

As a result of my investigation, I have concluded that, generally speaking, the administrative actions of DME relating to its compliance activities are reasonable, in accordance with the relevant legislation, and in accordance with DME's policies and procedures. However, I also concluded that there are deficiencies in certain aspects of DME's record keeping process. These are:

- a failure to record much of its informal compliance activity; and
- an inconsistency in the use, format and terminology of mine record entries.

I also concluded that much of the public criticism of the QMI stemmed from a perception that the Inspectorate has been 'captured' (that is, inappropriately influenced) by the mining industry.

I found that, while the evidence I obtained did not substantiate the criticism, the perception of 'capture' was not unreasonable having regard to the QMI's location within the DME, the QMI's reporting structure and its failure to record and publish details of much of its informal compliance activity.

I therefore made several recommendations for action to address this perception.

⁹ Ombudsman Act, s.26(3)

Opinions

I formed the following opinions:¹⁰

Opinion 1

The guidance provided by the QMI to its staff in relation to investigating deaths and serious injuries is reasonable and appropriate.

Opinion 2

The general standard of investigations and investigation reports by QMI inspectors meets their obligations under the Coal Act and the Mining and Quarrying Act.

Opinion 3

QMI's method of conducting investigations into mine-related deaths and serious injuries is reasonable and appropriate, and is in line with the objects of the Coal Act and the Mining and Quarrying Act.

Opinion 4

My investigation did not indicate that unreasonable delays are occurring in the production of investigation reports.

Opinion 5

While the QMI's inspectors frequently advise operators that mine inspections are to take place, the evidence does not support the opinion that this is being done to favour particular operators or that it is reducing the effectiveness of the inspections program.

Opinion 6

The QMI's failure to record much of its informal compliance activity constitutes unreasonable administrative action within the meaning of s.49(2)(b) of the Ombudsman Act.

¹⁰ For the purposes of part 6, division 1 of the Ombudsman Act

Opinion 7

The extent of inconsistency in the use, format and terminology of mine record entries constitutes unreasonable administrative action within the meaning of s.49(2)(b) of the Ombudsman Act.

Opinion 8

The low level of prosecution activity by the QMI for breaches of the Coal Act and the Mining and Quarrying Act since the Acts commenced in 2001 does not, in itself, provide sufficient evidence of unreasonable administrative action within the meaning of the Ombudsman Act.

Opinion 9

My investigation did not establish that the QMI is inappropriately influenced by the mining industry in the performance of its functions.

Opinion 10

There is a reasonable perception that the QMI is subject to inappropriate influence from the mining industry and from officers in the DME responsible for promoting and supporting mining in Queensland. The main reasons for the perception are:

- its compliance practices, especially the preference for informal compliance options, which are not recorded in a way that can be publicly reported on;
- regional factors, leading to the development of social relationships and reliance on mine operators' hospitality; and
- staffing issues, including a high degree of mobility between the QMI and the mining industry.

Opinion 11

The QMI's practice of not recording and reporting on a significant part of its informal compliance activity means that it has a limited capacity to defend itself from allegations that it is too close to the mining industry and is not effectively regulating the industry.

Recommendations

I formed the following recommendations:¹¹

Recommendation 1

That the QMI and WorkCover establish a memorandum of understanding, or similar arrangement, to enable QMI to obtain from WorkCover de-identified reports of mine-related injuries.

Recommendation 2

That a proposal be prepared for the Minister that the Coal Act and the Mining and Quarrying Act be amended to require the QMI to investigate, as soon as practicable, any incident at a mine resulting in serious injury to a person where there is a reasonable possibility that the injury will lead to the person's death.

Recommendation 3

That the QMI develop and implement a policy whereby it takes primary responsibility for the investigation of:

- incidents at mines resulting in serious injury; and
- high potential incidents.

Recommendation 4

That the QMI provide guidance to inspectors on the application of the policy referred to in recommendation 3.

Recommendation 5

That where the QMI investigates an incident at a mine resulting in death or serious injury or a high potential incident, the Investigation Coordinator for the region or another appropriately qualified person (for example, a legal officer) participate in the investigation (at least initially) and report to the Executive Director and the relevant Chief Inspector of Mines on:

- whether the investigation is likely to result in prosecution action; or
- if it is too early to make that assessment, the action that needs to be taken before such an assessment can be made.

¹¹ Under s.50 of the Ombudsman Act

Recommendation 6

That the QMI implement a procedure whereby, if an investigation has continued for a specified period (say, six months) and an assessment has still not been made about whether it will be likely to lead to prosecution action, the matter is 'fast-tracked' to ensure that the period in which a prosecution may commence does not expire.

Recommendation 7

That, during the current accreditation period, the QMI review the content of relevant units of competency in its Diploma and Advanced Diploma courses, in light of the comments in this report about the need, in certain instances, to provide reports on investigations, or on the outcomes of investigations, to non-technical audiences.

Recommendation 8

That a proposal be prepared for the Minister that the Coal Act and the Mining and Quarrying Act be amended to authorise the QMI to publish the following information (except when to do so may prejudice potential prosecution action):

- its investigation reports into serious incidents in mines; and
- such details of its other compliance activities (including the issuing of directives to operators) as it considers appropriate for promoting safety in mines.

Recommendation 9

That the QMI standardise its risk-based inspection prioritisation system.

Recommendation 10

That the QMI significantly expand its use of team-based auditing activities with priority to be given to higher-risk operations, whether through the *SafeGuard* audit program, or other means.

Recommendation 11

That the QMI provide guidelines to its inspectors on the types of situations in which it is appropriate or inappropriate to warn mine operators of proposed site inspections.

Recommendation 12

That the QMI publish guidelines on how inspectors are to conduct themselves on visits to sites, with particular reference to the extent of their social interaction with staff of remote mining operations (whether at the mine or elsewhere).

Recommendation 13

That the QMI give greater emphasis to auditing the standard of the health and safety systems of contractors providing services to mine operators, with particular regard to how well those systems are being integrated into those of mine operators.

Recommendation 14

That the QMI publish a policy providing guidance to its inspectors, the industry and other stakeholders on its approach to its inspectors providing advice to mine operators and the limits of such advice.

Recommendation 15

That the DME take steps to publicise the existence of its system of confidential complaint and incident reporting and promote its use, and publish information on how information received via the system will be handled.

Recommendation 16

That the DME report publicly on complaints it receives about mine safety, including the number and type, how they were received and the broad outcomes.

Recommendation 17

That the DME proceed with proposed amendments to the Coal Act and the Mining and Quarrying Act to make it an offence for a person to cause, or attempt to cause, detriment to another person because anybody has provided, may provide or is believed to have provided information to the QMI, another government agency, or the mine operator itself about a mine safety concern.

Recommendation 18

That the commission of any offence of a kind described in recommendation 17 be recorded by the QMI on its database as a safety risk factor for the relevant mining operation.

Recommendation 19

That the QMI develop a policy providing guidance to its inspectors on the making and use of mine entry records including:

- the types of compliance actions to be recorded; and
- the format and terminology to be used in such records.

Recommendation 20

That the QMI develop, and require inspectors to use, standard terminology for all available compliance actions.

Recommendation 21

That, as part of its induction for all new inspectors, QMI ensure staff are trained in the appropriate use of mine record entries.

Recommendation 22

That the QMI upgrade its Lotus Notes database to enable more accurate and standardised recording of requests for action below the level of directives.

Recommendation 23

That the DME report publicly on the number and types of directives, substandard condition or practice notices, and other requests for action issued by its inspectors.

Recommendation 24

That the DME require inspectors to specify a due date for implementation of each request for action the subject of a mine record entry.

Recommendation 25

That when an inspector specifies a due date for implementation of a directive or request for action, the inspector consider whether the level of risk is acceptable during the specified implementation periods.

Recommendation 26

That the DME implement a policy to the effect that, where an inspector makes a request for action to an operator to address a safety risk that could have been addressed by way of a directive, the inspector provide reasons in the mine record entry for not issuing a directive.

Recommendation 27

That, for the purpose of developing the policies I have recommended, the QMI review a sample of mine record entries (including some relating to directives) and incident investigations from all three regions and all sectors of the industry, and analyse:

- the nature, circumstances and appropriateness of the directives, requests for action and advice given;
- whether any request for action or advice should have been the subject of a directive;
- the clarity and practicability of each directive, request for action or advice; and
- whether due dates for compliance were specified and followed up.

Recommendation 28

That mine record entries produced by QMI inspectors be randomly and regularly audited by head office to identify whether:

- they are being made and recorded appropriately;
- directives were given wherever appropriate;
- due dates for compliance were specified and followed up; and
- risk is being adequately addressed in mine record entries.

Recommendation 29

That a proposal be developed for the Minister to consider amendments to the Coal Act and the Mining and Quarrying Act to authorise the Executive Director, Safety and Health, to commence prosecutions under those Acts.

Recommendation 30

That until the amendments recommended in recommendation 29 are made and commence, the Director-General of DME delegate the authority to commence prosecution action under the Coal Act and the Mining and Quarrying Act to the Executive Director, Safety and Health.

Recommendation 31

That if it is proposed to continue using review committees to advise on possible prosecution action, DME's Compliance Policy be amended to ensure no member of the Committee, whether an officer of the public sector or not, is involved in promoting the mining industry in Queensland.

Recommendation 32

That the QMI amend its Compliance Policy to provide that, when determining how to respond to an unacceptable level of risk at a mine, it will have regard to the following priorities:

1. Prevention of immediate harm at the site;
2. Prevention of similar incidents occurring at that site or elsewhere in the industry; and
3. The taking of prosecution action in respect of serious or repeated safety breaches.

Recommendation 33

That the QMI refine its Compliance Policy to provide greater guidance to officers on the appropriate compliance options to use to address safety concerns in the various sectors of the mining industry (such as small quarries).

Recommendation 34

That the QMI revise its Compliance Policy to incorporate, in an appropriately modified form, the principles set out in the Macrory Report.

Recommendation 35

That the DME undertake research (preferably in collaboration with the mining industry, unions, universities, other inspectorates and other relevant bodies) on the effectiveness of the various types of compliance action in improving mine safety.

Recommendation 36

That the DME use the results of this research in developing a new Compliance Policy and regulatory strategy.

Recommendation 37

That the DME develop a proposal for the Minister's consideration to amend the Coal Act and the Mining and Quarrying Act, and other relevant Acts, to provide for a wider range of compliance tools.

Recommendation 38

That the QMI conduct an audit to identify areas of its operational activity susceptible to inappropriate influence from the mining industry, based on the indicators discussed in this chapter, and develop strategies to manage the associated risks.

Recommendation 39

That the position of Commissioner for Mine Safety be established by legislation to advise the Minister on mine safety matters, chair the Coal Mining Safety and Health Advisory Council and the Mining Safety and Health Advisory Council and to report to Parliament on the performance of the QMI.

Recommendation 40

That the Executive Director, Safety and Health, be empowered to report directly to the Minister on mine safety issues.

Recommendation 41

That a proposal be developed for the Minister to give legislative recognition to the existence and role of the QMI and to recognise its operational independence.

Recommendation 42

That the DME estimate the cost of implementing the recommendations I have made in this report and prepare a submission for the Minister's consideration for increased funding for the QMI to enable it to discharge the additional responsibilities I have recommended.

Recommendation 43

That the DME increase the public visibility of its general complaints management system.

Recommendation 44

That the DME appoint an officer within the department for the coordination of its complaint handling function.

Chapter 1: Investigation of the Queensland Mines Inspectorate

1.1 Background

Over the past few years, I have conducted a series of investigations of public sector regulatory agencies. In doing so, I sometimes use my power under the *Ombudsman Act 2001* to investigate administrative actions of agencies on my own initiative (that is, without having first received a complaint).¹² I am also authorised to consider the administrative practices and procedures of agencies and make recommendations or provide information or other help to an agency for the improvement of its practices and procedures.¹³

In May 2007, I decided to conduct an investigation on my own initiative of the complaint handling, inspection and investigation functions of the Queensland Mines Inspectorate (QMI) within the Department of Mines and Energy (DME) for several reasons:

- the fact that a significant proportion of workplace deaths and injuries occurs in the mining industry;
- the fact that the QMI regulates one of the largest and most important industries in the state's economy; and
- criticisms of the QMI's performance by the media and by academic experts on mine safety.

1.2 My investigation

On 17 May 2007, I informed the Director-General of DME of my intention to investigate the:

- QMI's investigative process;
- actions taken in relation to breaches of mine safety legislation;
- quality of records made about those actions;
- policies and practices in relation to prosecution or other action for breaches of the mine safety legislation;
- training of inspectors;
- adequacy of proactive compliance programs and outcomes;
- systems used for the collection and storage of, and access to, compliance data; and
- availability of compliance data to the public.

The principal objects of the investigation were to:

- identify relevant practices and procedures;
- determine the extent to which QMI officers are complying with the practices and procedures;
- determine whether the practices and procedures are adequate;
- identify and recommend improvements to the practices and procedures; and
- if applicable, formulate proposals to amend legislation to enhance mine safety regulation.

¹² Ombudsman Act, s.12(a)(iii)

¹³ Ombudsman Act, s.12(c)

This investigation was conducted at a broad systems level and did not focus on individual complaints or incidents. The case studies used in the report to highlight safety issues are drawn from various publicly available sources such as reports into mining and other disasters and incidents (including coronial reports).

My investigation was conducted informally under s.24(a) of the Ombudsman Act, without the need to invoke my coercive powers.¹⁴ Staff of the DME cooperated fully with the investigation at all times. I am grateful for the extensive assistance provided to this investigation by DME staff.

Prior to the commencement of the investigation, I held a discussion with the Director-General of DME, Mr Dan Hunt. During the investigation, my investigators conducted interviews with a number of senior departmental officers. The interviews began in the week commencing 10 September 2007, and included the following officers:

- Mr Stewart Bell, Executive Director, Safety and Health (Brisbane);
- Mr Roger Billingham, Chief Inspector of Mines (Metalliferous) (Brisbane);
- Mr Brian Lyne, Chief Inspector of Mines (Coal) (Brisbane);¹⁵
- Mr Rob O'Sullivan, Manager Safety and Health (Townsville); and
- Mr Mike Walker, District Inspector of Mines (Rockhampton).

My investigators had informal discussions with other staff, including:

- Ms Tracey Jackson, Director Legal Services (Brisbane);
- Mr Phil Goode, Regional Inspector of Mines (Brisbane);
- Mr Hermann Fasching, District Inspector of Mines (Mount Isa); and
- Ms Julie Dryden, Inspector of Mines (Townsville).

My investigators also held discussions with the following people:

- Professor Neil Gunningham, Australian National University, Canberra;
- Mr Hag Harrison, AWU Organiser, Mount Isa;
- Mr Greg Betts, District President, CFMEU, Brisbane;
- Mr Greg Dalliston, Industry Safety and Health Representative, CFMEU, Brisbane;
- Mr John Tate, Executive Legal Consultant, Department of Justice and Attorney-General (who has appeared as Counsel assisting the Coroner in a number of mine-related deaths);
- Professor Jim Joy, Director, Minerals Industry Safety and Health Centre, Brisbane;
- Associate Professor David Cliff, Minerals Industry Safety and Health Centre, Brisbane;
- Mr Grant Cook, Manager Safety and Health, Queensland Resources Council, Brisbane; and
- Mr Jack Camp, Commissioner for Electrical Safety.

My investigators conducted an audit of a sample of QMI's files relating to complaints, inspections, audits and investigations of mine sites. This audit was conducted at QMI offices in Townsville, Rockhampton and Woolloongabba, Brisbane.

During November 2007, my investigators visited two mines in north Queensland accompanied by QMI inspectors. These were the Xstrata/MIM George Fisher underground zinc mine near Mount Isa, and the Resolute/Carpentaria Gold underground gold mine at Mount Wright (between Townsville and Charters Towers).

¹⁴ Under part 4 of the Ombudsman Act

¹⁵ Mr Lyne retired from this position in October 2007.

My investigators' visits included discussions with the QMI inspectors on investigation procedure, and discussions with mine staff on their perceptions of the QMI. My investigators then accompanied the QMI inspectors as they conducted routine inspections of the mines' operations above and below ground.

My investigators also conducted a broad review of literature on mine safety and general regulatory practice.

1.3 Assumptions made in this report

Mine safety regulation is a complex, and sometimes controversial, area of regulatory activity. Academics, inspectors, union officials, workers and mine operators may have very different views on how mine safety should be regulated.

In particular, there is considerable debate, both at an academic level and in the industry, about the following issues:

- whether the Queensland mine safety legislation's approach to safety (built on the concept of 'acceptable level of risk') is workable and appropriate;
- whether an approach based on what is known as a 'safety case regime'¹⁶ would be more effective;
- whether there should be greater self-regulation by industry on the basis that, given the incentive for larger operators to ensure safe practices simply to guarantee continuing production, there is little need for a government inspection regime of their operations;
- the relevance and accuracy of certain statistical indicators of mine safety; and
- the role of the various parties (unions, operators and the regulator) in mine safety regulation.

These kinds of issues are extensively analysed and debated elsewhere. There is limited scope for discussion of these matters in this report and, in any event, most of them are outside the jurisdiction, or expertise, of my Office. Therefore, for the purposes of this report, I have assumed that:

- the concept of 'acceptable level of risk' is an appropriate one on which to base mine safety legislation (I note this is also the basis used in the *Workplace Health and Safety Act 1995*¹⁷ for imposing obligations); and
- having a public sector inspectorate is an appropriate way to manage mine safety.

As was the case in the Workplace Electrocution Project, I have used the word 'incident' wherever possible in this report, rather than 'accident'.¹⁸ This is because the word 'accident' is defined (in the Macquarie dictionary) as 'anything that happens unexpectedly, without design or by chance'.

¹⁶ A regime whereby an operator's safety system must be approved by the government regulator

¹⁷ Section 27A (Managing Exposure to Risks)

¹⁸ See discussion in Queensland Ombudsman, *Workplace Electrocution Project*, p.10

The (then) Department of Industrial Relations Investigation Skills Training Manual included the following paragraph with which I fully agree:

The continued use of the word 'accident' promotes the belief that these events have occurred outside of human influence or control. In fact, they are predictable results of specific actions or non-actions. It is possible to clearly identify their causes and to take the appropriate action to prevent or minimise them. To use the word 'accident' allows the idea that the resulting injuries are an unexpected part of life. This totally undermines the goals and aims of [the Inspectorate] as well as the expectations that the community has of us as inspectors. It is encouraged that the use of another appropriate term, such as 'incident', should be used instead.¹⁹

1.4 Relationship to other reports

During the past few years, there have been a number of reports in the Queensland and national media relating to mine safety in the state. For example, just prior to my completion of this investigation, the *Sunday Mail* produced a full-page series of articles on safety concerns in the Queensland mining industry.²⁰

The general tenor of these reports has been that there is significant concern about safety levels in various mining industry sectors, and that the QMI is generally experiencing difficulty in fully carrying out its safety compliance functions given the rapid expansion of the mining industry caused by the resources boom.

I am not in a position to make any authoritative statement on the state of mine safety in Queensland from a technical perspective. That debate is continuing in the media, and in academic circles.²¹ I refer readers interested in that aspect of the debate to those forums for further consideration of the mine safety issue.

Instead, I have approached this investigation from the perspective of generic regulatory best practice. That is, I have sought to determine whether the manner in which the QMI regulates mine safety, and enforces the relevant legislation, is in keeping with internationally accepted best practice and the requirements of Queensland's administrative law framework.

It is my intention that this report be seen as an addition to the public debate on mine safety regulation in Queensland and that it be read alongside other recent publications and reports on the subject, including the 2007 report by Professors Parker and Cliff of the University of Queensland.²² That report provides a comprehensive assessment of the adequacy and accuracy of the collection and reporting of mine safety statistics in Queensland, and the role of the QMI in this process.

¹⁹ *Workplace Electrocution Project*, p.10

²⁰ See *Sunday Mail*, 23 December 2007, p.21

²¹ For a representative example of academic commentary on mine safety in Queensland (and Australia more broadly), see Gunningham, *Mine Safety – Law Regulation Policy*, 2007

²² Parker and Cliff, *A Review of the Queensland Mines and Quarries Annual Safety Performance and Health Report – Final Report*, 11 October 2007

Chapter 2: Mining in Queensland

2.1 Nature of the industry

The mining industry provides almost \$1.4 billion annually in royalties to the Queensland Government, with coal contributing the bulk of that amount (more than \$1 billion).²³ The DME's 2006-2007 Annual Report puts this into a practical context:

During [2006-2007], the Department of Mines and Energy received ... revenues of \$1.550 billion, with associated expenditure of \$478.629 million. The resulting excess of revenue over expenses of \$1.071 billion was transferred to consolidated revenue to help the government build schools and hospitals, put police on the beat and teachers in classrooms right across Queensland.²⁴

The overall economic contribution of mining to the state economy has been estimated to be in the order of \$2 billion annually.²⁵ According to the Queensland Government, coal exports alone represent around 30% of Queensland's total international export of goods by value.²⁶ As at March 2006, the state's mining industry directly employed at least 19,000 people, with potentially as many as 65,000 others employed in positions supported in some way by mining.²⁷ In some areas of the state, such as Mount Isa and Moranbah, mining is the central focus of the regional economy.

The DME stated in a publication in 2006:

The mining industry continues to be a major driver of Queensland's economic growth.²⁸

Without doubt, mining is of highly significant economic and social importance to Queensland, and funds many vital community and social services, as well as creating jobs.

A 2003 review of the Western Australia mine safety legislation described the nature of the mining industry in that state, in terms that are equally applicable to Queensland:

The mining environment, operations and culture are all significantly different from industry generally. Mines are often located in distant and sometimes remote geographic locations ... Notwithstanding air conditioning, the climate is often trying and much of the work is outdoors.

Mines themselves are often dusty, noisy and ... dirty places to work ... The work can ... be highly repetitive, sometimes physically demanding but not always mentally or intellectually challenging ... In most modern mines, shift arrangements mean that employees work extensive periods and many do not get regular or perhaps even adequate rest breaks ...

²³ DME Annual Report 2006-2007, p.2

²⁴ DME Annual Report 2006-2007, p.5

²⁵ Department of Natural Resources, Mines and Water, *Mining in Queensland – Facts: Mines Series M1*, March 2006

²⁶ Department of Mines and Energy – web page accessed on 11 October 2007 at <http://www.nrw.qld.gov.au/mines/coal/production.html>

²⁷ Department of Natural Resources, Mines and Water, *Mining in Queensland – Facts: Mines Series M1*, March 2006

²⁸ Department of Mines and Energy, *Queensland Mining and Petroleum Industries 2006*, p.30

In many instances most employees on mine sites are miners in name but in their particular jobs are drivers or tracked equipment operators, maintenance tradespersons and so on ... Similarly, as down stream processing activity increases, the nature of the mine changes and it becomes more difficult to distinguish where mining and other activities commence or end ...

Mine sites often have fly-in/fly-out arrangements with accommodation and messing associated with and attached to the workplace because of isolation. Employees can be separated from family and friends and any social involvement can be limited to activity at the particular site.

Mine support structures can be very limited and newcomers may well have difficulty adjusting and can find themselves isolated ...

Adjustment can be difficult where there is a strong existing culture ... The prevailing culture at some sites continues to adopt and promote the image of self-confident, tough and resolute miners; where it is manly to work and play hard; where to complain about the food is expected but to complain about an injury is to be a 'wimp'; and where double standards apply to risk taking. Output can take pre-eminence although a safety culture is promoted.²⁹

Mining is also an industry that presents unique, and sometimes extreme, risks:

Apart from the sheer size and magnitude of many mining operations and ... equipment, the sector is also a major consumer of hazardous chemicals and products such as fuels, explosives and chemical reagents both for the mining process and beneficiation³⁰ stages. Accidents associated with these in the past have caused both significant loss of life, disruption to operations and considerable and long-term destruction of the environment.

The layout of many mining operations is far from static and changes continuously. Operations, either as open-cuts, or underground mines or a combination of both have the scope to extend over large areas in often-inhospitable regions. All mines and operations are exposed to the danger of fire and explosions, with underground mines, particularly coal mines being extremely vulnerable and endangered by the effects of fires and explosions.

Variable geological conditions and the severity of the working environment have a fundamental bearing on the operation and influence much of the activities directly in terms of maintenance and administration of the mine.³¹

Other comments on the risks to health and safety in mining include:

Mining is subject to specific hazards that need particular measures to effectively identify and manage them. Moreover, as workers operate in a technologically heterogeneous, dynamic environment subject to daily and hourly decision making and changes, management of human factors is critical.

More recently additional challenges have arisen to effectively address safety and health risks in the industry, including the vertical and horizontal concentration of management, skills shortages, loss of experience related to turnover, and the ramp up in production due to increased demand from ... Asia. Addressing these will require continual adaptation of safety management systems.³²

²⁹ Laing, *Final Report – Review of the Mines Safety and Inspection Act 1994*, pp.15-17

³⁰ Beneficiation is the process whereby waste is removed from mined ore, separating out higher-grade, commercially useful ore.

³¹ Rasche, *Risk Analysis Methods – A Brief Review*, pp.2-3

³² Sarder, *Professionals in Mining: Putting Safety and Health First*, pp.1-2

2.2 One industry, several cultures

Queensland is vast and its geology varies enormously. Coal mines are found mainly in central Queensland and to a lesser extent in south-east Queensland. Large metalliferous mines occur throughout central and northern Queensland but are particularly concentrated in the north-west, around Mount Isa. Smaller quarries are found in all regions with particular concentrations in certain areas, such as the central Queensland gemfields or southern Queensland.

During our investigation, it quickly became clear that coal mining is managed very differently to other forms of mining. Time and again we were told '*coal is different*'. We were provided with extensive anecdotal evidence that, at virtually all levels, the coal and metalliferous mining sectors operate separately and according to markedly different cultures.

We also noted in our investigation that an enormous gap exists between the 'high end' producers (often multinational and sophisticated operators) and small producers (for example, some quarries) which might employ only a few people or even consist of one person working an isolated mining lease.

The structure of the mining industry in Queensland is described, in simple terms, in Table 1.

Table 1: Structure of the Queensland mining industry

Size ↓	Type →	Coal	Metalliferous
Large		<i>Virtually all</i>	<i>Numerous</i>
Medium		<i>Very few</i>	<i>Numerous</i>
Small		<i>None</i>	<i>Many (including small quarries)</i>

The following maps³³ provide a broad overview of the geographic scope of the state's mining industry.

³³ DME, *Queensland Mining and Petroleum Industry 2006*, Brisbane, 2007

Figure 1: Central Queensland Coal Mines

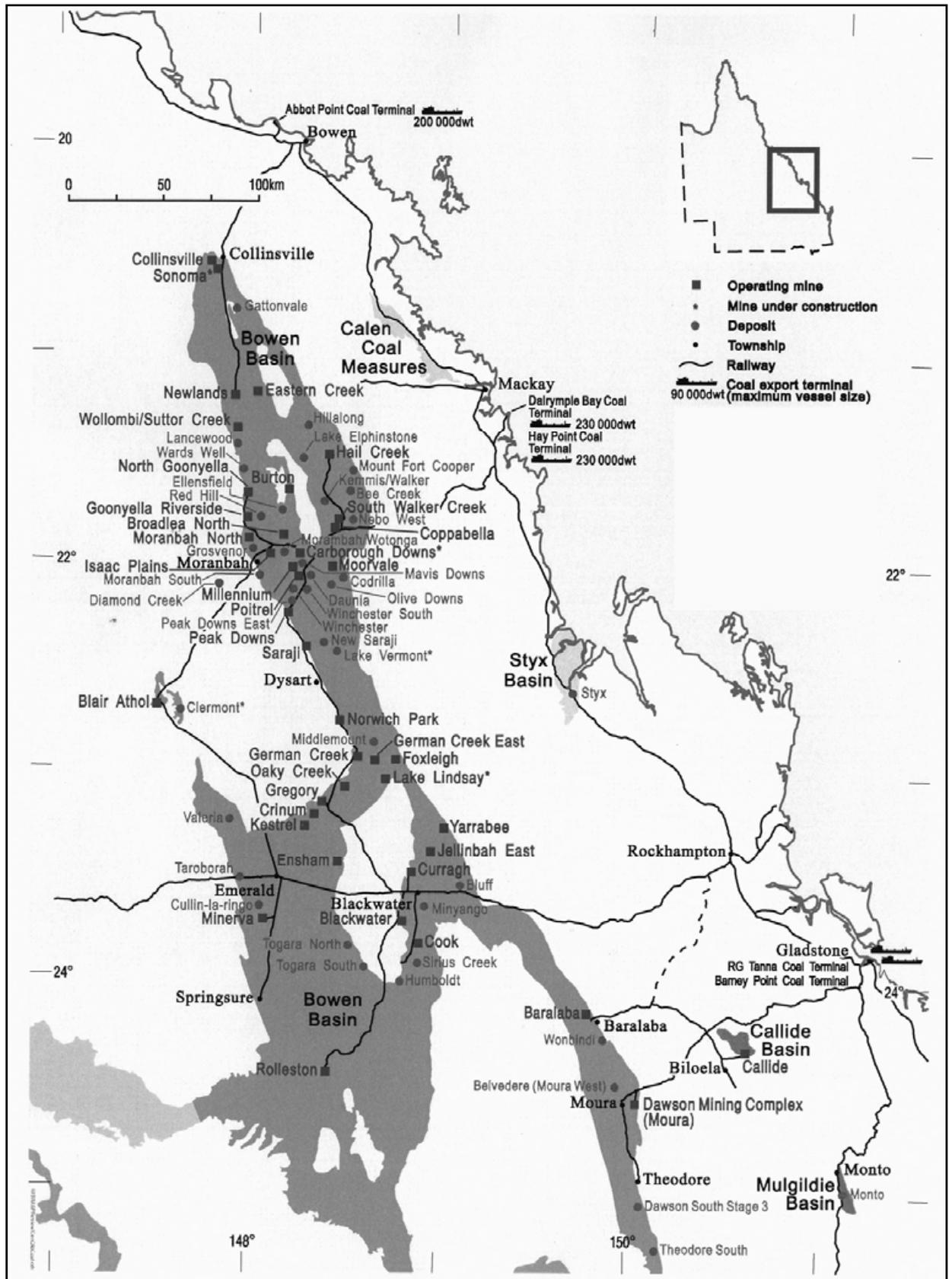


Figure 2: South East Queensland Coal Mines

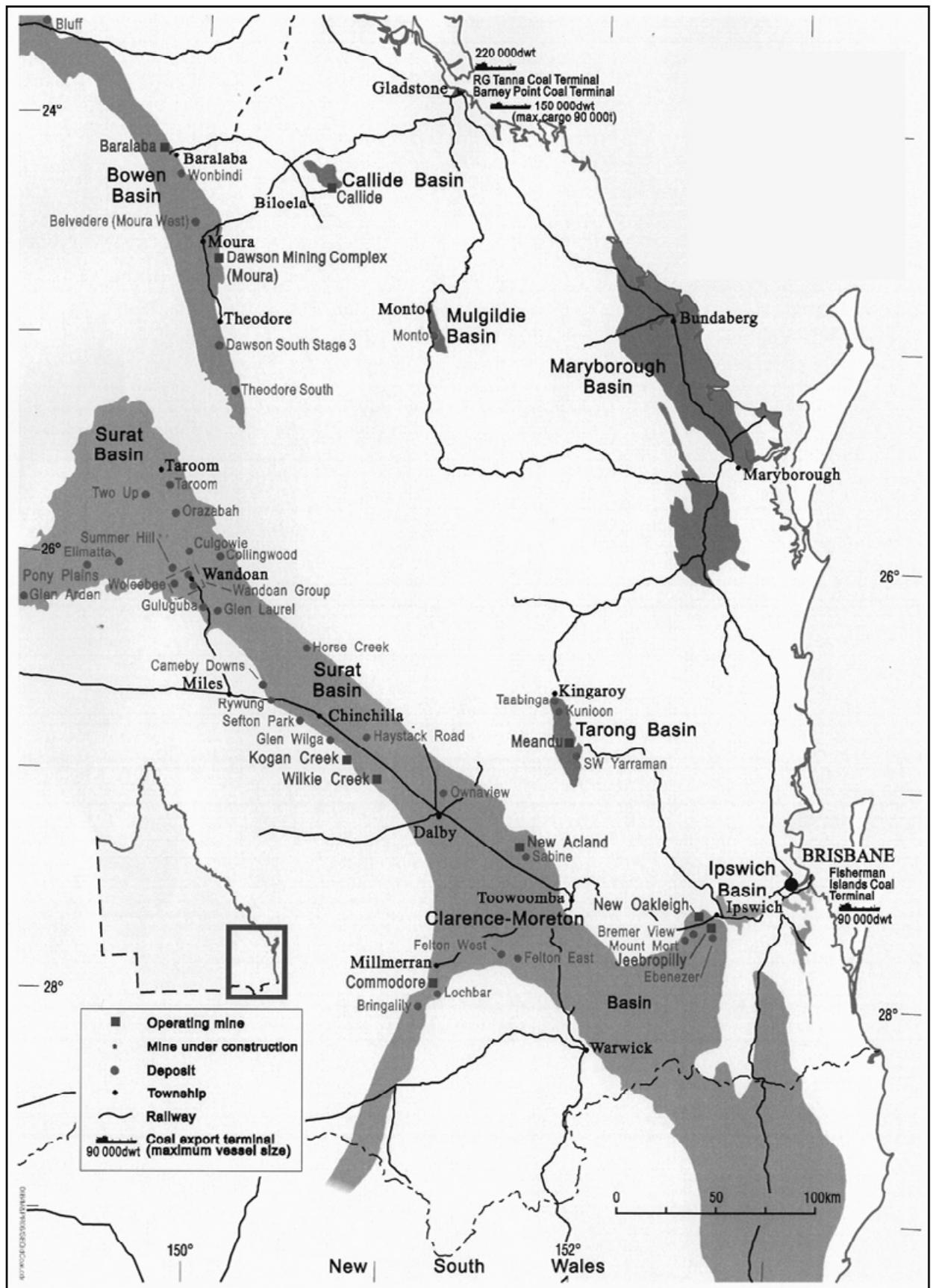
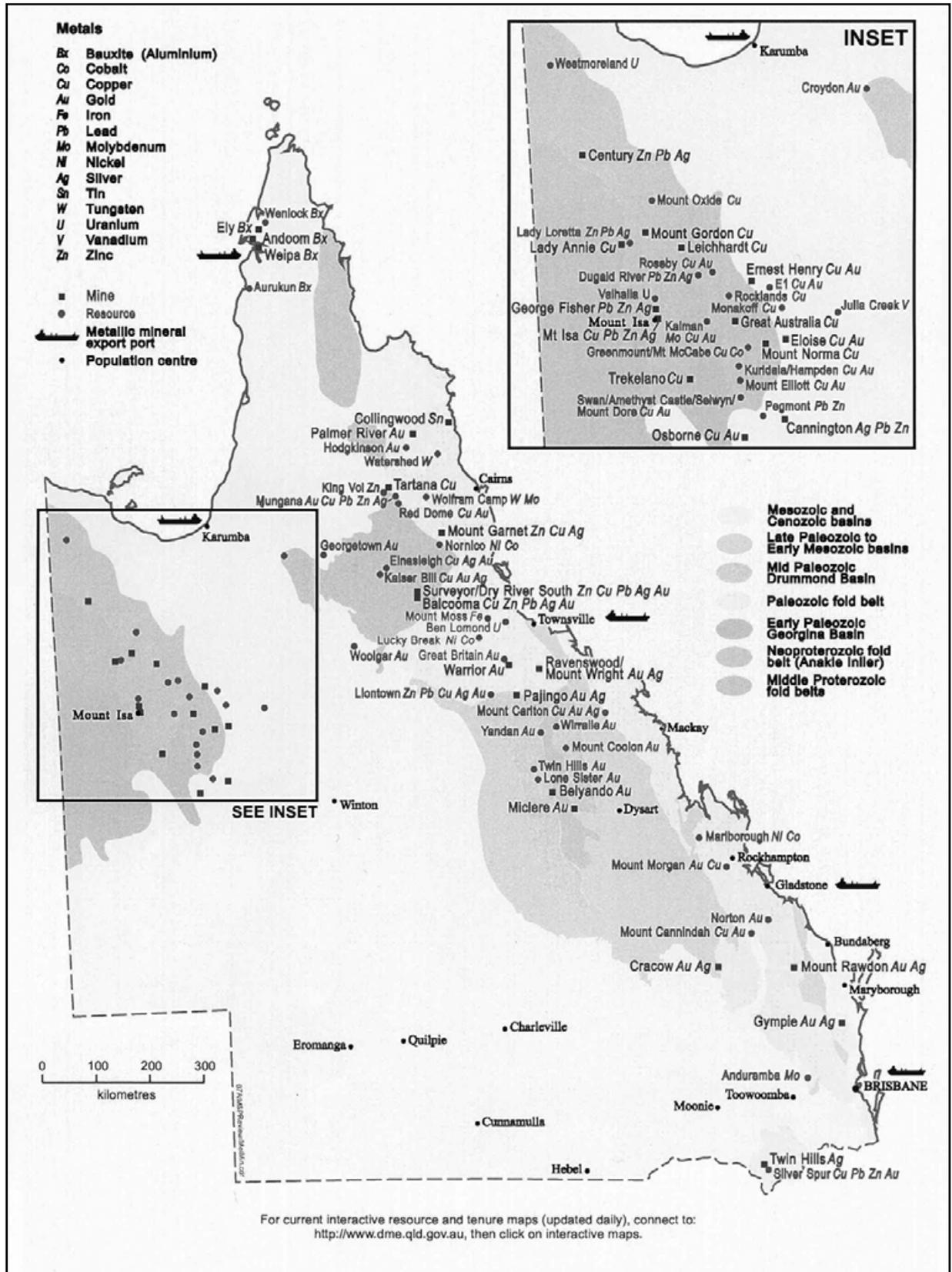


Figure 3: Queensland Metalliferous Mines



2.3 Regulation of mine safety

Safety in mines was one of the first areas of government workplace health and safety regulation, commencing in the United Kingdom with the introduction of the *Mines Act 1842* and the *Coal Mines Inspection Act 1850*. Mine safety regulation has also been in effect in Queensland since 1881 when the Inspectorate of Mines was first established.³⁴

Mine safety in Australia is a state-level responsibility, although there is a process underway for reaching national uniformity in mine safety standards.³⁵ While there is a general occupational health and safety system in Queensland³⁶ (administered by the Department of Employment and Industrial Relations), this does not apply to mining operations. This split is mirrored in Western Australia and, to a lesser extent, in New South Wales.

Mine safety in Queensland is regulated by two legislative regimes:

- the *Coal Mining Safety and Health Act 1999* (Coal Act) and its associated regulation; and
- the *Mining and Quarrying Safety and Health Act 1999* (Mining and Quarrying Act) and its associated regulation.³⁷

The Coal Act deals solely with coal mines, while the Mining and Quarrying Act covers all other forms of mining operations. Both regimes commenced on 16 March 2001. My investigation focuses, in the main, on the period since the new regimes commenced.

Penalties for breaches of the legislation can be as high as \$60,000 or two years' imprisonment for individuals, or \$300,000 for companies. Safety in relation to petroleum and gas operations, and explosives use, is regulated under different legislation but also administered by the DME. I did not examine these functions in this investigation.

A 'mine' is, broadly speaking, any place where mining operations are being carried out. A mine is usually located on a mining tenure, but the Acts can apply a range of safety obligations, even to operations being conducted illegally, outside mining tenures. Generally, the more rigorous requirements in relation to mine safety procedures may not apply to mine operations that employ ten people or fewer.³⁸

During the past century, there have been a number of mining disasters in Queensland:

- 1921 – Mount Mulligan colliery – 77 people killed;
- 1972 – Box Flat No.7 colliery – 18 people killed;
- 1975 – Kianga No.1 mine – 13 people killed;
- 1986 – Moura No.4 underground coal mine – 12 people killed; and
- 1994 – Moura No.2 underground coal mine – 11 people killed.³⁹

³⁴ *Mines Regulation Act 1881*

³⁵ This process is the National Mine Safety Framework – see

<http://www.industry.gov.au/minesafety>

³⁶ *Workplace Health and Safety Act 1995*

³⁷ See Appendix 5

³⁸ See Mining and Quarrying Act s.38(3)

³⁹ Information from Verra, Tate & Dryden, *What happens when there is a mining fatality in Queensland*, paper presented to the 2006 Queensland Mining Industry Safety and Health Conference, p.4

Acceptable level of risk

The most notable feature of the two current Acts is that, with limited exceptions, they do not prescribe specific safety measures or procedures that mine operators must implement. There is no 'checklist' of technical requirements set out in either Act that mines can comply with, then 'tick off'. That approach, labelled 'prescriptive regulation' by commentators,⁴⁰ is increasingly falling out of favour in many areas of health and safety regulation.

Instead, the Acts are based on the principle of 'acceptable level of risk'. The legislation assumes that risk cannot be entirely removed from mining activities, but that it can be managed to an 'acceptable level'. Put another way:

There is no zero risk and the basis of most duty of care regulation in this country is management of risk to an acceptable level. The concept of ALARP,⁴¹ risk managed to a level that is 'as low as reasonably practicable' is [one of] the early and key established principles of the [mining legislation].⁴²

Management of risk to an acceptable level is the responsibility of each individual mine operator, not the State Government.

Mine operators are not required to obtain specific approvals from the QMI to operate, nor to have their safety procedures approved before they commence operations (except in certain very high risk activities such as explosives use or sealing parts of coal mines).

However, if the mine operation is large enough (that is, employs more than ten people), it must have a safety and health management system in place. The DME, as the government regulator, conducts a range of investigations, audits and inspections to ensure that operations at mine sites do not exceed an 'acceptable level of risk'.

We were advised that the concept of 'acceptable level of risk' can lead to difficulties in mounting a prosecution case where the regulator believes the legislation has been breached. In a prescriptive regulatory setting, it may often be relatively clear what standard the operator is being held to – the question is purely one of finding evidence that the standard was not met.

For example, if a rule states that there must be three staff performing a certain task and there is evidence that only two were on duty at the relevant time, there is a *prima facie* breach.

The situation is often far more complex under the current system where the focus is more likely to be on ensuring risks are kept at a level considered by experts to be 'acceptable'. We were informed that, in many cases, experts can differ over the level to which risk in an activity can reasonably be reduced and that, in reality, a serious injury or death can still occur in a situation where mining experts agreed the risk was at an acceptable level. Conversely, a situation of unacceptable risk justifying prosecution or other compliance action can arise even in the absence of any deaths or injuries.

⁴⁰ See, for example, Gunningham, *Mine Safety – Law Regulation Policy*, p.64

⁴¹ As Low As Reasonably Practicable

⁴² Extract from a report of Professor Jim Joy prepared for Anglo Coal, quoted by McMurdo J in *CFMEU v Queensland* [2004] QSC 181 at para 31

Queensland's worst recent mining disaster occurred in 1994 at the Moura coal mine. 11 workers were killed when an explosion occurred in the mine. In a study of the disaster, Hopkins noted:

OHS legislation does not prohibit death and injury; it imposes a duty on employers (among others) to maintain a safe workplace as far as reasonably practicable. The point is that a workplace may be patently unsafe and an employer therefore liable to prosecution, even though no death or injury has occurred. The fact of death or injury is not strictly relevant. As legal authorities have said, 'the gravity of the consequences of an accident, such as damage or injury, does not, in itself, dictate the seriousness of the offence or the amount of penalty'.⁴³

The interpretation of the legislation therefore often relies on evidence based on professional judgment and experience. In similar circumstances, the UK rail safety authority (the Office of Rail Regulation – ORR) provides the following advice:

Deciding what is reasonably practicable to control risks involves the exercise of judgment. Where duty holders must control risks so far as is reasonably practicable, ORR will, when considering the protective measures taken by duty holders, take account of the degree of risk on the one hand, and on the other the sacrifice, whether in money, time or trouble, involved in the measures necessary to avert the risk. Unless it can be shown that there is gross disproportion between these factors and that the risk is insignificant in relation to the cost, the duty holder must take measures and incur costs to reduce the risk.

ORR will expect relevant good practice to be followed. Where relevant good practice in particular cases is not clearly established, health and safety law effectively requires duty holders to establish explicitly the significance of the risks to determine what action needs to be taken. Ultimately, the courts determine what is reasonably practicable in particular cases.

Some irreducible risks may be so serious that they cannot be permitted, irrespective of the consequences.⁴⁴

The issue of cost is significant, as Maxwell discussed in a report on occupational health and safety regulation in Victoria:

Cost has become the single most significant factor in decision-making – by dutyholders and by the Authority through its inspectors – about what ought to be done in a particular setting to remove or mitigate a hazard. Time and again, so I have been told, when an inspector identifies a contravention in a workplace, and indicates an intention to require its rectification, the dutyholder responds by saying something along the following lines –

'But I cannot afford to do that. We have never had an accident with that machine and you can't seriously be expecting me to spend money which we don't have to fix a non-existent problem'.⁴⁵

⁴³ Hopkins, *The Gretley Coal Disaster*, p.10

⁴⁴ Office of Rail Regulation, *ORR Health and Safety Enforcement Policy Statement*, pp. 5-6

⁴⁵ Maxwell, *Occupational Health and Safety Act Review*, p.121

In the 2004 Ritter Inquiry into mine safety in WA, the following comment was made:

A number of researchers argue that, at least in the long term, a safe work site is cost effective. This is, however, generally a long term, rather than a short term, outcome. Further, the idea that 'good safety is good business' is potentially flawed if, at least in the short term or at any particular period or moment, good safety is 'not good business'.⁴⁶

In his report on Victoria's occupational health and safety legislation, Maxwell comments:

Once an accident happens, however, the reluctance to spend money disappears. The future possibility has, all of a sudden, become a present reality. When a dutyholder is prosecuted in respect of OHS breaches associated with the accident, the relevant safety measure – which did not exist at the time – will almost invariably have been implemented by the time the matter comes on for trial.

Partly, no doubt, this is because the dutyholder wishes the court to know that the safety lesson has been learnt. But predominantly it is because the dutyholder's officers and managers are shocked and upset by what has occurred and are determined to remove any risk of a recurrence. With the reality of the risk having been demonstrated in the starkest possible way, by an injury or a death, no responsible manager would hesitate before saying: 'We must spend whatever is necessary to ensure that it never happens again'.

But compliance with the Act day-to-day does not – cannot – enjoy the certainty of hindsight. Judgments must be made in advance, based on predictions and forecasts. This has a number of obvious consequences ... there will always be scope for disagreement about the degree of risk, whether measured according to likelihood or according to severity of harm.⁴⁷

2.4 Statutory positions

A wide range of people have some level of responsibility for mine safety in practical terms. In summary, the major statutory responsibilities are:

- **DME (including the QMI)**
(regulatory oversight, inspections, directives, enforcement, prosecutions, etc)
- **District workers' representative (Industry Safety and Health Representative in coal mining)**
(appointed by the Minister to fulfil certain health and safety roles in the industry, including investigating complaints about mine safety)
- **Mine operator (usually the owners)**
(implementation of safety policies and practices)
- **Site Senior Executive (often the mine manager)**
(senior officer of mine responsible for that mine's operations – can conduct some investigations into serious incidents)
- **Site safety and health representative**
(an employee of a mine, selected by other employees to inspect and review safety matters, and investigate certain complaints about mine safety).

⁴⁶ Ritter, *Ministerial Inquiry*, p.59

⁴⁷ Maxwell, *Occupational Health and Safety Act Review*, p.122

Relevant unions (such as the CFMEU and AWU) play a role in this system, in that they have the right to nominate individuals for certain statutory roles. They are also an integral part of the consultation process, handle many mine safety complaints and conduct training, among other roles.

The Queensland Resources Council is the peak body representing the mining industry in the state and performs a range of roles in the mine safety framework. The Council is entitled to nominate individuals for certain statutory roles and is, like the unions, a major part of the consultation process on mine safety matters.

Chapter 3: The mine safety regulator

3.1 Structure of the QMI

*A mining inspectorate will be established with appropriate powers to monitor and audit industry performance, to detect and prevent unsafe practices and to hold accountable those who fail to fulfil their safety and health obligations.*⁴⁸

The QMI is an administrative unit of the DME. Prior to 2006, the QMI was located within the Department of Natural Resources and Mines (as it then was).

The QMI exercises functions under the Coal Act and the Mining and Quarrying Act. It is managed on a day-to-day basis by the Executive Director, Safety and Health, who has direct responsibility for:

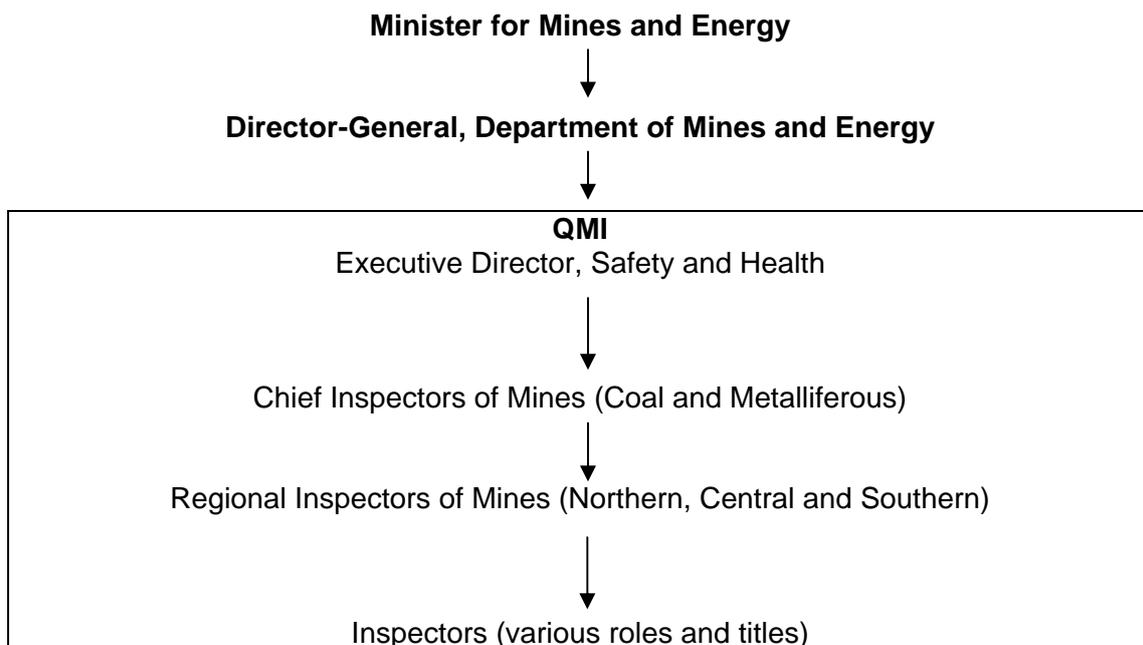
- the QMI;
- the Petroleum and Gas Inspectorate;
- the Explosives Inspectorate; and
- SIMTARS⁴⁹ (the Department's mine safety research unit).

The most senior staff of the QMI are located in the Brisbane CBD, with other staff being divided among three districts:

- Northern Region (based in Townsville, with offices in Mount Isa and Atherton);
- Central Region (based in Rockhampton, with an office in Mackay); and
- Southern Region (based at Woolloongabba in Brisbane).

An organisational chart for the QMI is provided at Appendix 1.

The hierarchy for mine safety regulation in Queensland is as follows:



⁴⁸ The Honourable Tony McGrady MP (former Minister for Mines and Energy), Second Reading of the Coal Mining Safety and Health Bill and Mining and Quarrying Safety and Health Bill, Hansard, 24 March 1999, p.733

⁴⁹ Safety in Mines Testing and Research Station

Figure 4: Mines Inspectorate Operational Districts



Note: Most current map available – does not show recent local government amalgamations.

At the time of our investigation there were 44 inspectors at the QMI, with a number of other technical experts and support staff. Other support, such as legal services, is provided by the DME on a department-wide basis.

The QMI's mine safety role is diverse, and includes:

- conducting routine inspections of all mines in Queensland;
- conducting wider audits of mine operations;
- receiving, and investigating, complaints about mine safety;
- investigating deaths and serious injuries at mines;
- assisting the Coroner during inquests into mining deaths; and
- promoting mine safety best practice.

The QMI also works closely with SIMTARS, another part of the DME, in researching mine safety matters.

There are separate mining, petroleum, gas, electrical and explosives inspectorates within the overall structure of the Safety and Health branch of the Department, although strictly speaking, there is only a single legal entity (DME) responsible for regulating mine safety in Queensland.

The predecessor of the QMI was split into separate coal and metalliferous inspectorates following the 1921 Mount Mulligan colliery disaster. However, the two inspectorates have since been recombined.⁵⁰ Nevertheless, the coal/metalliferous split is still evident, with the existence of two separate health and safety Acts, and two Chief Inspector positions in QMI (one for metalliferous mines, the other for coal).

QMI inspectors generally have a specific area of expertise, for example:

- coal mining;
- metalliferous mining;
- electrical;
- mechanical; or
- geomechanical.

Other responsibilities for the DME include the promotion of production and investment in the state's mining industry, and the policy oversight and regulation of the state's energy market. However, the QMI itself (that is, all staff at the level of Executive Director, Safety and Health and below) has no role or responsibility in relation to promotion of, or investment in, the industry.

Other branches of the DME not directly associated with mine safety include:

Energy

- Energy Policy
- Energy Sector Monitoring

Mining and Petroleum

- Resource Strategy
- Industry Development
- Geological Survey of Queensland.

⁵⁰ Verra, Tate & Dryden, *What happens when there is a mining fatality in Queensland*, paper presented to the 2006 QLD Mining Industry Safety and Health Conference, p.4

3.2 Criticisms

Over the past few years, there have been numerous reports in various media articles and academic publications alleging that the QMI (along with mine safety inspectorates elsewhere in Australia) is not effective in carrying out its functions. Allegations include the following:

- the QMI does not have enough staff to adequately inspect mine sites;
- there is a high inspector turnover which is ‘crippling’ the QMI’s ability to conduct inspections;
- senior decision-makers are compromised as they must consider the economic impact of any safety-related action (a concern exacerbated by the location of the QMI within the DME);
- the QMI fails to conduct many unannounced inspections, and is generally ‘too close’ to the mining industry;
- the QMI fails to prosecute for even the most blatant breaches of mine safety; and
- the QMI does little more than respond to deaths in mines, and fails to devote resources to other concerns.

Representative criticisms include the following:

- Miners’ lives are at risk because of a shortage of safety inspectors sparked by high wages on offer in the private sector ... The head of Queensland’s mine safety unit ... had told an industry conference in Brisbane that his department was understaffed and ‘in a state of flux’ ... [A CFMEU official] said he believed the mining inspectorate was in crisis. ‘The only thing they can reasonably respond to is fatalities ... They simply haven’t got enough bodies on the ground to properly audit coal mines and that is most certainly going to have an impact on safety in the industry.’⁵¹
- Hundreds of serious injuries are not being reported in Queensland’s booming mining industry, a top-level State Government review confirms ... The State Government has completed nine [unannounced mine safety] audits this year but their failure to systematically check figures provided by mining companies is criticised in the review.⁵²
- ... the coal mine inspectorates in NSW⁵³ and Queensland suffer from a similar structural problem. They are both located in mining departments whose primary role is to assist industry to develop the state’s resources. They are inevitably compromised by this location ... But if the logic of the Piper Alpha inquiry⁵⁴ is applied, they should be relocated in the generalist occupational health and safety inspectorates in these two states.
- It seems likely that, until these structural arrangements are changed, the enforcement function of the inspectorate will remain compromised. This is particularly worrying as the industry moves into the new era of safety management plans which depend ultimately for their effectiveness on rigorous auditing by inspectorates ... [If] inspectorates are not able to compel mines to adopt satisfactory safety plans and to compel compliance with them, the whole strategy for the control of major hazards will be undermined.⁵⁵

⁵¹ Sherwin, ‘*Safety hits bedrock – Mining for inspectors*’, Courier Mail, 23 April 2007, p.10

⁵² Burke, ‘*Mines disguise toll of injuries*’, Sunday Mail, 21 October 2007, p.21

⁵³ This comment describes the situation in NSW at the time the quote was written (1999). See chapter 11 for a discussion of the current enforcement approach in NSW.

⁵⁴ This is a reference to the inquiry into the 1988 fire on the *Piper Alpha* offshore oil rig off Scotland which killed 165 workers.

⁵⁵ Hopkins, *Managing Major Hazards*, p.129

- In terms of the ... statutory regime, the mine safety legislation of Queensland ... which had long lagged far behind 'mainstream' OHS regulation, has finally shifted to a point where, in some respects at least, it is now substantially ahead ... In contrast, in terms of their 'on the ground' activities, most of the specialised mines inspectorates fall far short of administrative best practice. When it comes to targeting and rational allocation of resources, avoiding the risk of 'capture' by powerful interest groups, and efficient and effective inspection, enforcement and prosecution strategies, most of the mines inspectorates are far behind some of their generalist counterparts ...⁵⁶

In a submission to the Tasmanian Government in relation to a review of that state's legislation, the CFMEU expressed concerns about:

- The low deterrent value of prosecutions in the mining industry ... given the small number of prosecutions undertaken by Government Regulators relative to the high number of recorded safety incidents.
- Inadequate resourcing of the mine safety inspectorate.
- An ingrained belief amongst sections of the mining industry ... that the general duty of care is not achievable given the 'inherently dangerous' character of the mining industry.
- The huge political and economic power wielded by mining industry ... employers and their ability to deter the Government Regulator from implementing a vigorous prosecution policy.⁵⁷

While these comments related specifically to Tasmania, similar criticisms have been directed at virtually all Australian mines inspectorates, including the QMI.

⁵⁶ Gunningham, *Mine Safety*, pp.6-7

⁵⁷ CFMEU Tasmanian District Branch, *Submission of the CFMEU Mining & Energy Division to the Review of the Workplace Health and Safety Act 1995*, p.14 [Accessed at www.justice.tas.gov.au/_data/assets/pdf_file/0005/64688/CFMEU_M_and_E.pdf on 8 January 2008]

Chapter 4: The inspectors

The QMI employed 44 mine safety inspectors at the time of our investigation. The inspectors are based at a number of regional offices around the state, in each of the three regions (Central, Northern and Southern).

4.1 Skills

QMI staff were adamant that the mining industry is an area of unique specialisation, and that risks are encountered in the industry which do not exist elsewhere. In few other workplaces is there a risk of massive rockwall collapse, with hundreds of tonnes of earth burying workers and machinery, or catastrophic explosions underground with the potential to kill dozens of workers. While these risks are obvious to the layperson, other tragedies can occur in ways not obvious to those other than specialists. For example, in 2004, a Queensland mine worker was killed while changing a highly pressurised mine truck tyre.

For this reason, those we interviewed at the QMI were strongly of the opinion that generic workplace health and safety inspectors would not be well placed to handle mine safety matters.

The role of an inspector can be quite complex, as was noted in relation to Victorian health and safety inspectors:

Quite simply, the inspectors operate at the sharp end of the legislative scheme. It is for them (in the first instance) to decide what does, and what does not, constitute compliance with the requirements of the Act and the regulations. It is they who must engage in the crucial debates with dutyholders about what is, and what is not, 'practicable having regard to ...' It is they who, with no guidance from the legislative scheme, have to decide when the cost of removing a hazard is disproportionate to the risk.

Being a good inspector is, therefore, an extraordinarily difficult job. The inspector has to be, variously, an expert at hazard identification and risk assessment; an expert at systems engineering; an expert at micro-economics; competent at statutory interpretation; and have skills as a diplomat/negotiator/mediator. He/she also has to have a fairly thick skin, given that site inspections are often unpopular events with dutyholders.⁵⁸

Inspectors have traditionally come from an engineering (or related technical) background, and this is still the case at the QMI. Some have been mine managers earlier in their careers. While this expertise is vital for a mines inspectorate, the increasing sophistication and complexity of the industry meant that the QMI had become increasingly challenged in handling some aspects of mine safety. A QMI official explained to us:

The trouble [with the QMI] was [we were] sailing along and it wasn't sustainable, because the age of the inspectorate was going up all the time. We weren't recruiting new people ... We weren't bringing different skills that reflect the changing technology in the industry.

⁵⁸ Maxwell, *Occupational Health and Safety Act Review*, p.284

However, as a result of a growing focus in the mining industry on 'human factors', the background of inspectors is now becoming more diverse. QMI has recently begun hiring other professionals in order to increase the range of expertise available to the Inspectorate.

We were informed, for example, that ergonomists and occupational hygienists have been recruited. At least one former police officer has also been recruited to manage the legal aspects of investigations.

Those we spoke to outside the QMI (such as the AWU, CFMEU and the Queensland Resources Council) generally had a high opinion of the professionalism of inspectors.

4.2 Salary

There is a considerable gap between the salary of a generic workplace health and safety inspector in the Department of Employment and Industrial Relations and the salary of a QMI mines inspector. Many workplace health and safety inspectors are employed at or around Queensland Government Administrative Officer levels AO5-AO7, with an annual salary of between \$61,000 and \$84,000. QMI mines inspectors are employed under an arrangement known as an 'S70 contract'⁵⁹ and are generally paid at the Senior Executive Service 2 or 3 level, with a salary of at least \$110,000.

We were advised that a QMI inspector could, without great difficulty, almost double his or her salary by moving to a position with a mine operator. Clearly, in the face of such salaries on offer in the industry, the QMI has an uphill battle to attract and retain competent and qualified inspectors.

It is relevant to note that a 1995 review of the South African mine inspectorate (the Leon Commission) reached the following conclusion on the issue of inspectorate staff salaries:

Existing remuneration packages are inadequate to attract candidates of the right quality and calibre in adequate numbers. The Commission recommends that to ensure that suitable staff can be appointed to these grades the remuneration packages for these grades should be related to remuneration in the industry. The reference point should be at Principal Inspector level [who] should be offered 90 per cent of a typical mine manager's package.

The following levels of remuneration are recommended:

PERCENTAGE OF MINE MANAGERS REMUNERATION PACKAGE

Government Mining Engineer⁶⁰ 110%
Deputy Government Mining Engineer 100%
Principal Inspector 90%
Senior Inspector 65%
Inspector/Senior Quarry Inspector 45%
Assistant Inspector/Quarry Inspector 30%
Sub Inspector 15%

The Commission further recommends that these relative remuneration positions should be adjusted annually to allow for changes in industry remuneration packages.⁶¹

⁵⁹ A reference to the power in s.70 of the *Public Service Act 1996* to employ staff on contract

⁶⁰ A post equivalent to the Chief Inspector of Mines in the QMI

⁶¹ *Report of the Leon Commission*, p.150

In an interview with my investigators, one QMI officer said:

We've always had difficulty getting people in certain areas ... We're now in a situation where the industry's paying so much more because they can't get people, and obviously the inspector will be able to get twice as much elsewhere. We've also had people retiring, so our ... resources have dropped dramatically ... If we don't have the people we can't do the job we want to do and I don't think there's any doubt we're falling behind in doing some of the things we should do ...

If you look at the applicants for the positions we've advertised, the pool is actually not ... particularly good. When you consider what we're paying you want people who are worth [the salary offered].

Another QMI officer explained:

There's always been a gap between public servants and industry. There was a move made after the Moura [Disaster] to adjust that by putting mines inspectors on S70 contracts which allow them to be paid outside and ... above the public awards ... The S70 contract has helped but the gap is widening because the industry is booming and there's a shortage in the industry. We're constantly getting offers for our inspectors to go back into the industry. And ... the only advantage we've got is that most of the mines are in ... isolated areas ... That has major implications for people with families ... and a lot of people choose not to live in outback Australia. So what we can offer inspectors apart from a reasonable salary - certainly not one that's competitive with the industry - is lifestyle issues which means that [they work] one week or two weeks away from home. They're not doing 12 hour shifts unless it's an emergency situation or a major accident ... They're doing closer to a 40 or a 50 hour week. They're home 3 nights of the week and they'd be out once or twice a week [unlike those in industry who might] be away for 7 or 8, 10 days or 14 days - a lot of people won't accept that. So that's the only thing we can offer ...

Inspectors have a wide variety of motivations for their work; however, the most common which were given to us included:

- a desire to contribute to a safer mining industry;
- an interest in broader aspects of the industry beyond production; and
- a desire to balance their work and private lives more effectively than they could in the industry itself.

Some inspectors advised us it was unlikely that financial incentives beyond their existing salaries would encourage them to move to industry, given their preference for the better work/life balance available to them at the QMI.

Nevertheless, it was also clear that many staff do leave to take up higher salaries in industry. My investigators were told by most people they spoke to in the QMI that there are always a significant number of vacancies for inspectors and, at the time of writing this report, a major national campaign was underway to recruit more inspectorate staff.

On 13 November 2007, the Minister for Mines and Energy, the Honourable Geoff Wilson MP, issued a media statement which included the following comments:

Minister Wilson told State Parliament that a national recruitment drive had swung into action to attract skilled mines inspectors and safety and health specialists to Queensland. 'We wanted to attract the best people to reap the benefits of a better career path backed up by better training and remuneration,' Mr Wilson said

...

Extra funds of \$3 million over the next four years will support incentive packages for Mines Inspectors.⁶²

Of course, this is not the only area where the government is having difficulty in competing with the rewards available in the private sector. There are frequent reports in the media about the government's difficulties in recruiting specialists in the medical profession, especially to work in regional hospitals.

There is no obvious solution to this dilemma. The government cannot be expected to match the rewards available in the mining industry, but clearly needs to be proactive in addressing the problem. Some initiatives that could be considered are:

- an ongoing recruitment drive highlighting the advantages of working in the public sector;
- a vigorous graduate recruitment program with guaranteed fast-tracked promotion; and
- severing the link between inspectors' remuneration and normal levels of public sector remuneration.

A United Kingdom Cabinet Office Report in 2003 contains the following comments that are relevant to this issue:

Some regulators felt that the market from which they recruit their staff should dictate the salaries they should be able to offer. For those regulators who need highly specialised staff the pool of people from which they might recruit may be very small. They need to be able to pay the going rate for the job.⁶³

Just what remuneration package would need to be offered to enable the QMI to attract and retain suitably qualified inspectors is not an answer I can provide.

⁶² Media Release, the Honourable Geoff Wilson MP, 13 November 2007 [Accessed at cabinet.qld.gov.au/MMS/StatementDisplaySingle.aspx?id=55089 on 8 January 2008]

⁶³ Better Regulation Task Force, *Independent Regulators*, p.19

Chapter 5: Safety statistics

Reporting is crucial to safety. This is not simply a matter of reporting injuries and near misses. The issue is far broader. Studies of accidents, both major and minor, routinely show that there was information available prior to the accident which, had it been reported and analysed, would have enabled the accident to be averted. In short, there are always warning signs. The organisations which are most committed to accident prevention recognize this fact and put a great deal of energy into collecting this information. It should be stressed that a reporting culture is not limited to reporting occurrences. Employees in such cultures are also encouraged to report unsafe conditions, hazards, ineffective procedures, process upsets, certain kinds of alarms and so on, in short, anything that could potentially lead to an unwanted outcome.⁶⁴

5.1 Incident statistics

The QMI reports regularly on its website and in its Annual Safety Performance and Health Report on incident statistics in Queensland's mines. A number of measures are used to report on mine safety, including:

- number of deaths;
- number of serious injuries;
- lost time injury frequency rate (LTIFR) (the number of lost time injuries/diseases per million hours worked);⁶⁵ and
- number of 'high potential incidents' (that is, an event, or a series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person).

A University of Queensland study comparing serious injury and other incident rates in the three major Australian mining jurisdictions (Queensland, Western Australia and New South Wales) revealed that the major sources of injuries were:

- single and multiple vehicle collisions;
- fall of ground;
- persons crushed in machinery;
- persons falling from heights; and
- persons hit by objects or substances.⁶⁶

Mining is a significant contributor to workplace deaths and injuries. However, looked at over many years, mine-related deaths have decreased in number to an average of approximately three a year in Queensland. Table 2 shows deaths, disabling injuries, lost time injuries and high potential incident rates across the entire Queensland mining industry (coal and metalliferous).

⁶⁴ Hopkins, *A Corporate Dilemma*, p.4

⁶⁵ DME, *Queensland Mines and Quarries Safety Performance and Health Report, 2005-06*, p.vii

⁶⁶ Minerals Industry Safety and Health Centre, *Report to QRC on Underlying Causes of Fatalities and Significant Injuries in the Australian Mining Industry* (Executive Summary), p.3

Table 2: Recent injury and safety statistics – Queensland mining industry

Year	Deaths	LTIs	Disabling injuries	High potential incidents	Million hours worked	Prosecutions commenced
2006-07	4	351	557	1128	80.3	2
2005-06	2	308	515	839	73.5	2
2004-05	4	278	384	715	60.8	1
2003-04	1	343	547	536	55.4	1
2002-03	3	324	628	559	52.1	2
2001-02	2	403	620	457	48.4	2
2000-01	2	449	529	299	43.5	New Act commenced March 2001

Comparing Queensland mine-related deaths and serious injuries to statistics from China, South Africa and elsewhere (including the USA) leads an observer to wonder whether they are in fact the same industries, such is the enormous difference. The Queensland mining industry is, without doubt, much safer than its overseas counterparts.

However, even one death in the industry is too many and its impact, which is vividly described in the following extract, should be kept in mind when considering these statistics:

It is not difficult to understand the pain and suffering that a family experiences when a loved one dies in an industrial accident. The death lacks a sense of purpose, or legitimate reason. *'It was not his time.'* *'He was a young man with a wife and children.'* *'They needed him.'* *'I loved him; he was my husband and the father of my children.'* Equally, a fatality impacts on the deceased's workmates and local community. In short, the death has no meaning and is seen as senseless. The community feels angry ...⁶⁷

Therefore, all stakeholders in the industry should operate under the belief that no mining-related death or serious injury is acceptable or inevitable. In my opinion, the QMI operates on this basis.

5.2 Accuracy of the statistics

QMI's own comment on the need to collect mine safety data is as follows:

Serious accident data is valuable. Accidents are costly, both in human and commercial terms, and it is important that data is collected and not lost. However, contemporary safety management practice recognises that measuring 'lost time injuries' alone is reactive, and not the best indication of safety and health performance.

⁶⁷ Verra, Tate & Dryden, *What happens when there is a mining fatality in Queensland*, paper presented at the 2006 Queensland Mining Industry Health and Safety Conference, p.3

Incidents where things have gone wrong, and injuries could have occurred but didn't, must also be identified, recorded and acted on. Identification of these **high potential incidents** ensures that management is aware of the problem and can implement strategies for managing the risks, often before actual injuries occur. That is why they are referred to as 'free lessons'. Supplying this data benefits the industry as a whole, and it indicates a mature and effective accident and incident reporting system ...⁶⁸

The number of deaths and serious injuries is likely to be a relatively reliable measure, given the obvious nature of such incidents and the fact that it would be almost impossible to disguise them. Other statistics, however, are reported by the mine operators themselves, and must be used by the QMI as the basis for determining whether overall safety in the industry has improved or declined in a given year.

In particular, the lost time injury frequency rate (LTIFR) has been criticised as being 'too easy to manipulate'. All parties we spoke to during this investigation acknowledged that LTIFR statistics are susceptible to manipulation, although it is very difficult to know how great this manipulation is. Manipulation is said to occur throughout the industry, and not just in Queensland; for example, in 2004 the Ritter Inquiry in WA referred to this issue.⁶⁹

In their October 2007 report on the QMI's reporting of health and safety statistics for the Queensland mining industry, Parker and Cliff state:

... injuries leading to permanent disability are believed to be underreported ... the more traditional measures have limited validity for use as measures of overall [occupational health and safety] performance and have little predictive value.⁷⁰

Further, Parker and Cliff state:

General industry reporting relies on analysing workers' compensation data. The limitations of using this data are widely known, relating to variable capture efficiency due to poor reporting of injuries. Mining probably has a higher data capture efficiency than other industries due to the more comprehensive reporting procedures, the nature of the industry and the support offered by companies to injured persons. The accuracy of the data may be compromised by late reporting as a function of the delay before claims are processed and finalised. Permanent disability claims can take years to finalise.⁷¹

⁶⁸ NRM, Guidance Note QGN 07, p.2

⁶⁹ Ritter, pp.105-106, 187

⁷⁰ Parker and Cliff, *A Review of the Queensland Mines and Quarries Annual Safety Performance and Health Report*, p.11

⁷¹ Parker and Cliff, *A Review of the Queensland Mines and Quarries Annual Safety Performance and Health Report*, p.17

Other issues reported by Parker and Cliff which can lead to inaccurate mine safety data include:

- an attitude in certain sectors of the industry that they need not report accurate information as *'the QMI do not do anything meaningful with it'*;
- workers with permanent disabilities may receive redundancy or retrenchment payments rather than workers compensation;
- injuries are not being reported as a lost time injury, but in some other format;
- systemic underreporting for a variety of reasons; and
- some conditions (such as fatigue and mental health concerns) arising from work, but not being reported as such.⁷²

One QMI officer described the concerns to us as follows:

We can only work on the figures that are given to us ... The term 'Chinese wall' is often used [in relation to] getting access to workers' compensation numbers. So we can't get those, particularly off the mines, and I might add I believe that's a major failing ...

We've had numerous examples of people being paid significant sums of money for workers' compensation injury, supposedly with permanent injury, coming back within two or three weeks to the same mine saying they're now miraculously better looking for work but they can't and don't give access to the medical records ... that's protected by the law ...

You must also remember that ... we currently do not require a person to report when that person is terminated because, commonly, in the mining industry a person is terminated before retirement – they get a payout ... There's no record there's a health issue or an injury issue or anything like that, so it's like an early retirement payout.

... We've [also] had people who have been killed both coming to and from work or injured coming to and from work. They don't come up in our statistics whereas they do come up on the workers compensation ...

Another QMI officer said:

As far as accuracy of our [lost time injury rate statistics] is concerned we believe they're probably 95% accurate if not more. It's difficult to check them other than to check them when you go [to] a particular mine.

We've had complaints ... that our figures were inaccurate, but basically what we've been talking about is the figures relating to people who are put off work because of ill health. This is information that we had great difficulty getting ...

... We've tried to compare [the statistics] with workers compensation ... It's very difficult to get figures about individual mines from workers comp. We're hoping we can improve that but we've had situations where they provided us with figures and all the incidents related to a particular postcode area because that's the way they sorted them. You'll find Mackay is the most dangerous place to be a miner in Australia and there are no actual mines in Mackay ...

⁷² Parker and Cliff, *A Review of the Queensland Mines and Quarries Annual Safety Performance and Health Report*, pp.5-6, 8

One academic (Hopkins), analysing the 1994 Moura mine disaster, had this comment on LTIFR:

Explosions are relatively rare events – most mines have never experienced one – but when they occur, they are likely to have severe consequences. These are low frequency/high severity incidents. On the other hand, slips, trips, falls, bangs and jolts are common events in mines, as they are in most industrial settings ... These are high frequency/low severity matters.

... lost time injury frequency rate (LTIFR) is often taken as a measure of safety performance. Concern about safety then becomes a concern about reducing the LTIFR. This is certainly what happened at Moura. By concentrating on high frequency/low severity problems, the mine had managed to halve the [LTIFR] in the four years preceding the explosion ... By this criterion Moura was safer than many other Australian coal mines. But as a consequence of focusing on relatively minor matters, the need for vigilance in relation to catastrophic events was overlooked.

A similar situation was evident in the Westray mining disaster in Canada ... That mine had just won an award for reducing its lost time injury frequency rate when it blew up.⁷³

Mirroring the statements by the QMI officers, Hopkins continues:

It is widely recognised that where organisations are judged by their LTIFR they will resort to ways of reducing this figure that have nothing to do with improving safety. More effective claims/injury management, for instance, will result in workers who previously took several days off work being treated and brought back to work on the next shift, perhaps on alternative or light duties. The result is that they no longer count as lost time injuries ... The statistics can thus improve with no reduction in the real rate of injury. But what it means is that the LTIFR becomes a measure of how well injuries are being managed, not how safely the organisation is performing ...⁷⁴

In order to design inspection and compliance strategies that will identify and address the most serious and widespread safety problems, the QMI needs accurate and relevant data on mine safety. Flawed, incomplete or stale data can lead to inappropriate strategies being developed.

The recent work of Parker and Cliff, including the recommendations they make for improvement of the QMI's statistical function, is comprehensive and means that I do not need to consider this matter in any depth or make specific recommendations, other than to encourage DME to implement their recommendations.

I note that the DME states in its 2006-2007 Safety Performance and Health Report that it is in the process of finalising its official response to the report.⁷⁵

⁷³ Hopkins, *Managing Major Hazards – The Lessons of the Moura Mine Disaster*, pp.80-81

⁷⁴ Hopkins, *Managing Major Hazards – The Lessons of the Moura Mine Disaster*, p.88

⁷⁵ See p.i in Department of Mines and Energy. *Queensland Mines and Quarries Safety Performance and Health Report 2005-06*, Brisbane, 2006

However, senior QMI officers advised my investigators that there is little communication between WorkCover Queensland and the QMI, and that this may hinder attempts by the QMI to gain an accurate overall view of mine-related injuries across the state.

Recommendation 1

That the QMI and WorkCover establish a memorandum of understanding, or similar arrangement, to enable QMI to obtain from WorkCover de-identified reports of mine-related injuries.

DME response

DME advised that it agrees with this recommendation on the basis that information from WorkCover about mining incidents will allow the QMI to check the accuracy of its statistics.

Chapter 6: Deaths and serious injuries

Things are always going wrong in organisations. Information fails to get to people who need it; erroneous or counterproductive beliefs undermine good decision making; things fail to happen because no one actually has a responsibility to make them happen; and people follow their own agendas at the expense of the organisation's goals. This is all routine. And normally the consequences are not too serious ...

But when a disaster occurs, when people are killed, the organisation concerned is placed under a spotlight. External authorities conduct detailed inquiries ... In the process, the workings of the organisation are laid bare and its failings, normally hidden from view, are open to scrutiny. Disasters therefore offer an unparalleled opportunity to study the workings of an organisation and to identify where things are going wrong.⁷⁶

6.1 Investigations

The Coal Act and the Mining and Quarrying Act state that a QMI inspector's role includes the investigation of:

- serious accidents and high potential incidents and other matters at mines that affect the successful management of risk to persons;⁷⁷ and
- complaints about matters relating to safety or health resulting from operations.⁷⁸

The inspector does not act as an advocate for any side in the matter, and is to be an objective investigator seeking the cause of the incident. See Appendix 3 for an overview of the QMI investigation process.

The QMI conducts a range of investigations, not only following deaths at mines, but also in some cases where there has been a serious incident or a high potential incident. The State Coroner is also notified following a mining death, as are the police.⁷⁹ Usually, the QMI will produce a report on a mine death investigation and provide this to the Coroner for the purposes of the eventual inquest. Inspectors are authorised to make recommendations to the Director-General of the DME about prosecutions and other enforcement action under the Acts.⁸⁰

The QMI's role has been described as follows:

A fatality is a nightmare. The subsequent investigation and the legal process simply attempts to understand that nightmare to try and prevent recurrence.⁸¹

QMI uses an investigative approach developed by BHP Billiton for the mining industry known as ICAM (Incident Cause Analysis Method). This method is also used by investigators in other major industries, such as aviation. An example of an ICAM analysis of a workplace fatality (not connected with mining) is provided in Table 3. This table indicates the hypothetical interrelationship between a number of actions or inactions that might lead to the death of a worker.

⁷⁶ Hopkins, *Managing Major Hazards: The Lessons of the Moura Mine Disaster*, p.1

⁷⁷ Coal Act, s.128(h); Mining and Quarrying Act, s.125(h)

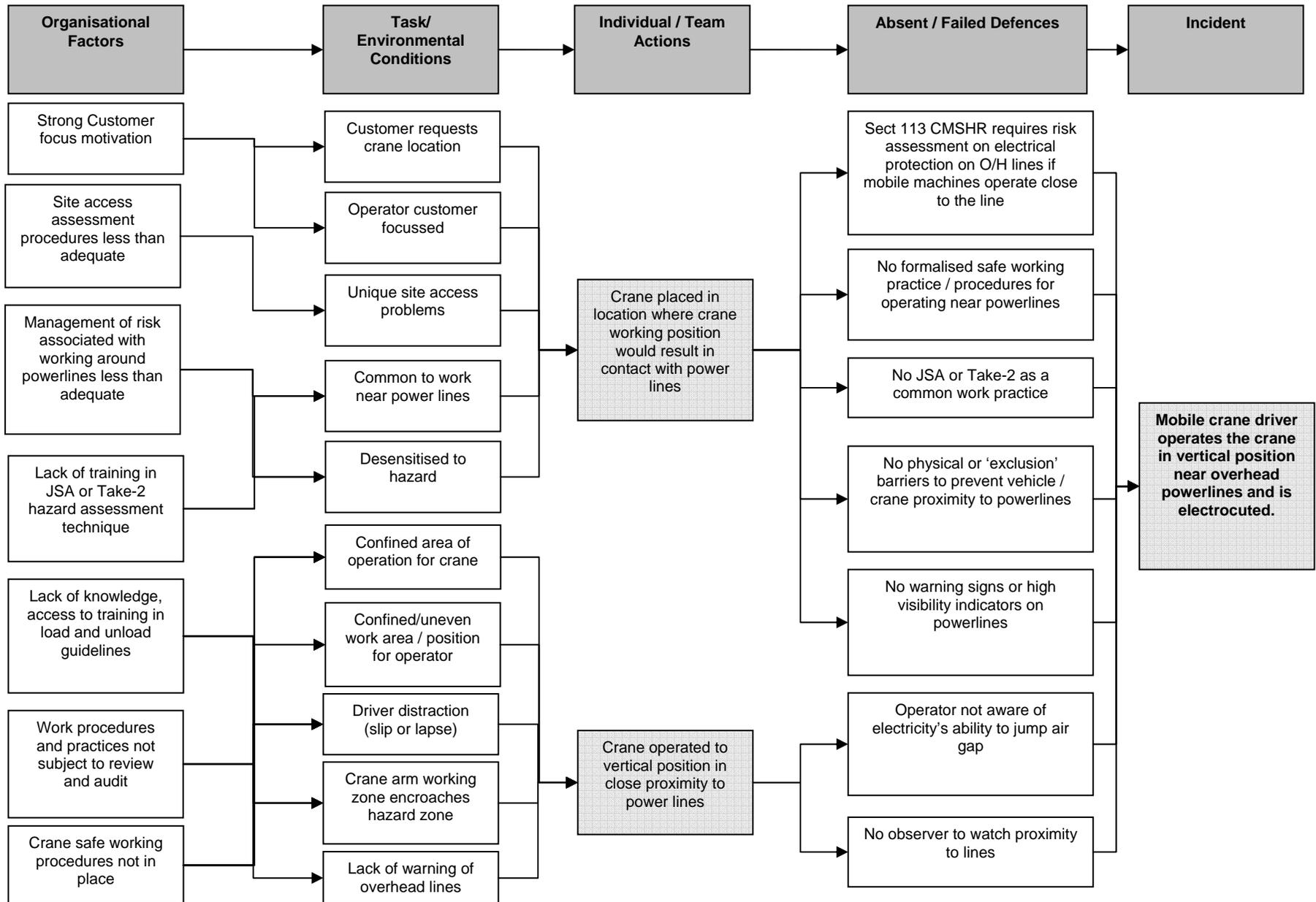
⁷⁸ Coal Act, s.125(i); Mining and Quarrying Act, s.125(i)

⁷⁹ See generally *Police Powers and Responsibilities Act 2000*, Chapter 19, Part 5 and s.794

⁸⁰ Coal Act, s.129(b); Mining and Quarrying Act, s.126(b)

⁸¹ Verra, Tate & Dryden, *What happens when there is a mining fatality in Queensland*, paper presented to the 2006 Queensland Mining Industry Health and Safety Conference, p.36

Table 3: Example ICAM analysis



The QMI's view of its responsibilities is that it is only obliged to investigate deaths, but that it also investigates high potential incidents and other serious incidents wherever possible. This approach complies with the legislation, although it means that many investigations of less serious matters (which might still be of benefit to the industry as a whole) may not be undertaken by the QMI.

Both Acts contain the following provision:

As soon as practicable after receiving a report of a serious accident causing death at a mine, an inspector must inspect the place of the accident, investigate the accident to determine its nature and cause, and report the findings of the investigation to the chief inspector.⁸²

The Second Reading Speech introducing the new legislation included the following comments:

All fatal accidents will be examined by the coroner, therefore allowing an external review of safety and health failures by a body independent of all agencies associated with the mining industry. Inquiry by the coroner will also allow more focus on the possibility of bringing criminal charges in cases of gross neglect of duty.⁸³

It was apparent from our audit that, when deaths or serious injuries occur, mine inspectors are generally on the site very quickly following notification, often within only a few hours, even in remote locations. Inspectors then spend extensive periods of time onsite conducting the investigation.

Mining death reports audited by my investigators indicated that the QMI invests considerable time, effort, and expertise in investigating fatalities. Reports produced on why deaths occurred are extremely professional, comprehensive, and could be readily understood by a layperson. As such, they are no doubt of considerable assistance to the Coroner, the industry and other interested parties. Indeed, on several recent occasions, Coroners have commented favourably on the quality of QMI investigations.

Broadly speaking, the fact that the QMI utilises the ICAM methodology in its investigative process means that it operates within a framework regarded as best practice by the industry it regulates.

Our audit revealed that the investigative work undertaken by QMI inspectors was generally of high quality.

It is difficult to fault the QMI's investigation processes, and the documentation relating to the conduct of formal investigations into deaths or serious injuries (such as the QMI's *Investigation Process Manual*). The guidance provided by the QMI to its inspectors on the correct manner in which to conduct investigations into deaths and serious injuries is comprehensive and clear.

⁸² Coal Act, s.199; Mining and Quarrying Act, s.196

⁸³ The Honourable Tony McGrady MP (former Minister for Mines and Energy), Second Reading of the Coal Mining Safety and Health Bill and Mining and Quarrying Safety and Health Bill, Hansard, 24 March 1999, p.734

A perusal of the *Investigation Process Manual* reveals that it provides thorough guidance for inspectors on:

- immediate post-incident notification procedures;
- liaison with stakeholder entities such as the police and families;
- incident site security;
- investigation process and planning;
- appropriate procedures for dealing with witnesses and taking statements;
- conducting site inspections and recording evidence;
- preparing reports; and
- post-investigation matters such as formal recommendations for prosecution.

The manual also provides detailed guidance for QMI inspectors on appropriate interview techniques, and for managing different types of witnesses, including those with challenging behaviours.

The manual is also explicitly linked into a framework of supporting guidance such as BHP Billiton's ICAM Guide, the QMI's own Compliance Policy, risk assessment tools and witness statement proformas.

Opinion 1

The guidance provided by the QMI to its staff in relation to investigating deaths and serious injuries is reasonable and appropriate.

Opinion 2

The general standard of investigations and investigation reports by QMI inspectors meets their obligations under the Coal Act and the Mining and Quarrying Act.

DME comment

In relation to opinions 1 and 2, DME maintained that all investigations and reporting are undertaken in accordance with the *Investigation Process Manual*, which is periodically subject to review. According to DME, their processes will be further enhanced by the establishment of an investigations case management system due for completion this year.

6.2 Ways of investigating

Generally, an incident investigation may have two 'modes': 'nature and cause' and 'legal'. At a recent coronial inquest, the investigation of a mine-related death was described as follows:

In mining matters the investigation runs on two courses. The inspector investigates the matter and presents the Coroner with a report. Consideration is also given to immediate safety issues, alerts to the industry and possible breaches of legislation.

Police, who are usually charged with investigating deaths at the direction of the Coroner, also conduct an investigation. Of course, if there is any prospect of criminal charges arising from the incident causing the death, then the matter is investigated by police to determine whether charges should be laid.⁸⁴

In the mine-related deaths my investigators audited, police involvement was limited to attending the scene, securing evidence and taking possession of the body.

The main report to the Coroner is prepared by QMI investigators.

A focus on establishing legal culpability can mean that the 'root cause' of the incident is either not uncovered, or not addressed appropriately. The following is a hypothetical example:

Hypothetical case study

Scenario:

AB, while operating a large machine, rests against a guard rail which collapses. AB falls into the machine and is killed.

An investigation is conducted to determine legal responsibility. The investigator determines that CD had adjusted the guard rail just prior to the collapse. CD was permitted to do this, but had not followed the appropriate procedure. This meant the guard rail was not properly fixed, and this was the immediate cause of the collapse.

Outcome:

CD appears to have breached a duty of care in not following correct procedures when adjusting the guard rail. CD is charged with a breach of the mine safety legislation.

Alternative investigation:

A broader, more detailed investigation, inquiring into the nature and cause of the incident, determines that CD was in the eleventh hour of a 12 hour overnight shift. This was the seventh consecutive shift for CD. Medical evidence suggested CD was heavily fatigued at the time of the incident, to a degree where he or she could not have been expected to have performed complex tasks with a high degree of accuracy.

⁸⁴ *Inquest into the Death of Roger Bruce Browne*, 6 March 2007 (Findings), Transcript of Proceedings, p.26

WX, a manager of the operation, had noticed CD and others appearing drowsy during the final hours of such shifts, but, apart from reprimanding the staff, had done nothing. Further inquiries reveal that, while there is a fatigue management plan for the operation, YZ, the staff member responsible for implementing the plan, had described it to other staff as 'a complete waste of time' and had threatened to 'make life hard' for anyone who raised fatigue concerns. YZ later says that the motivating factor for this attitude was a bonus which is paid on the basis of production output.

An office-based staff member responsible for auditing compliance with the plan was found to have conducted an audit, but this audit was limited to 'paper-checking only', and did not involve speaking with workers about whether the plan was actually being implemented.

Alternative Outcome:

Although CD, as well as WX and YZ, may still face prosecution, the inspectorate recommends that the operator implement a rigorous audit of the implementation of its fatigue management plan, and report on the outcome. The operator is also asked to reassess its bonus system to ensure that it does not encourage staff to disregard safety issues.

While simplistic, this hypothetical case study illustrates the difference in outcomes that can sometimes occur depending on the mode in which an investigation is conducted. A singular focus on finding someone responsible for what happened can divert an investigation away from achieving an understanding of serious, systemic flaws in the way mine work is being conducted.

In the case of the QMI, there is no evidence at all that a search for legal culpability is overriding an analysis of the nature and cause of mine incidents. On the contrary, it is clear the QMI seeks, first and foremost, to understand why an incident occurred and to determine how recurrences can be avoided.

The approach to investigations does, however, vary slightly between the regions. The Northern Region has begun to take a different approach to investigations involving deaths or serious injuries. This involves a QMI inspector undertaking the nature and cause analysis, with assistance from an 'investigation coordinator'.

The investigation coordinator is not from an engineering background, but at present is a former police officer. The coordinator assists in the evidence-gathering and enforcement aspects of the case, and is responsible for preparing any prosecution case in association with the DME's legal unit.

Nevertheless, concern was expressed by many parties (within and outside the QMI) that there is growing pressure for a focus on legal culpability and prosecutions, which might increasingly compromise nature and cause investigations.

My investigators did not see any significant evidence of this during the investigation, but did see the potential for such a situation to arise in the future, especially in light of the often strident external criticism of the QMI's prosecution record.

Opinion 3

QMI's method of conducting investigations into mine-related deaths and serious injuries is reasonable and appropriate, and is in line with the objects of the Coal Act and the Mining and Quarrying Act.

DME comment

DME stated that the Review of Safety Performance report by Parker and Cliff has identified possible opportunities to strengthen definitions of injury that may lead to changes in legislation. This will clarify the types of serious injuries the QMI should investigate.⁸⁵

6.3 When does a death investigation start?

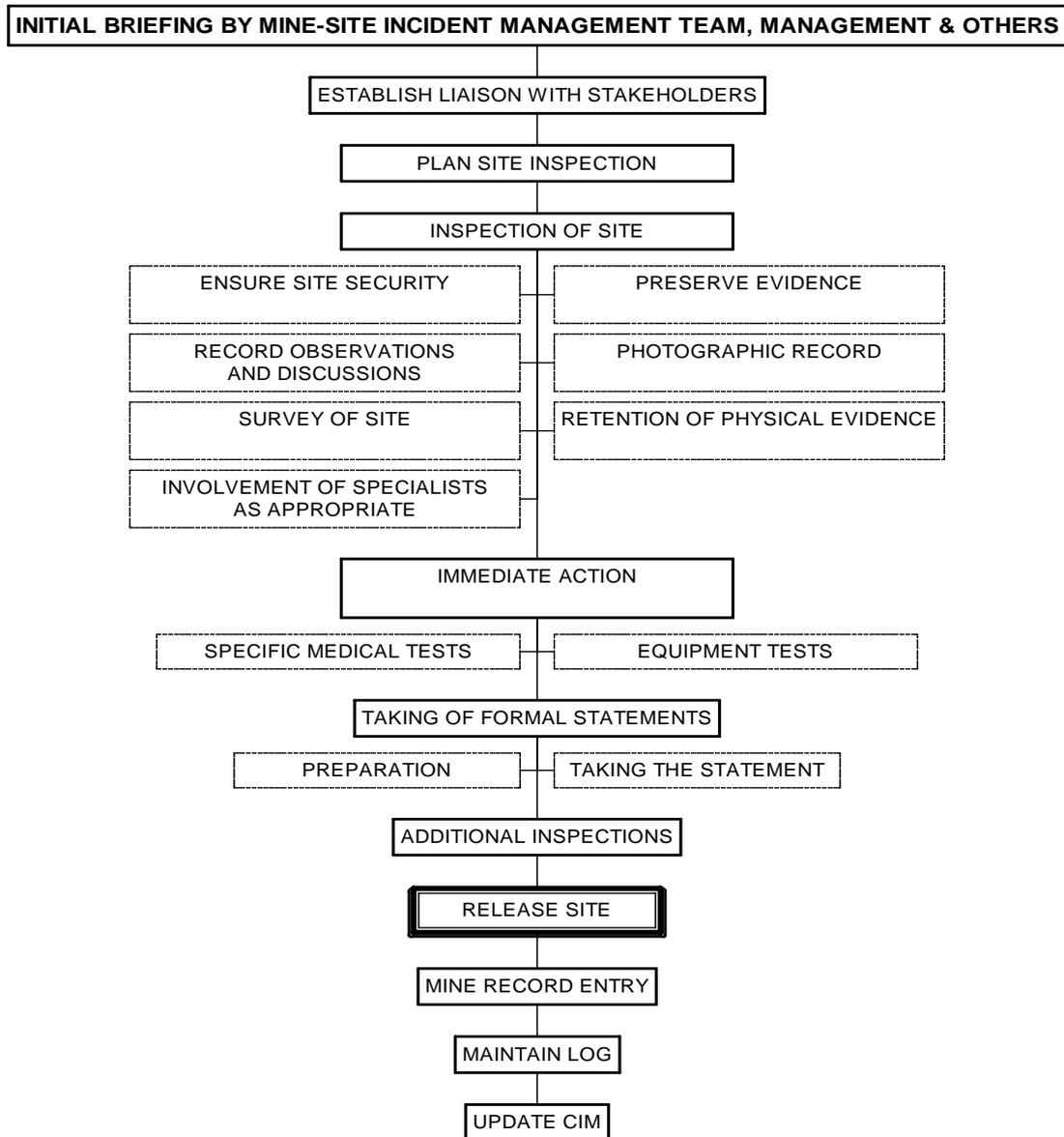
The Coal Act and the Mining and Quarrying Act describe a serious incident at a mine as one which results in a person:

- dying; or
- being admitted as an inpatient at a hospital.

However, as has been mentioned above, the QMI is only required by the relevant Act to take *immediate* investigative action (for example, by inspecting the scene of an incident) if there has been a death at the mine site. The immediate process of an investigation by the QMI is described in Table 4.

⁸⁵ See discussion at 6.3

Table 4: Process of initial QMI investigation actions following a death or serious injury (from *QMI Investigation Process Manual*) – Note: CIM denotes Chief Inspector of Mines



Generally, QMI inspectors will produce a preliminary report at the outset of an investigation to advise the relevant Chief Inspector (coal or metalliferous) of the basic details of the incident.⁸⁶ The mine operator also prepares its own report on the incident.⁸⁷

⁸⁶ Verra, Tate & Dryden, *What happens when there is a mining fatality in Queensland*, paper presented to the 2006 Queensland Mining Industry Health and Safety Conference, p.14

⁸⁷ Coal Act s.201; Mining and Quarrying Act s.198

The types of investigation reports which may be produced by the QMI are:

- Record of Incoming Notification - immediately
- Update report from scene - within 24 hours
- Preliminary Report - within five days
- Investigation Report - within two months
- Final Report - within three months
- Prosecution Report - to secure funding.

Of course, QMI inspectors cannot predict which incidents at a mine will ultimately lead to the death of an injured worker. Therefore, the current system could mean that an incident at a mine that leads to a person's death some time later is not immediately investigated, which could lead to relevant evidence being lost.

The QMI does not always produce comprehensive investigation reports itself. Where there has been a 'high potential incident' the QMI will, in most cases, request the mine operator concerned to prepare a report and provide this to the QMI within a certain time, even if the incident has led to a serious injury.

In discussions with inspectors, my investigators were advised that, generally, the QMI will attend a scene where there has been a serious injury and where death is a possibility,⁸⁸ and require the mine operator itself to conduct an investigation. The operator's investigation is then monitored for adequacy and appropriateness.

Nevertheless, the problem with the QMI's current approach is that, on occasion, it may not conduct a thorough investigation when there has been an injury at a mine, leaving this instead to the operator. This practice is not unique to the QMI. In the Workplace Electrocution Project, for example, it became evident that the electrical safety regulator at the time relied entirely on investigations of incidents conducted by authorised persons employed by the industry operator.⁸⁹

I also fully understand that, with resourcing limitations and with the difficulty QMI has in recruiting and retaining inspectors, it has become necessary for the Inspectorate to narrow its focus to those investigations it is obliged to do under the Acts.

My investigators were present with QMI staff when an official of a mine site⁹⁰ called an inspector with a report that a worker had been seriously burned during routine operations at the site during an overnight shift.

A QMI officer conducted the notifications required by QMI policy and sent an inspector to the site immediately. My investigators were advised that the inspector would assess the situation and prepare a brief preliminary report but that it was likely the QMI would rely on the operator to prepare a more detailed investigation report.

⁸⁸ This is an example of a situation called a 'high potential incident' in the legislation – see Coal Act s.17 and Mining and Quarrying Act s.18.

⁸⁹ *The Workplace Electrocution Project Report*, p.60

⁹⁰ Unrelated to those sites and operations my investigators visited

Another example, also drawn from a real case considered during our file audit, is the following timeline for an investigation report.

- 9 August – high potential incident (involving destruction of equipment but no injuries to people) occurs at a mine site in central Queensland in the evening
- 10 August – informal notification to QMI early in the morning. QMI investigation begins the same day, including preliminary interviews at the mine
- 11 August – formal notification received by QMI. The mine record entry completed by the QMI inspector that day requires that the operator prepare its own report ‘within one month’. QMI also gives the mine operator details of interviews the QMI conducted for use in its own report
- 21 August – QMI inspector provides a preliminary report to the Chief Inspector outlining major concerns from the case, and action to be taken by the operator
- 28 September – mine operator provides its own, detailed investigation report to the QMI.

In this case, the matter was a ‘high potential incident’ in which no one was killed or injured but something happened that might be described as a ‘near miss’. However, had a worker received an injury that did not appear to be serious at the time but later died (say on 30 August), the weakness in this arrangement becomes apparent.

By the time the injured worker dies, the incident site may have been disturbed, witnesses may have left the site (on leave or permanently), memories of what happened may have faded, and the mine and its workers may have moved into ‘defensive’ mode, concerned about potential action against them for negligence and failure to adhere to the mine safety requirements. The desire to ensure the incident never happens again may be overtaken by the desire to escape blame.

In these circumstances, it will be extremely difficult for the QMI to return to the site and conduct an adequate investigation into what originally happened.

My investigators discussed with the QMI staff the circumstances in which a decision would be made that the QMI itself would conduct the entire incident investigation. They were informed that such a decision would be made on the basis of the QMI officers’ judgment of factors such as:

- the apparent severity of the reported injuries;
- the number of people involved;
- the record of incidents at the mine site concerned;
- the size and sophistication of the operator’s investigative resources; and
- the willingness of management at the mine site to objectively analyse the factors which led to the incident.

In short, the decision is based on a complex range of factors judged in light of the experience and knowledge of the particular QMI officer making the decision on whether to conduct a full investigation.

All agencies with investigation and enforcement functions are required to prioritise their activities in accordance with the limits of their resources and staff numbers. In that sense, the decision by the QMI to generally limit its own investigative involvement to deaths (and a limited number of serious injuries) is understandable.

Furthermore, large mining operations will also have extensive and sophisticated resources available to them to conduct their own internal investigations, and may sometimes be in a better position than external inspectors to uncover exactly why an incident occurred, because of their ready access to the site and the people involved.

Permitting an operator to conduct an investigation may also act as an educative tool, helping them to prevent similar incidents from occurring. Any recommendations made by the operator itself to improve safety may be more likely to achieve immediate acceptance given that they were developed internally rather than imposed by an external body.

Nevertheless, I am concerned that decisions about whether QMI will investigate serious incidents (other than those involving a fatality) are not being made consistently from region to region and even within a region.

There is also a substantial risk that an operator, even if it has the capacity to conduct an adequate internal investigation, may not do so if concerned that it will reveal serious breaches of safety that may have an adverse financial impact or damage its reputation or the relationship between employees and management.

There is the additional consideration that the investigation of such incidents can provide valuable safety lessons for the benefit of the industry as a whole (or part of the industry). These are likely to be lost if the QMI does not conduct the investigation.

Having regard to the inherent risks in permitting operators to investigate relatively serious incidents themselves, I believe a clearer policy is required to guide the QMI's decisions on which cases or types of cases it will investigate.

Recommendation 2

That a proposal be prepared for the Minister that the Coal Act and the Mining and Quarrying Act be amended to require the QMI to investigate, as soon as practicable, any incident at a mine resulting in serious injury to a person where there is a reasonable possibility that the injury will lead to the person's death.

DME response

DME agreed with this recommendation, noting that amendments can be proposed as part of the current round of amendments of the two Acts. DME also advised that the investigation response guide to incidents will be formalised as part of the *Investigation Process Manual*. DME noted that, while resources limit investigation of all incidents, it almost always investigates incidents resulting in serious injuries.

It also stated that both the Coal Act and the Mining and Quarrying Act also empower site senior executives (SSEs) at mine sites to investigate, and that following an investigation, SSEs must report their findings to the QMI.

Recommendation 3

That the QMI develop and implement a policy whereby it takes primary responsibility for the investigation of:

- incidents at mines resulting in serious injury; and
- high potential incidents.

DME response

In its response, DME noted that there are over 1000 high potential incidents in the mining industry each year, and that a large increase in QMI staff would be required to enable investigation of all such incidents. DME indicated it does in fact investigate almost all serious injury incidents. It stated it will formalise an amendment to the *Investigation Process Manual* to assist in determining which incidents it will investigate, and that it will also examine ways of improving the efficacy of its process for reporting its analysis of high potential incidents.

Ombudsman comment

I recognise that recommendations 2 and 3 have resourcing implications for QMI, particularly in light of its current difficulties in recruiting and retaining qualified staff. However, for the reasons I have expressed above, I consider it important that QMI take on these additional responsibilities. I deal with the funding issue in Chapter 13.

Recommendation 4

That the QMI provide guidance to inspectors on the application of the policy referred to in recommendation 3.

DME response

DME agreed to this recommendation.

6.4 Delays in producing reports

The CFMEU expressed a concern that the QMI's investigative reports sometimes take a considerable time to produce. The concern was that the sheer length of the process ruled out the possibility of a prosecution even where a prosecution might be an appropriate course to take.

Under both Acts, the Director-General of the DME generally has one year from the date of the incident within which to launch a prosecution.⁹¹ We were told that reports have, on occasion, been produced so late that the one year limitation has virtually expired, preventing, in a practical sense, any prosecution from being launched. This may have occurred in one incident investigation we examined during our audit, although it was not clear that a prosecution would have commenced but for the delay.

There may be legitimate complications which lead to this occurring. Indeed, our audit of QMI investigation reports showed that some of them deal with very complex matters. However, the implication is that, at some point relatively early in the investigation, someone has to decide whether prosecution is a possibility.

Presumably, the investigation coordinator (a position established by QMI to manage the legal aspects of investigations) would be best placed to determine this, working alongside the inspector.

At a certain point (say, three months into an investigation), it may become fairly clear that no legal action is likely, in which case the investigation could proceed in a standard 'nature and cause' mode. In other cases, a potential prosecution may become clear very early in the matter.

My investigation did not find any evidence of deliberate or unreasonable delays in the production of investigation reports.

Opinion 4

My investigation did not indicate that unreasonable delays are occurring in the production of investigation reports.

Recommendation 5

That where the QMI investigates an incident at a mine resulting in death or serious injury or a high potential incident, the Investigation Coordinator for the region or another appropriately qualified person (for example, a legal officer) participate in the investigation (at least initially) and report to the Executive Director and the relevant Chief Inspector of Mines on:

- whether the investigation is likely to result in prosecution action; or
- if it is too early to make that assessment, the action that needs to be taken before such an assessment can be made.

⁹¹ Coal Act s.257(a); Mining and Quarrying Act s.236(a)

DME response

The DME agreed with this recommendation, noting that it has already appointed two investigation coordination officers (one each in Townsville and Mackay), with a proposal in place to recruit a third officer for its Southern Region. These officers perform the duties of an Authorised Officer under the Coal Act and the Mining and Quarrying Act.

Investigation officers conduct and coordinate the activities of inspectors and inspection officers in the gathering of evidence, conducting of statements and interviews, scene preservation, and data collection throughout the state. In the event of a major incident response, investigation officers manage the evidentiary functions of the incident room including incident recorders, database managers, investigators and inspectorate staff conducting enquiries.

This work was previously performed by the compliance unit within the then Department of Natural Resources and Mines but the positions were created in Safety and Health due to the need to provide quality investigation services and technical advice to inspectorate staff in the complex regulation of mining, petroleum and gas and explosives industry.

Recommendation 6

That the QMI implement a procedure whereby, if an investigation has continued for a specified period (say, six months) and an assessment has still not been made about whether it will be likely to lead to prosecution action, the matter is 'fast-tracked' to ensure that the period in which a prosecution may commence does not expire.

DME response

DME agreed with recommendation 6, stating that it is essential that investigations be monitored to ensure that reports and briefs are completed within the required timeframe. DME added that this monitoring process is now being undertaken on a fortnightly basis with details on progress circulated to relevant officers.

A QMI officer also commented that the transience of much of the mining industry workforce can lead to investigations taking longer than anticipated, especially where witnesses have left the relevant mine operation and moved elsewhere.

6.5 Coronial inquests

The QMI has considerable experience in participating in coronial inquests, which follow most deaths in mines. Prior to the introduction of the *Coroners Act 2003*, deaths in the course of mining operations were subject to an inquest by the Mining Warden. Now, inquests are conducted by the State Coroner. These inquests are directed at examining how and why the death occurred and, where appropriate, making recommendations for the prevention of similar deaths in future.⁹²

The following recent coronial inquests illustrate the important role the coronial system plays in identifying improvements in mine safety and the important role the QMI plays in supporting the work of coroners and acting on their safety recommendations.

Case study: RB (central Queensland)

RB was in the process of inspecting the edge of a mine pit alone when he fell a considerable distance into a pond. He died some time later. His partner contacted the mine operator several times, distressed because he had not returned home from work and she could not contact him. However, his body was not found until late the next morning. His computer had been left on, his wallet and personal belongings were still at his desk, and the vehicle he had used for the inspection was parked with the engine still running. It had been seen by others several times during the evening.

The Coroner found that there were inadequacies in the manner in which the mine operator handled reports of missing persons and made recommendations about this, as well as in relation to reviews of procedures to prevent falls from the edges of excavations.

The Coroner was also concerned about communication problems between the QMI, Queensland Police Service and the family of RB, which led to his partner not being made aware of the full circumstances of his death.

Case study: PM (north-west Queensland)

PM was removing a wheel from a large dump truck at a mine site in far north-western Queensland. The highly compressed air within the wheel was released suddenly and explosively, throwing the 3.5 tonne outer wheel a distance of 13 metres. PM was in the path of the wheel and sustained fatal injuries.

The QMI conducted an investigation and prepared a subsequent report. The Coroner stated:

[The QMI Inspector] and those assisting him produced a detailed report and an animated graphic both of which I found very helpful in understanding the sequence of events leading to [the victim's] death.

...

I am satisfied that the investigation was thorough and professional and that it addressed all of the relevant issues.⁹³

⁹² See ss. 45(2) and 46(1) of the *Coroners Act 2003*

⁹³ State Coroner, *Inquest into the Death of Peter Whitoria Marshall*, p.3

The Coroner found that there had been systemic failings in safety procedures at the mine, commenting:

The evidence of those senior people and of other workers who gave evidence also persuaded me that the leaseholder, the [site senior executive] and the major contractor ... took very seriously their obligation to maintain safe systems of work. Certainly, these systems were not merely 'window dressing' and, while no direct evidence was given on the point, it is obvious that the companies involved have devoted very significant financial resources to safety issues. Further, since the death of [PM], relevant [standard operating procedures] have been developed and a system of tagging deflated tyres has been introduced.

Notwithstanding these endeavours, there is compelling evidence that they have not resulted in a sufficiently high level of compliance with safety standards in the tyre bay. I accept that this non-compliance was news to the company executives and supervisors which means that there is no reason to think that the gap between organisational artefacts – the policies and procedures – and what the workers actually do, doesn't exist also in other parts of the operation.

The idea that inherently dangerous activities can be made safe by a multiplicity of rules is of course flawed. Compliance with the rules and commitment to safe practice is also required. Organisational and industrial psychologists have for some time articulated the difficulties of changing the climate and culture of an organisation and have recognised the limited role rules can play in such a process.

...

It seem[s] to me that while workers continue to engage in aberrant behaviour when that activity has recently led to the death of one of their colleagues, the organisation can not claim to have instilled a 'safety first' approach among the workforce. Indeed, such actions would seem to suggest that the organization is in urgent need of some specialist outside advice as to how the culture and climate could be changed to lessen the gap between its artefacts and the action of its workers.⁹⁴

In light of this finding, the Coroner recommended that the mine operator hire:

[a] consultant with an industrial or organisational psychology background to review the safety culture of the operation with a view to better informing management of how safe work practices can be internalised by staff of the mine.⁹⁵

The incident occurred during a night shift at a time when there was minimal supervision of tyre bay operations. The Coroner found that this lack of supervision meant that management of the mine was unaware staff were, on a regular basis, failing to follow correct tyre changing procedures. The Coroner further recommended that:

The Mines Inspectorate investigate how meaningful supervision can be delivered to a heterogeneous workforce of skilled autonomous workers engaged on a disparate site and that they publish their findings and practical examples applicable to various mining activities.⁹⁶

⁹⁴ State Coroner, *Inquest into the Death of Peter Whitoria Marshall*, pp.11-12

⁹⁵ State Coroner, *Inquest into the Death of Peter Whitoria Marshall*, p.12

⁹⁶ State Coroner, *Inquest into the Death of Peter Whitoria Marshall*, p.13

Case study: KMD (western Queensland)

KMD was employed by the operator of a small mining operation outside Winton to do the book keeping. She accompanied her son and the operator in a truck (with a sleeper cabin) to the mining lease site. The group arrived at the site at about 9.30 pm. The operator preferred to work at night as it was cooler and there was less traffic on the roads.

The operator left the truck to load trailers from stock piles of gypsum nearby, and gave both passengers the instruction to remain in the truck while he was away. While moving the loader, the operator ran over KMD, who had left the truck. The operator rushed KMD back to Winton in the truck; however, she died on the way.

The QMI investigated the death and determined that no charges would be laid under the mine safety legislation. At the inquest, QMI inspectors gave evidence that it was unlikely they, or any other mine worker, would have acted any differently to the operator in this case.

The Coroner commented:

It is appropriate ... to introduce the concept of hindsight bias, i.e. because we know the result we therefore consider, even unconsciously, a different answer to the question raised ...

[The QMI inspectors] all agree that the method used by [the operator] to load the trailers is very standard and at least probably if not absolutely the way they would do it ...

What may differ is the response to the situation where [the operator] could no longer see [KMD]. We can all now say, knowing the result, that we would have stopped the loader and gone to see where she was. But would that have been our honest response at the time if we were driving the loader and an adult, who had been there before, who had previously been told to stay in the truck and had done so – including going out of sight into the sleeper cab – and on the night in question was told to ‘stay in the truck’?

In the circumstances, the Coroner did not refer any information to the Director of Public Prosecutions concerning possible criminal charges.

In closing, the Coroner said:

During the course of the inquest such things as poor communication, allowing visitors on site and so on were raised and I believe that [the QMI has] already, since this tragedy, addressed all the recommendations which I could have made.

In December 2006, I published a report called *The Coronial Recommendations Project*, which drew attention to the fact that there was a widespread failure among Queensland public sector agencies to implement coronial recommendations. In fact, in many cases the agencies concerned were not even aware recommendations had been made which were relevant to them.

One of the opinions I formed during that investigation was:

Officers who discharge regulatory functions in public sector agencies should ensure that their investigations of incidents resulting in a person's death are not focussed solely on whether a breach of legislation has occurred and should be prosecuted but also consider measures for preventing similar deaths occurring.⁹⁷

The coronial inquest reports sampled during that project did not include any reports relating to deaths connected with mines. However, the State Coroner, in responding to this particular opinion, noted that some agencies, including QMI, were already including in their reports recommendations about ways to prevent similar deaths occurring.

My current investigation revealed extensive evidence that the QMI has a high capability of assisting the Coroner in determining the nature and cause of deaths, and in making recommendations for improving safety systems and procedures. This conclusion is certainly borne out by the comments of several coroners in recent inquests, such as the following one made by Coroner Hennessy:

I am satisfied that the [QMI's] investigation was carried out in an appropriate, professional and thorough manner and the information gathered was of critical importance to the inquest.⁹⁸

I am satisfied that the QMI already provides appropriate training for all new inspectors (in the form of a Diploma or Advanced Diploma in Workplace Inspection) in investigative methodology, as well as in auditing, ICAM and risk management. I am also satisfied, based on our review, that the standard of QMI's investigations is generally high. However, such work is a specialised area requiring broad knowledge and experience (particularly where a coronial inquest is required), which mine inspectors cannot be expected to possess without appropriate training, especially given the relatively high turnover rate for QMI staff.

That training also needs to include instruction in the preparation of investigation reports in language appropriate to the relevant audience. Reports will often need to contain technical information. However, depending on the intended audience, reports may need to be written in a manner that enables persons who are not mining experts (such as a coroner, a court, the media, as well as the worker's family, friends and co-workers), to understand:

- what happened and why;
- whether the operator's immediate response was appropriate;
- what should be done to prevent recurrences; and
- whether any person should be prosecuted.

In my proposed report, I recommended that the DME develop a training program for inspectors in matters such as the investigations process, and reporting to a wide range of audiences.

⁹⁷ Opinion 6 – see *The Coronial Recommendations Project Report*, p.35

⁹⁸ State Coroner, *Inquest into the Death of Shane William Davis* (Transcript of Proceedings – Findings, 21 March 2007), p.70

In its response, the DME indicated that training in the investigations process is currently required for all inspectors. Relevant Diploma and Advanced Diploma courses are also to be offered to staff through the Central Queensland Institute of TAFE with course development currently underway.

Recommendation 7

That, during the current accreditation period, the QMI review the content of relevant units of competency in its Diploma and Advanced Diploma courses, in light of the comments in this report about the need, in certain instances, to provide reports on investigations, or on the outcomes of investigations, to non-technical audiences.

6.6 Publishing investigation and enforcement details

Many internationally respected safety regulators have moved to greater transparency in their investigation and compliance activities in recent years, for example, by publishing investigation reports and the outcomes of other compliance activities. In many cases, the publication of such information may achieve benefits similar to those that result from a successful prosecution (which would generally be more expensive and take longer), such as:

- acting as an incentive for the miner to appropriately address the incident or deficient practice to avoid further adverse publicity;
- bringing the incident or deficient practice to the attention of the industry generally and thus acting as an incentive for other miners to take action to avoid similar incidents occurring or to improve their own practices; and
- making the community aware of the important work being carried out by the publicly funded regulator.

The Norwegian safety regulator for the offshore petroleum industry (Petroleum Safety Authority Norway (PSA)) publishes details of investigations, audit reports, guidance and directives on its website. There is no attempt to disguise the identities of the operators. This has no doubt caused some concern in the Norwegian oil industry, as the PSA itself admits:

The oil industry is less than happy with the PSA from time to time, particularly when the agency goes public in the media with criticism or negative characterisations of the companies.

Opponents ask whether the authorities should really release so much information and be so critical, and whether the PSA is aware that it is partly responsible for the reputation of companies and the industry ... Is the PSA oblivious to the fact that the companies are listed on the stock market, critics ask. Is the agency not aware that it is contributing to much negative coverage of the country's most important [cash] cow?

Being open about the challenges, problems and near-misses makes it possible to learn and improve. A focus on what actually or almost went wrong – and why – reduces the probability of a repetition ... Correcting the industry will always be part of the government's role – that is inherent in the supervisory concept. And when the regulator believes there is cause for concern, this view will and must be expressed – in external media, on its own website and through the publication of audit results, inquiry reports, serious incidents and industry-wide problems.

Information is not provided to expose the industry to criticism, destroy its reputation or weaken share prices. Its purpose is to help focus attention on aspects which function badly and – when appropriate – on those which function well ... In a society where freedom of information and the duty to inform are highly valued, the industry has everything to gain by defining and learning from things which are not good enough.

The government's role is to be both a guide dog and a guard dog for the industry ...

When ... one and the same company is responsible for 70-90 per cent of oil and gas output on the [continental shelf], a large part of the undesirable incidents are likely to occur there. The challenge then for the PSA will not be to take special considerations into account, so that the ... company does not face too much criticism.

On the contrary, the trick will be to act as a regulator with backbone, strength, integrity, a firm awareness of its role and the expertise to meet and match a partner and an adversary of such size. A guard dog seldom wins popularity contests, but does not stop barking for that reason. Otherwise it will be replaced by another canine which can do the job.⁹⁹

This approach is mirrored by the UK Office of Rail Regulation, which publishes on its website details of its prosecutions and other compliance action.¹⁰⁰ Anyone can access the website and view:

- which companies in the industry have received 'improvement notices';
- what those improvement notices were about;
- the date the notices were issued;
- the date by which the company must comply; and
- whether, at the date of viewing, the company has complied with the improvement notice.¹⁰¹

As discussed elsewhere in this report, the Australian transport safety investigator, the Australian Transport Safety Bureau (ATSB), also publishes full investigation reports on its website, including:

- details of the incident or near-miss;
- a full analysis of what went wrong and why;
- recommendations to prevent a recurrence; and
- details of the responses from, and actions by, those to whom the ATSB has made recommendations.

Other regulators, such as the Australian Competition and Consumer Commission (ACCC)¹⁰² and the Queensland Office of Fair Trading,¹⁰³ provide details on their websites of their compliance activities, such as enforceable undertakings and prosecutions.

⁹⁹ Petroleum Safety Authority Norway, *Safety, Status and Signals 2006-2007*, pp.20-21

¹⁰⁰ See UK Office of Rail Regulation website – <http://www.rail-reg.gov.uk>

¹⁰¹ See 'Improvement Notices' webpage at <http://www.rail-reg.gov.uk/server/show/category.1283>

¹⁰² See, for example, the ACCC's Undertakings Register at: <http://www.accc.gov.au/content/index.phtml/itemId/6029/fromItemId/3673>

¹⁰³ See the media releases about enforcement action at the Office of Fair Trading's website: <http://www.fairtrading.qld.gov.au>

Any move towards more open reporting of QMI enforcement activities may be resisted by the Queensland mining industry as unfairly damaging the reputation of miners.

However, as indicated above, other industries (such as Australia's aviation industry and the UK rail industry) appear to have accepted a higher level of public exposure in respect of their performance on safety-related issues.

Any scheme for enhancing public reporting by QMI of its compliance activities would need to be supported by a legislative framework that:

- authorises such reporting;
- protects the regulator and its officers from civil liability except where a report is shown to be intentionally or recklessly false;
- requires the QMI to include in its reports, a fair summary of the action taken by an operator or other relevant person in response to the QMI's compliance activity; and
- requires the QMI to omit from its public reports information that would prejudice the reputation of an operator or other person where the information is not necessary to understand the action taken by the QMI, why the action was taken and the operator's (or other person's) response to the action.

The fact that many safety regulators already publish their investigation reports and details of their enforcement actions indicates that such a reporting scheme is viable. Managed properly, a system of public reporting could be used to encourage rectification of problems. For example, an operator found to have a flawed system could be encouraged to fix the problem as quickly as possible so that details of the action taken can be included in the report, reflecting positively on the operator's safety culture.

Recommendation 8

That a proposal be prepared for the Minister that the Coal Act and the Mining and Quarrying Act be amended to authorise the QMI to publish the following information (except when to do so may prejudice potential prosecution action):

- its investigation reports into serious incidents in mines; and
- such details of its other compliance activities (including the issuing of directives to operators) as it considers appropriate for promoting safety in mines.

DME response

DME indicated that some information on prosecutions and fatal accident investigations is already placed on its website, in newsletters and in its annual report. According to DME, increased reporting can be undertaken without the need for legislation.

DME further advised that the recent Parker and Cliff report has identified opportunities for improved publication of information which include expansion of the information provided in the Annual Safety Performance and Health Report. According to DME, stakeholders have also expressed a desire to have more information available on the internet. DME advises that implementation of the Parker and Cliff report's recommendations has commenced.

The Department also commented that it:

... publishes safety alerts on incidents investigated where appropriate action should be taken by industry to address concerns on the internet. Non-legislative reporting is in accordance with the government's commitment to reduce over-regulation.

Ombudsman comment

I made this recommendation based on my observations of the value of incident reporting schemes in other industries or areas of regulation. There are essentially two types of reporting:

- nature and cause reporting; and
- breach or infringement reporting.

DME regularly publishes safety alert bulletins on its webpage.¹⁰⁴ An example of a safety alert is contained at Appendix 4. These bulletins are a form of 'nature and cause' reporting, as they explain to industry (and the general public) the details of particular risks in light of recent incidents, and on the ways these risks can be avoided or minimised. There is no identification of the particular individuals or operators involved. These are clearly a useful means of communicating safety concerns to the industry and how they should be managed.

However, my recommendation relates to the QMI publishing more detailed reports about significant incidents such as deaths or serious injuries. I envisaged these reports being somewhat similar to reports produced by the ATSB under the authority of the *Transport Safety Investigation Act 2003* (see discussion at 10.8).

As mentioned above, regulators such as the ACCC and the Office of Fair Trading publish details on their websites of actual compliance actions against entities they regulate. That is, they report details of breaches or infringements of the relevant legislation.

The purpose is not only to encourage operators to avoid breaches (and to comply with breach notices) but also to publicly demonstrate the rigour of the regulator's compliance action. In DME's case, it could, for example, publish details of its directives (at least in more serious cases, such as where operations are shut down due to health and safety risks).

Although DME may be correct in asserting that it can increase the public reporting of its compliance activity without a legislative amendment, it would be preferable to provide a clear legislative basis for the reporting regime I am recommending. This will clarify the scope and purpose of the regime for all concerned (as is the case with the regime under the *Transport Safety Investigation Act 2003*).

¹⁰⁴ http://www.dme.qld.gov.au/mines/mining_safety___health.cfm

Chapter 7: Routine inspections and audits

7.1 Inspections

The core of the QMI's work is the conduct of regular, routine inspections at all mine sites across Queensland.

The most common is a **structured inspection**. These inspections usually involve one inspector visiting a mine site to inspect a certain aspect of that site's operations. There are a number of elements of mining operations on which the QMI bases its inspections, described in Table 5.

Table 5: QMI structured inspection elements

Category					
Element	Mining	Mechanical	Electrical	General	Chemical
	Development Mining	Cranes	Plant Equipment	Emergency Procedures	SXEW Plants
	Ground Control	Fuel and Oil Storage	Sub Stations and Switch Rooms	Project Management and Contractors	Smelting
	Production	Forklifts	Motor Control Centres	Exploration	Concentrating
	Transport and Haulage	Crushing and Conveying	Bore Fields	Warehousing	Sulphuric Acid
	Remote Control Equipment	Workshops and Maintenance Services	Power Generation and Distribution		Reagents and Chemical Batching
	Explosives Storage and Transport	Vehicle Management Systems	Accommodation and Facilities		Leaching
	Ventilation and Working in Heat	Structural Inspection	Welders		
	Hoisting and Shaft Inspection		Pump Stations, Workshop Installations		
	Backfill		Trailing Cables and DCBs		
			Mobile Electrical		

Each structured inspection will involve one or more of these elements as relevant to the mine site under scrutiny. For example, the inspections my investigators observed involved:

- above and below ground vehicle workshops; and
- ground control for underground operations.

Inspectors may also observe and deal with other matters of interest during an inspection not directly related to the element under consideration that day.

For example, during the inspections my investigators observed, one inspector raised an issue about transport and haulage from the mine with mine management, based on observations on the drive to the mine site, although the inspection itself was focussed on ground control for the mine's underground operations.

The QMI advised us that, where two or more inspectors conduct a routine structured inspection of a site, they will usually inspect one element each, rather than all inspectors scrutinising the same element.

The QMI has a rolling series of scheduled mine inspections. The computer program used to determine the priority of inspections is known as RIPS.¹⁰⁵ My investigators were shown the format of the RIPS database. They were informed that it schedules mine site inspections based on a formula comprising a number of factors, including:

- the number of previous inspections;
- how recently the mine was inspected;
- the number of directives and other compliance actions the QMI has required of the mine; and
- the risk level of the mine.

RIPS generates a numerical value which represents the priority to be given to an inspection of particular operations at a particular site. For example, a record of repeated directives at a mine site dealing with ground control (a high-risk element) in geologically high-risk operations is likely to result in the RIPS database prioritising an inspection.

Inspections are managed according to checklists designed for each specific element. However, my investigators observed (and the QMI confirmed) that inspectors do not rigidly follow the checklist format, but can vary the inspection process where they think it justified.

We were told that, with the QMI having difficulty attracting and retaining inspectors:

... [RIPS] has virtually fallen by the wayside with the shortage of labour that we've had ... plus we've had some pretty significant investigations [into] some serious accidents and when that happens the investigations become ... the predominant activity.

We were informed that there are two risk-based prioritisation systems used by the QMI – RIPS, and an older system which appears to still be in use by some inspectors. When asked about this overlap by my investigators, two inspectors from the Northern Region advised that the outcomes produced by the two systems were sufficiently similar for working purposes.

¹⁰⁵ Risk-based inspection performance and scheduling database

My investigators did not find any evidence that the continuing existence of the two systems was leading to any degree of confusion. However, there is the potential for this to lead to inconsistent compliance practices.

Recommendation 9

That the QMI standardise its risk-based inspection prioritisation system.

DME response

The DME agreed, stating that ‘... the risk-based inspection prioritisation system should be restored to common use now that the inspectorate is fully staffed.’

7.2 SafeGuard

*A good safety management system is no guarantee against lapses and errors of various sorts. Every credible safety system audit finds problems; an audit which doesn't is hardly credible.*¹⁰⁶

The next level up in the QMI's inspection hierarchy is called a **subject audit**. These are focussed audits of mine operators' management of significant risks in their operations (for example, ground control or vehicle management). A subject audit is more detailed and intensive than a structured inspection, and may involve several inspectors.

The next level of inspection activity is a **SafeGuard audit**. *SafeGuard* is a safety and health management system (including audit criteria) developed by the QMI for the Queensland mining industry. It has been in operation for more than ten years.

QMI conducts audits of major mines in accordance with the *SafeGuard* system and prepares substantial audit reports. We reviewed ten of these during our own audit of the QMI.

SafeGuard audits are substantial projects, involving numerous QMI inspectors and others being on site for up to one week.

The performance of a mine operation is assessed against 20 criteria:

- management responsibility
- safety and health systems
- duty of care review
- design and planning
- document control
- purchasing and employment
- control of customer supplied product
- identification and traceability
- work method control
- inspection, monitoring and testing
- inspection, monitoring and testing equipment
- inspection, monitoring and test status
- reporting and control
- corrective and preventive action

¹⁰⁶ Hopkins, *The Gretley Coal Mine Disaster*, p.12

- handling, storage, transport and accommodation
- safety and health records
- safety and health audits
- training
- servicing
- statistical techniques.

SafeGuard audits are valuable in that they provide a comprehensive overview of the functioning of a range of aspects of the mine operations, and also describe positive aspects as well as areas requiring improvement.

An audit system such as *SafeGuard* may prove just as effective, if not more so, than a prosecution in terms of identifying and fixing safety and health problems in mine operations. This is because such audits focus on broader organisational factors, and not simply immediately obvious physical hazards. As Reason¹⁰⁷ and others have demonstrated, safety problems rarely arise in isolation – there is often a systemic flaw in the organisation's policies or practices which led to, or failed to prevent, serious incidents.

Further advantages of a *SafeGuard* audit are that:

- audits are conducted by a team of inspectors, minimising the possibility of intimidating, influencing or corrupting an individual inspector, and broadening the range of expert opinion considering the mine site's operations;
- audits are conducted over several days, allowing inspectors more time to consider problems and uncover issues of concern; and
- audits are generally seen in a positive light by operators.

As part of a *SafeGuard* audit, operators can be issued with:

- mandatory corrective actions (where auditors identify serious systemic failures); or
- recommended corrective actions (where auditors identify significant shortcomings in a mine's systems); or
- 'improvement opportunities', which the operator is not obliged to implement (generally in cases where auditors are aware of best practice alternatives, or wish to offer guidance to an operator even though their systems may not necessarily be deficient).

Routinely, the outcomes of a *SafeGuard* audit are also written in a mine record entry¹⁰⁸ (discussed in more detail in Chapter 9).

While the benefits of a *SafeGuard* audit are potentially enormous, each audit is extremely resource intensive for the QMI. For that reason, QMI has had to use *SafeGuard* audits sparingly and in connection with the larger operators only.

¹⁰⁷ See Reason, *Managing the Risks of Organizational Accidents*, 1997

¹⁰⁸ A formal record of actions during a QMI inspection which must be displayed by the mine operator on site – see Chapter 9.

I note that in March 2007, the Minister for Mines and Energy, the Honourable Geoff Wilson MP, ordered that safety audits of certain operators in Queensland be carried out.¹⁰⁹ These audits were directed to mines that had a recent incident record of concern, as well as certain operations considered to be high risk.

External experts were contracted to assist the QMI with this audit program. At the time of my investigation, this work was ongoing. I understand that the *SafeGuard* methodology was used.

My proposed report recommended (as proposed Recommendation 10):

That the QMI significantly expand its SafeGuard audit program.

In my proposed report, I indicated that I recognised that implementing the recommendation would require significant resources but considered this justifiable as the methodology appeared to facilitate a comprehensive evaluation of safety at a site and a coordinated approach to addressing safety concerns.

The DME expressed concern about this recommendation, stating:

It should be noted that SafeGuard audits are extremely resource intensive and do not necessarily provide the best use of available resources. A single SafeGuard audit can take in excess of 40 inspector days to complete. It is not necessary to have a SafeGuard audit to ensure that a team-based approach to inspections is used. In fact, in the current calendar year the Inspectorate is undertaking audits, unannounced audits, inspections and unannounced inspections in accordance with identified risks which represents best utilisation of our resources.

The Director-General of DME informed me that, following a significant expansion of *SafeGuard* audits during 2007 (at the direction of the Minister), seven broad themes of concern had been identified (such as fatigue and contractor management). These themes have since been used as a basis for more widespread, but more focussed, inspections around the state. DME believes this approach provides the best mix of broad auditing at a small number of sites, and narrower (but more focussed) inspections at a larger number of sites.

I accept that significantly expanding *SafeGuard* audits will strain the QMI's resourcing, and may not necessarily lead to the most effective use of the Inspectorate's staff. My intention in making the proposed recommendation was to encourage DME to expand the use of team-based audits (rather than single-person inspections) focussed on higher-risk sites and higher-risk activities at sites.

I have modified the recommendation accordingly.

Recommendation 10

That the QMI significantly expand its use of team-based auditing activities with priority to be given to higher-risk operations, whether through the *SafeGuard* audit program, or other means.

¹⁰⁹ Media Statement 8 March 2007, the Honourable Geoff Wilson MP [Accessed at: http://www.dme.qld.gov.au/media_centre.cfm?item=247.0]

7.3 Unannounced inspections and relations with operators

The QMI, along with other mine safety regulators in Australia, has been criticised for failing to carry out unannounced mine site inspections as often as is warranted.¹¹⁰ For example, in relation to allegations that the WA mine safety inspectorate conducted too many announced inspections, it was said:

It is clear ... that some sites that are not fulfilling their general duty obligations adequately take advantage of the notification to temporarily lift standards or to remove or disguise difficulties. Reports of inspectors' attention being diverted to the better and safer areas and, more significantly, away from poor safety areas or certain personnel were not uncommon ...¹¹¹

There are many mines, quarries and related facilities across Queensland. Ideally, each should be inspected regularly. It would, however, be unreasonable to expect the QMI (with its current resourcing) to conduct unannounced inspections of every aspect of every mine operation in Queensland.

QMI regional staff informed us that, ideally, they would like to conduct many more unannounced inspections than they do. However, they also advised that even when an inspection is announced, the QMI will not indicate which of the inspection elements (see 7.1) will be the focus of the inspection.

Furthermore, it is virtually impossible to conduct unannounced inspections of some of the larger, more remote mines, and the limited number of inspectors makes it inevitable that the same inspector will visit the same site repeatedly.

At some locations there may be only one feasible method of transport (by chartered aircraft). The size of the operation will likely warrant a visit of more than one day, necessitating an overnight stay (at the very least). There may be nowhere else for inspectors to stay and eat other than at accommodation and canteens provided by the mine operator. Additionally, without prior arrangements having been made, it is quite possible that key staff to whom the inspector needs to speak will be absent (for example, rostered onto a different shift).

In the Southern Region, at least, we found extensive evidence of routine unannounced inspections. This may, however, simply be due to the fact that many operators in the region are small to medium-sized quarries, which are easily accessible by road, and are within a relatively short travelling distance for inspectors.

In the DME's response to my proposed report, it advised that 290 unannounced inspections were carried out in 2006-2007.

¹¹⁰ See, for example, Gunningham, *Mine Safety*, p.105

¹¹¹ Laing, *Final Report – Review of the Mines Safety and Inspection Act 1994*, p.198

Although unannounced inspections are more likely to lead to the discovery of unsafe practices, announced inspections can still be valuable. The simple fact that an experienced inspector will be visiting the mine can act as an incentive to ensure safety measures are in place and operating effectively.

Moreover, we were advised by many people during this investigation that one of the core dangers to a robust health and safety system is the *normalisation of risk*. This term describes the situation where unsafe or unsatisfactory practices are allowed to continue simply because the people exposed to them become used to their presence and their levels of concern are reduced. In short, familiarity can breed acceptance of objectively unsafe situations. In these cases, an objective outsider such as an inspector may draw attention to the problem and identify and encourage a rapid solution.

Opinion 5

While the QMI's inspectors frequently advise operators that mine inspections are to take place, the evidence does not support the opinion that this is being done to favour particular operators or that it is reducing the effectiveness of the inspections program.

Recommendation 11

That the QMI provide guidelines to its inspectors on the types of situations in which it is appropriate or inappropriate to warn mine operators of proposed site inspections.

DME response

The DME agreed to implement this recommendation.

In addition to the issue of whether inspections are carried out appropriately is the question of the general interaction of inspectors and mine staff during inspections, particularly during longer audits or investigations which may require overnight or longer stays by inspectors.

The QMI informed us that there are certain measures in place to ensure a high degree of objectivity in inspections. These include ensuring no inspector is allocated to a mine connected to a former employer. The QMI also advised us that they have informal protocols to prevent perceptions of bias in these situations, such as a general direction to inspectors not to drink alcohol or socialise excessively in canteens at mine sites.

It was evident to my investigators that the inspectors they accompanied in the Northern Region were well known to mine staff, who treated them in a friendly and collegiate manner. I do not believe there is anything inappropriate in this, provided the inspections remain on a professional and objective footing and inspectors are careful not to socialise with mine staff to an extent that could be perceived as jeopardising their independence.

In fact, a more detached and officious approach to conducting inspections may be counterproductive, as mine staff may become less cooperative and more defensive and fail to reveal problem areas. Mine staff we spoke to indicated that, when they feel comfortable with the attitude of a QMI inspector, they are more likely to be open about the mine's operations and to report matters of concern.

Furthermore, in many Queensland communities (such as Mount Isa), complete isolation and detachment from the mining industry outside the work setting is virtually impossible. The mine manager or other senior mine officer to whom an inspector has issued a directive may, for example, send their children to the same school as the inspector, frequent the same social venues, and run into the inspector in supermarket check-out queues.

As my investigators only accompanied two QMI inspectors on visits to mine sites, I do not have evidence from a sufficiently large sample to draw any broad conclusions about the appropriateness of the relationship between QMI inspectors and mine staff.

My officers certainly saw no evidence during the investigation, however, to suggest that inspectors are behaving other than appropriately and professionally during inspections. Nevertheless, I consider that a set of public guidelines on what is considered acceptable, particularly during the longer visits to more remote locations, would be useful to both inspectors and the industry.

Recommendation 12

That the QMI publish guidelines on how inspectors are to conduct themselves on visits to sites, with particular reference to the extent of their social interaction with staff of remote mining operations (whether at the mine or elsewhere).

DME response

DME agreed, indicating there is already an Inspection Protocol on personal conduct during inspections. The Department has undertaken to review the Protocol in light of my comments and provide this to inspectors.

7.4 Contractors

In common with many other industries, the mining sector in Queensland makes increasing use of contractors in virtually all aspects of its operations. For example:

The requirement for specialist services, construction, shutdown, and breakdown labour as well as peak operational load requirements are only practically managed by bringing in outside workforces. Mining is an industry with constantly changing labour needs with peaks of a day, week, month and in the case of overburden stripping, sometimes years. Sustainable operation requires the labour costs to stop when the need diminishes.¹¹²

In theory, the health and safety obligations of the Coal Act and the Mining and Quarrying Act apply to everyone at a mine site. This means contractors are, like regular employees, required to observe the health and safety systems established at the mine at which they happen to be working. In fact, some contractors have been prosecuted by the QMI for breaching mine safety requirements.

¹¹² Crowe, *Ownership of Behavioural Safety in a Transient Workforce*, p.2

We were advised, however, that in practice, contractors can ‘fall through the cracks’ of a mine’s safety system. QMI staff told us this is not generally because of any failure on the part of mine operators to instruct contractors in the relevant health and safety systems. Instead, contractors can become confused or blasé about systems, or simply not be fully ‘immersed’ in a particular operation’s safety culture.

This may be because they frequently move from site to site and operator to operator and may not be considered an integral part of the local workforce. One academic publication explains the problem as follows:

... increasing prevalence of outsourcing, self-employment and the use of contingent workers can have a significant effect on OHS. This is because of: the pressures on sub-contractors (resulting in corner cutting, work intensification and excessive hours); disorganisation (or attenuated control systems in the workplace, under resourced operators, having strangers on site and so on); and undermining of regulatory controls.¹¹³

Case study: Death of a truck driver in Central Queensland

In 2005, SD was working as a truck driver for a transport company. The company was contracted to haul coal by road from the mine near Middlemount to another facility some distance away.

As SD was experiencing problems with one of the tyres, he stopped at the transport company’s workshops. There was a part-time tyre fitter on site; however, it was the drivers’ responsibility to remove wheel assemblies. The wheel in question had a cracked rim which had not been detected. While SD was removing the wheel assembly, the tyre exploded under pressure, killing him instantly.

The Coronial Inquest¹¹⁴ into SD’s death revealed that the contractor transport company had inadequate safety induction and training. The Coroner found that:

- there was no evidence truck drivers had been given safety information about the correct way to handle the wheel assemblies;
- the contractor and its staff had paid little attention to the very similar death which had occurred during 2004,¹¹⁵ despite the publication of a safety alert¹¹⁶ by the QMI;
- there was a lack of experienced and qualified people to develop and implement a safety system for the contractor’s operations;
- little account was taken by the contractor of the different safety issues which might be encountered in the coal industry as opposed to regular transport;
- the person in charge of the relevant safety procedures at the contractor’s business admitted little or no knowledge of the relevant legislation;
- there was generally little or no consideration given to the interrelationship of the safety systems of the mine operation and the contractor; and

¹¹³ Bluff, Gunningham and Johnstone, *OHS Regulation for a Changing World of Work*, Federation Press, 2004 at p.3, quoted in Ritter, p.222

¹¹⁴ State Coroner, *Inquest into the Death of Shane William Davis* (Transcript of Proceedings – Findings 21 March 2007)

¹¹⁵ See the commentary on the inquest into the death of PM at Chapter 6.

¹¹⁶ An example safety alert to industry is contained in Appendix 4.

- the contractor's inductions were generally rushed and did not lead to new employees adequately learning correct safety procedures.

The Coroner's summary of the evidence given at the inquest by a colleague of SD provides a picture of the situation in which many contractors may find themselves:

... a truck driver [of the contractor] underwent a general black coal induction in Rockhampton for two days and a general site induction at both sites ... of one day each ... He went through the [contractor's own procedures] the following day. He stated that at that stage he was lost due to the amount of information being presented over the couple of days and that the inductions gave some awareness of the issues but not a total understanding.

He stated that most of the information was repetitive between the inductions and there was a risk of not fully understanding the information as it was all mulched in together. He said at the time of starting with [the contractor] he did not have a clue what was going on ... Things were happening thick and fast and it would take anyone a long time, in his opinion, to become [completely] comfortable in the workplace.¹¹⁷

At a broader level, the Coroner said:

Due to the rapid expansion in the coal mining sector in Queensland in recent years there are currently a large number of people without a high level of familiarity with the industry working in it ... Mine operators have placed increased reliance on contractors to provide services on site. Some contractors are large companies with mining experience but there are also those ... who have grown rapidly alongside the expansion in the industry and are operating on numerous mine sites under a number of different mining operators.

It was submitted that the use of contractors is a commercial decision for mine operators. The issues that contractors bring to a mining enterprise are a fact of life in the current industry and need to be managed appropriately.¹¹⁸

Most mining operators already foster positive safety culture and a proactive approach to safety issues on site to prevent or reduce normalisation of risk within their own business. Such an approach should also be adopted in relation to supervision of contractor activities.¹¹⁹

There is little evidence available on the extent to which the increasing use of contractors may be affecting overall mine safety in Queensland. However, in NSW, a survey of recent mine safety prosecutions revealed that issues relating to the safety practices of contractors constituted the largest single category leading to prosecution.¹²⁰ Further, the 2004 Wran Review of Mine Safety in NSW commented:

Although little systematic research has been undertaken into the use of contractors in mining in Australia, a report by the Western Australian Prevention of Mining Fatalities Taskforce (1997) pointed to a close association between a rising level of mine fatalities and the growing use of contract labour in the mining industry.¹²¹

¹¹⁷ State Coroner, *Inquest into the Death of Shane William Davis* (Transcript of Proceedings – Findings 21 March 2007), p.16

¹¹⁸ State Coroner, *Inquest into the Death of Shane William Davis* (Transcript of Proceedings – Findings 21 March 2007), p.56

¹¹⁹ State Coroner, *Inquest into the Death of Shane William Davis* (Transcript of Proceedings – Findings 21 March 2007), p.62

¹²⁰ Freeman, *Observations on Mine Safety Management from Review of Major OHS Prosecutions and Investigations*, p.7

¹²¹ Wran, *NSW Mine Safety Review*, p.35

There is also sufficient anecdotal evidence to suggest that more attention should be given to this area. For example, in January 2008, the DME reported that a contractor had been killed at a BHP Billiton mine, apparently as a result of a traffic incident.¹²² In a paper delivered at the 2007 Queensland Mining Industry Health and Safety Conference, it was said in relation to the nature of contracting work in the mining industry, that:

Rather than the certainty of years of known work or workplaces, the worker will often be unsure of the location and amount of work two months ahead. They live in construction camps of varying quality and full time employment can only occur by moving between mines on a regular basis.

... The current high demand in the industry further fuels the rate of movement through opportunity and alternatives for people with even limited experience.¹²³

Therefore, it is timely for the QMI to increase its focus on the standard of the health and safety systems of contractors providing services to mine operators, with particular regard to how well those systems are being integrated into those of mine operators. As with some other recommendations in this report, I recognise that implementing this recommendation will require significant resources. However, it is made so that QMI can proactively address what appears to be an emerging problem with mine safety.

Recommendation 13

That the QMI give greater emphasis to auditing the standard of the health and safety systems of contractors providing services to mine operators, with particular regard to how well those systems are being integrated into those of mine operators.

DME response

The DME agreed, stating that audit/inspection of contractors' systems already takes place. Under existing legislation, contractors must adhere to the mine site's Mines Safety Management Plan. Audits of these plans can be increased as appropriate.

¹²² See: 'Investigations continue into Cannington Mine fatality (18/01/08)' at http://www.dme.qld.gov.au/media_centre.cfm?item=421.0)

¹²³ Crowe, *Ownership of Behavioural Safety in a Transient Workforce*, pp.1-2

7.5 Inspectors as consultants

A common challenge for all government regulators is to maintain an appropriate balance between strict enforcement of the legislation, and providing advice on how those regulated can comply with the legislation. At some point in this continuum, an inspector can very easily become a de facto consultant.

The QMI considers it has a legitimate role to play in advising the mining industry on safety issues. A memorandum from a former Chief Inspector of Mines to all inspectors in June 2006 stated (in part):

This memorandum is to remind all Mines Inspectorate officers of the need to continue providing advice on safety and health issues to all obligation holders under the mining safety and health legislation ...

Provision of advice does not compromise the position of the Mines Inspectorate. Nor does following the advice mitigate the primary responsibility of any obligation holders to fulfil their obligations. Following the advice does not guarantee compliance with legislated obligations.

By way of example of the QMI's advisory role, it has recently identified a need to adopt a more educative strategy for small mine and quarry operators in relation to mine safety matters. This is based on the fact that, although the small mine and quarry sector represents only about 3% of the state's mining workforce, it has accounted for around 62% of recent mine deaths.¹²⁴

The difficulties with giving advice to a regulated industry include:

- it can later be used against the regulator (*'But you told me that was OK!'*);
- it can lead to a blurring of functions (*'Are you just giving me advice, or do I actually have to do this?'*);
- it can encourage the industry to believe enforcement action will not be taken (*'Don't worry about that ... When the inspector gets here we'll just ask for help and then they won't take any action'*); and
- it can lead to inconsistency (*'But Inspector XYZ saw that practice during the last inspection and said it was fine! Why are you issuing us with a directive?'*).

A 2005 review of the QMI (see commentary at Chapter 14) recommended that the QMI increase its emphasis on the provision of information and advice to industry. I note that this recommendation was accepted by Cabinet.

While the provision of advice by the QMI may improve overall safety in the industry by providing operators with the benefit of the Inspectorate's expertise, it also creates potential risks for the QMI. It may also divert attention and resources from the core role of regulatory enforcement.

¹²⁴ O'Sullivan, 'Review into fatal accidents', *Queensland Government Mining Journal* (September 2007), p.56

For example, a study of catastrophic engineering failures (such as the 1998 Longford gas explosion in Victoria and the 1997 Canberra Hospital implosion), and the contribution of regulatory malpractice to these disasters, stated:

[A] common problem is that the regulator focuses too much on facilitating improvement and not enough on enforcement. If the regulators continue to provide education on best practice while at the same time not enforcing the regulatory regime, over time this can result in a diminished incentive for companies to actively seek the information themselves.¹²⁵

Therefore, while I agree that the QMI should continue to give advice to mine operators on safety issues, it must not lose its focus on, or divert too many resources from, its core role of regulatory enforcement and should continually reinforce with operators that they bear the primary responsibility for mine safety. There is clearly a need for the QMI to provide guidance on the issue by setting some parameters for when advice will be given.

Recommendation 14

That the QMI publish a policy providing guidance to its inspectors, the industry and other stakeholders on its approach to its inspectors providing advice to mine operators and the limits of such advice.

DME response

DME agreed with my recommendation, noting that the guidance had been provided in 2006 and that, given the turnover of inspectors since then, it was timely to issue the guidance again.

¹²⁵ Yates, *The Nexus between Regulation Enforcement and Catastrophic Engineering Failures*, p.6

Chapter 8: Incident reporting

8.1 Complaints about mine safety

Although the QMI conducts regular audits and inspections, as well as post-incident investigations, it also receives numerous complaints each year relating to alleged breaches of mine safety practices, or general concerns about safety at particular mines.

The majority of complaints come from workers at mines, although others (such as workers' family members) also lodge complaints from time to time. Many complaints arrive at the Office of the Minister for Mines and Energy and are then directed to the Department. Others are forwarded to the Director-General of the DME, or arrive 'over the counter' in regional offices.

A major problem with current DME complaint processes is that the largest potential category of complainants (mine workers) is unlikely to be willing to complain directly to the DME about its officers' actions because they are:

- unaware that they can make a complaint;
- unaware of how to make a complaint;
- unaware of the process the DME will follow in dealing with the complaint; and
- concerned about the consequences for themselves and their colleagues.

It also appears that many safety-related complaints are made to the relevant union (CFMEU or AWU), which may deal with the matter. Where this happens the matter will not necessarily come to the QMI's attention.

Those making complaints (most often mine workers) are usually better placed than inspectors to know what is actually happening at mine sites when 'no one's watching'. Complaints therefore form an important source of information for any safety regulator.

As part of our investigation, we inspected a number of QMI complaint files held at the Inspectorate's regional offices. These all related to safety problems, although some appeared to be unrelated to mine safety. The broad picture was of a comparatively *ad hoc* complaint handling process. It was apparent that QMI feels obliged to 'take on' all complaints even if some have little or no real relevance to mine safety.

The creation of a standardised complaint system for the DME would be beneficial regardless of the type of complaint received, and would enable a more effective and efficient handling of all matters.

8.2 Reporting methods

Safety is built on a foundation of *open and full exchange of information* about problems, incidents and concerns. In an ideal world, workers and employers would report all serious incidents, near-misses and other safety concerns to the health and safety regulator simply because it is the 'right thing to do', and because it would enable the regulator to:

- take action, or ensure action is taken by the employer, to address the concerns; or
- bring the problem (and any solution) to the notice of the industry as a whole.

However, this is unlikely to happen in an industry where any stoppage in operations can seriously jeopardise production targets and profits and lead to job losses. In such an environment, an employee or contractor who reports safety concerns to the regulator is likely to be seen by the operator (and even by other employees or contractors) as a trouble-maker and may become the subject of reprisals.

Moreover, there is the simple fact that people do not like to admit mistakes:

Human reactions to making mistakes take various forms, but frank confession does not usually come high on the list.¹²⁶

One method of encouraging workers and others to report concerns about mine safety is to establish a confidential safety reporting system similar to that used by aviation regulators.

The aviation industry worldwide has increasingly moved to a more confidential system of incident and 'near-miss' reporting, which is not the case in mining and other industries. For example, in respect of the UK aviation industry, Faith comments on:

... the astonishing openness of the way near misses are reported through what is called the Airprox System. It is entirely up to the pilots to decide when, as the official definition goes, 'the safety of the aircraft was or may have been compromised'. Any such incidents are obviously investigated thoroughly and independently of the airlines, and the results published ...

Looking at the records over the past decade what is surprising is that the number of cases has actually gone down ... [yet] ... traffic has increased ... [and] there has been an increasing readiness ... to report these problems ...¹²⁷

Similarly, the background to the USA equivalent, ASRS (Aviation Safety Reporting System) is described as follows:

It took [an aircraft crash in the US] because the pilot misread the distance-measuring equipment to bring out into the open five pilots who admitted that they too had experienced similar incidents but had been too embarrassed to report the problem. They had assumed, wrongly, that it was they and not the equipment that had been at fault.

This sort of revelation, and the fact that pilots often dared not report incidents involving them or other pilots, dared not complain of stress, of fatigue, of bad maintenance, of unreasonable demands imposed by their employers, resulted in a new reporting system for untoward incidents.¹²⁸

In Australia, the ATSB's Aviation Confidential Reporting Scheme (REPCON) became operational in January 2007. It is described as:

a voluntary confidential reporting scheme for aviation [which] allows any person who has an aviation safety concern to report it to the ATSB confidentially. Protection of the reporter's identity is a primary element of the scheme.¹²⁹

¹²⁶ Reason, *Managing the Risks of Organizational Accidents*, p.196

¹²⁷ Faith, *Black Box*, p.71

¹²⁸ Faith, *Black Box*, pp.263-264

¹²⁹ ATSB, *REPCON: Aviation Confidential Reporting Scheme* (brochure issued February 2007, accessed from <http://www.atsb.gov.au>)

The matters excluded from the scheme are:

- unlawful interference with aircraft;
- conduct representing a serious and imminent threat to a person's life or health;
- industrial relations issues; and
- conduct which would constitute an offence punishable by more than two years' imprisonment.¹³⁰

Reports received through REPCON are de-identified and, if necessary, investigated. Information briefs and alert bulletins can be issued to the operator concerned and, presumably, to a wider audience, if deemed appropriate.

The ATSB has recently launched a new incident information reporting system called SIIMS (Safety Investigation Information Management System). This is an 'occurrence database' and is designed to collect data on approximately 7000 'aviation occurrences' each year for a *safety benefit*. Notifications can be made confidentially, and this is seen as a key benefit of the system.

A system of blame-free or confidential incident reporting will never be perfect. There may be considerable cynicism at the outset about its effectiveness and, in smaller operations, individuals may still be afraid to report on the basis that '*everyone will work out who it was, anyway*'.

To be accepted by industry, any such program must be seen to produce improvements in safety.¹³¹

At the operator level, the decision whether to report a problem affecting their own operation is likely to run into the dilemma described in the following terms by Hopkins:

... companies face a dilemma with respect to information about safety problems. Should they seek out such information and attempt to learn from it, or should they suppress this information in order to be able to plead ignorance if something goes wrong? Should they be as open as possible, disclosing whatever information is available and accepting the legal consequences, or should they limit the availability of this information as much as possible in order to be able to deny responsibility?¹³²

In the USA, the federal mine safety regulator, the Mine Safety and Health Administration (MSHA), runs a confidential telephone hot line for complaints about hazardous conditions. Complaints can be made anonymously.¹³³

The QMI advised us that it does, in fact, have such a system. Mine workers or others with safety concerns can contact the QMI and the details of the complaint are recorded on the Inspectorate's database in such a way that only the inspector to whom the complaint was made has access to the complainant's personal details.

¹³⁰ ATSB, *REPCON: Aviation Confidential Reporting Scheme* (brochure issued February 2007, accessed from <http://www.atsb.gov.au>)

¹³¹ See the discussion of blame-free reporting in Reason, *Managing the Risks of Organizational Accidents*, pp.196-205

¹³² Hopkins, *A Corporate Dilemma*, p.3

¹³³ See MSHA National Hazard Reporting page at <http://www.msha.gov/codeophone/codeophonew.htm>

However, our review of the publicly available information sources of the DME, including its website, indicates that the system is not well publicised or promoted. Greater promotion of this avenue for mine safety incident reporting is likely to give the QMI a more detailed picture of where problems are occurring, and bring to its attention specific matters which have not been revealed during inspections.

Recommendation 15

That the DME take steps to publicise the existence of its system of confidential complaint and incident reporting and promote its use, and publish information on how information received via the system will be handled.

DME response

DME agreed, indicating that further changes to clarify complaints mechanisms for mine safety legislation matters will be published on the internet.

Recommendation 16

That the DME report publicly on complaints it receives about mine safety, including the number and type, how they were received and the broad outcomes.

DME response

DME agreed and undertook to publish this information in its Annual Report.

8.3 Reprisals

Under the Coal Act and the Mining and Quarrying Act, anyone with a concern about safety at a mine may contact the QMI and report their concern. Typically, safety concerns will be reported by a mine worker about conditions directly affecting him or her or a fellow worker. As with any other workplace, individuals in the mining industry who wish to report unsafe or illegal practices are often reluctant to do so because of fear of retribution or victimisation. This may not always be by the employer – in many instances colleagues can victimise a fellow employee on the basis that the employee has ‘dobbed them in’ and potentially jeopardised their jobs.

QMI staff advised us that, although rare, there have been cases where workers had either been victimised or been in fear of being victimised because they had spoken to QMI inspectors about mine safety concerns.

Having regard to the fact that we are dealing with life and death issues, there is clearly a need to give greater protection to individuals who report safety concerns in the mining industry. The provisions of the *Whistleblowers Protection Act 1994* on reprisal are a useful model for statutory protection for persons in the mining industry who report safety concerns.

Recommendation 17

That the DME proceed with proposed amendments to the Coal Act and the Mining and Quarrying Act to make it an offence for a person to cause, or attempt to cause, detriment to another person because anybody has provided, may provide or is believed to have provided information to the QMI, another government agency, or the mine operator itself about a mine safety concern.

DME response

DME advised that a proposal in similar terms to recommendation 17 is now in a series of proposed amendments to the Coal Act and the Mining and Quarrying Act. This issue is also to be considered as part of the stakeholder consultation for the proposed amendments.

Recommendation 18

That the commission of any offence of a kind described in recommendation 17 be recorded by the QMI on its database as a safety risk factor for the relevant mining operation.

DME response

DME agreed to implement this recommendation. According to DME, all convictions under the Coal Act or the Mining and Quarrying Act are currently recorded in the QMI database for consideration as a safety risk factor. DME also advised that once the reprisal offence is established in the legislation, any convictions under the new provision will also be recorded.

Chapter 9: Record keeping and reporting

9.1 Overview

There are significant differences in the type of work generally carried out by inspectors in each of the three QMI regions. Inspecting a large underground coal mine in central Queensland is a very different task from inspecting a small gravel quarry in a Brisbane suburb, and will entail different policies and documentation. The Southern Region, for example, oversees a large number of smaller quarry operations, the Central Region is responsible for most large coal mines, and the Northern Region contains many large metalliferous mines.

Therefore, as one would expect, during our review of QMI's documentation relating to complaints, inspections and audits, we noted that there were significant differences in the record keeping practices from region to region. However, these differences were not solely attributable to the differences in the type of work that dominates inspectors' duties in each region. Local practices were also evident and it was clear that individual inspectors exercised a considerable degree of discretion in the way they dealt with particular safety concerns at particular mine sites.

One of the problems of these different practices is that it makes it difficult to compare regulatory performance between regions. Our investigation highlighted the need for greater consistency in the way QMI 'does business', including in relation to its record keeping practices.

This does not mean the QMI must perform its inspections and other work in precisely the same way everywhere. As one safety regulator comments:

Consistency of approach does not mean uniformity. It means taking a similar approach in similar circumstances to achieve similar ends.¹³⁴

The area of the QMI's work where my investigators saw the greatest variability was in the making and use of mine record entries (MREs).

9.2 Mine record entries

Under the previous legislation,¹³⁵ mine operators were required to keep, and make accessible to all employees, a 'record book', which was essentially a central record of all compliance and safety activities at the mine. Under the Coal Act and the Mining and Quarrying Act,¹³⁶ the operator is required to maintain a 'mine record', which is to contain:

- (a) all reports of, and findings and recommendations resulting from, inspections, investigations and audits carried out at the mine by the QMI; and
- (b) all directives issued by the QMI about the mine; and
- (c) a record of all remedial actions taken as a result of directives; and
- (d) a record of, and reports about, all serious accidents and high potential incidents that have happened at the mine; and
- (e) all other reports or information that must be entered according to the Regulations.

¹³⁴ Office of Rail Regulation, *ORR Health and Safety Enforcement Policy Statement*, p.6

¹³⁵ *Mines Regulation Act 1964*, s.17

¹³⁶ Coal Act, s.68; Mining and Quarrying Act s.59

An inspector who visits a mine completes a mine record entry, which is a document containing (in theory) details of what happened during the visit, any directives or other advice given, and responses by management. It is the principal formal means of written communication with a mine operator.

Mine record entries are recorded on the QMI's Lotus Notes database, and are also provided to the mine operator, which must store them in a central location. The Acts require that workers have reasonable access to these entries.¹³⁷ In effect, mine record entries are an ongoing record of the mine operator's performance on safety issues and of the operator's interaction with the QMI, for all at the mine to see. An example of a mine record entry is contained at Appendix 2.

At the sites my investigators visited with QMI inspectors, relevant mine record entries were displayed on noticeboards around the mine complex and workers appeared to be aware of their existence and location. A 2003 review of mine safety legislation in WA included the following observations on mine record entry practices in that state:

Advice to the employees relies on the safety and health representative or committee or employees making reference to the Record Book. It is unlikely, however, that employees generally would wish to refer to the Record Book or would wish to be seen as having too great an interest in matters such as these ...

As a consequence, it appears at least possible that an entry in the Record Book might not be seen by those who have a significant interest and, as a result, the possibility exists of an employee being harmed. While a Mines Inspector advised that notices are also placed on notice boards as well as the copies provided to health and safety representatives, it is not clear that is the case with every direction. As well, notice boards may well be some distance or obscured from the particular work site.¹³⁸

The content of mine record entries my investigators saw was extremely varied. Some were detailed reports on inspections, while others contained little more than a single line stating that the inspector had been to a certain mine and discussed an issue with the manager.

Some entries also contained an unusual combination of communications. For example, some contained an expression of thanks to a mine operator for their hospitality during a visit, or personal messages to mine operators and staff, and then proceeded to set out formal directives in relation to safety.

There is certainly nothing wrong in inspectors thanking mine operators for their assistance and cooperation during an inspection or investigation, or in wishing them well, for example, at Christmas but such comments should not be included in MREs. There was also no indication that the inspectors concerned had lost impartiality in their dealings with the mine operators.

However, a professional tone should be maintained in MREs, the main purpose of which is to inform mine operators of serious safety issues they are required to address under the legislation.

¹³⁷ Coal Act, s.68(4); Mining and Quarrying Act, s.59(4)

¹³⁸ Laing, p.125

9.3 Uses of mine record entries

Our audit revealed that the QMI uses mine record entries for a wide range of purposes, including:

- issuing directives;
- issuing other forms of recommendation or suggestion not based on the legislation;
- recording details of inspections and site visits;
- reporting on investigations and audits; and
- communicating with mine operators on day-to-day issues.

The Coal Act and the Mining and Quarrying Act provide for two types of enforcement action: directives and prosecutions. However, the QMI most often responds to safety concerns by making recommendations or offering suggestions or guidance in a manner not formally based on the provisions of the legislation. While the informal advice and recommendations provided by the QMI are clearly useful, they do not appear to be given in a systematic manner.

When auditing the mine record entries, my investigators noted wide variations in the wording used by inspectors to convey their findings, directives, recommendations and suggestions, for example:

- It is recommended that ...
- It was noted that ... This needs attention ...
- My comments are given as a matter of advice ...
- As a matter of interest, I note that ...
- I request that ...
- Everyone is urged to ...
- More could be done to ...
- This needs to be addressed ...
- I raised the question of the need for ...
- An option was suggested ...
- Issues arising from the site inspection were ...
- This needs to be actioned ...
- The obvious disregard for [correct procedure] was disappointing ...
- Formulation of action plan was as follows ...
- The [staff member] is required to ...
- [The practice] needs to be reviewed ...
- The following items require attention as soon as possible ...

There were many more. The general picture was of considerable inconsistency from region to region and from inspector to inspector in the use of mine record entries, and in the way safety recommendations were formulated. In fact, it was not always clear whether an inspector was suggesting that some action should be taken, or simply providing advice on a 'best practice' approach to a particular safety issue.

We also noted that in most cases the mine record entry did not record any date for implementation of the directed or recommended action.

Of course, given that these informal recommendations or suggestions were most likely to have been given during a visit by the inspector, the context in which they were given would have helped the mine operator to understand them. Nevertheless, the potential for ambiguity and confusion is considerable.

The mine record entry is meant to be read and taken into account by everyone at the mine who might be affected by the issues on which the QMI inspector has commented. The mining industry (especially larger operators) is often based on round-the-clock shiftwork. Even if a QMI inspector has extensively discussed an issue with staff present on the shift at the time he or she visited, other shifts may be unaware of the issue and will rely on the mine record entry for that information.

For example, the Mining Warden's Inquiry into the 1994 Moura disaster revealed that there was a systemic failure by mine staff to adequately record and pass on vital safety information between shifts. This systemic failure meant that action which might have been undertaken by staff on one shift was neglected by the new shift during weekend changeovers. The Inquiry determined that this failure contributed to the eventual deaths of the 11 workers when the underground coal seam heated and exploded.¹³⁹

It is therefore vital that mine record entries are as concise and unambiguous as possible, and consistent in style and terminology.

9.4 Enforcement options

Gunningham and Sinclair describe the broad range of options for enforcement at QMI as follows:

... in Queensland, options include the issuing of formal directions; expressing concern and making a Mine record entry; meeting with a specific manager expressing concern; meeting with the site senior executive expressing concern; a management accountability meeting at the Regional Inspector's Office; a senior company accountability meeting with the Chief inspector of Mines and a Regional Inspector at Head Office; and a senior company (CEO) accountability meeting at Head Office with the Chief Inspector, Regional Inspector and Executive Director.¹⁴⁰

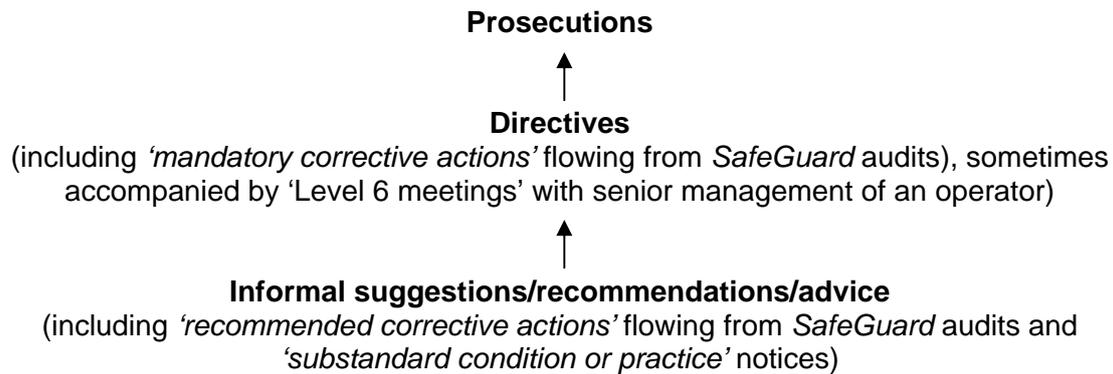
As the seriousness of the QMI's concern increases, the level of accountability meeting between the operator and QMI can increase accordingly. These are referred to within the QMI according to their level in the 'meeting hierarchy'.

For example, a 'Level 6 meeting' will be between senior managers of the mine operator and senior staff of the QMI, and arise from a matter of serious concern to the QMI. At these meetings, the QMI expresses the reasons for the concern and requests relevant action to address the risks.

¹³⁹ Wardens Inquiry, *Report on an Accident at Moura No.2 Underground Mine on Sunday 7 August 1994*, p.54

¹⁴⁰ Gunningham and Sinclair, *Working Paper 56: Responsive OHS Regulation in the Mining Sector*, p.5

In terms of actual enforcement actions, the current hierarchy of QMI actions is as follows:



The bulk of the QMI’s actions are at the lower end of this hierarchy, with far fewer directives and only a handful of prosecutions. In short, the QMI’s clear preference on a day-to-day basis is to encourage compliance through informal measures rather than enforcement. While this might be a pragmatic and sensible approach in many cases, it gives rise to significant problems.

9.5 Directives

Based on our observations, and comments by QMI officers, it would seem the majority of an inspector’s compliance activity at a mine focuses on making suggestions and requests. These are usually discussed informally with managers and workers on site and some form of response is negotiated at the time. Following this, an inspector will return to the local QMI office and prepare a mine record entry setting out the details of the inspection and the agreed actions.

When an inspection uncovers a significant risk, however, the QMI inspector can issue a directive to require that action be taken to make the situation safe.

The term ‘directive’ is not defined anywhere in the legislative schemes. Under the Coal Act¹⁴¹ and the Mining and Quarrying Act,¹⁴² directives can be issued by an inspector for the following purposes:

- a task be performed only by a person with necessary competencies;
- carry out a test to ensure risk is at an acceptable level;
- take corrective or preventative action to reduce unacceptable risk from mining operations;
- suspend operations if there is an unacceptable level of risk;
- review safety and health management and (principal) hazard management plans;
- suspend operations for ineffective safety and health management system;
- isolate site following a death or serious injury (in order to preserve evidence);
- operate separate parts of a mine (in certain circumstances); and
- provide an independent engineering study.

¹⁴¹ Coal Act, ss.164-172

¹⁴² Mining and Quarrying Act, ss.161-169

The section empowering inspectors to issue directives to reduce unacceptable risk is worth setting out in full:

Directive to reduce risk

- (1) If an inspector or inspection officer reasonably believes a risk from [coal mining]¹⁴³ operations may reach an unacceptable level, the inspector or officer may give a directive to any person to take stated corrective or preventative action to prevent the risk reaching an unacceptable level.
- (2) The directive may be given orally or by notice.
- (3) If the directive is given orally, the person giving the directive must confirm the directive by notice to the person in control of the mine or part of the mine affected by the directive and to the relevant site senior executive.
- (4) Failure to comply with subsection (3) does not affect the validity of the directive.¹⁴⁴

In relation to the general power contained in both Acts to issue a directive shutting down a mine (or certain operations at a mine), the Queensland Supreme Court has stated:

... the section confers a wide discretion requiring a judgment of what is necessary in the circumstances of the particular case ...¹⁴⁵

Inspectors must keep an accurate record of all reports and directives they issue under the Coal Act and the Mining and Quarrying Act.¹⁴⁶ Once issued, a directive must be entered in the mine record entry along with the reason it was made.¹⁴⁷

My investigators were told that, in some regions at least, inspectors were encouraged by management of the QMI to deal with problems they encountered in as informal a manner as possible, as issuing formal directives would trigger automatic consequences in the event of non-compliance.

Specifically, once a directive is issued, the person to whom it is directed must comply within the time stated.¹⁴⁸ The person can challenge the directive according to a procedure set out in the legislation,¹⁴⁹ but failure to comply with a valid directive can result in a fine of up to \$60,000 or two years' imprisonment.¹⁵⁰

No such consequences result from a failure to follow recommendations or advice, as they are not made or given under any legislative power. Objections or concerns raised by a mine operator about an informal recommendation can also be readily managed by, for example, negotiating a compromise or amendment to the original recommendation. This approach also involves less paperwork and, potentially, less confrontation, and hence a better relationship, with mine operators.

The major benefits and drawbacks of using formal directives as opposed to informal recommendations are described in Table 6.

¹⁴³ The words 'coal mining' are omitted from the Mining and Quarrying Act provision

¹⁴⁴ Coal Act, s.166; Mining and Quarrying Act, s.163

¹⁴⁵ *CFMEU v Lyne and Anglo Coal* [2004] QSC 259 at para 15 per McMurdo J

¹⁴⁶ Coal Act, s.173(1); Mining and Quarrying Act, s.170(1)

¹⁴⁷ Coal Act, s.174(1); Mining and Quarrying Act, s.171(1)

¹⁴⁸ Coal Act s.161; Mining and Quarrying Act, s.158

¹⁴⁹ Coal Act s.175 ; Mining and Quarrying Act, s.172

¹⁵⁰ Coal Act s.174(2); Mining and Quarrying Act, s.171(2)

Table 6: Comparison of QMI enforcement notices

Issue	Directives	Informal recommendations/ Advice/ Substandard Condition or Practice Notice
<i>Legislative basis</i>	Yes	No
<i>Recording in QMI's system</i>	Must be recorded as an action for follow-up in Lotus Notes database	Can be recorded as an action for follow-up but depends on regional practice and practice of individual inspector
<i>Display by operator</i>	Must be displayed as part of mine record	Must be displayed as part of mine record
<i>Follow-up</i>	Lotus Notes provides bring-ups of uncompleted directives for QMI inspectors to follow-up	If entered as a corrective action on the database, will be tracked as with a directive. Otherwise, may be lost unless inspector remembers or operates some other reminder system
<i>Understanding</i>	Mine operator can refer to legislation to see effect of directive	Depending on the circumstances, operator may be uncertain whether obliged to comply
<i>Acceptance</i>	May be challenged by operator under procedure in legislation	Less likely to be challenged as wording can usually be negotiated
<i>Failure to comply</i>	Fine and/or imprisonment	No consequences unless QMI escalates to a directive

Whether a safety issue should be dealt with by way of an informal recommendation or a formal directive (or some other statutory process, such as an infringement notice or prosecution) is the kind of decision every regulator has to make in its day-to-day work. Whichever course is taken in a particular situation, it is important that the reasons for the decision and its effect are clear to all concerned.

9.6 QMI's preference for informal compliance options

The question to be considered is: *'Should all recommendations and advice given to operators to reduce unacceptable levels of risk (or to prevent such a level from arising) be the subject of directives?'*

As noted above, the QMI prefers to use informal options because:

- formal directives involve more paperwork;
- non-compliance triggers legal consequences; and
- informal recommendations and advice can be negotiated with the mine operator and are therefore more likely to be readily complied with and are conducive to an ongoing cordial relationship.

As inspectors are encouraged to use informal options by management, a culture has developed that the informal approach is generally the preferable one. In an organisation with a demanding workload and high staff turnover, the preference for informal compliance methods and negotiated outcomes is readily understandable.

Furthermore, the observation needs to be made that such an approach is not unique to the QMI and does not necessarily lead to poorer safety outcomes than an enforcement-based approach. A study of enforcement methods in an Australian corporate regulatory context noted:

It is quite common for regulators to decide not to take tough enforcement action against possible regulatory breaches on the basis that they can accomplish acceptable (perhaps even superior) compliance through negotiation and settlement with the potential offenders.¹⁵¹

Additionally, there is some evidence from academic literature on regulatory practice (and mine safety) that mine operators may be more willing to address a safety concern if the response has been negotiated. Mine staff and industry representatives we spoke to certainly agreed with this.

The National Offshore Petroleum Safety Authority (NOPSA) is the safety regulator for offshore oil operations in Australian waters. In its guidance on enforcement actions, NOPSA says:

The process of making enforcement decisions is complex. Each operator is unique, as is each facility, and OHS inspectors must have a thorough understanding of the hazards and control measures associated with the activities of each operator at each facility. It is vital that OHS inspectors have discretion to exercise their professional judgement, so that action appropriate to each situation can be taken.¹⁵²

Every decision by an inspector on how to deal with a particular safety concern at a mine involves the exercise of some level of discretion. Sometimes the risk will be so high or the safety breach so serious that the only appropriate response is a formal one. However, in the majority of cases, the most important consideration for the inspector will be that his/her action results in the safety concern being effectively addressed by the operator or some other person in a timely way.

Clearly, experienced QMI inspectors are well placed to make these decisions, especially where they have frequently visited the mine and are thoroughly conversant with:

- the mine's operations;
- any special risks faced by those operations;
- the calibre of its staff; and
- the safety culture prevalent at the site.

Nevertheless, the QMI admits it has difficulty recruiting experienced, well qualified inspectors and also has a relatively high turnover of inspectors, which means that there is likely to always be a group of new inspectors with less knowledge and understanding of particular mine operations and less experience in encouraging compliance in the industry generally.

In these circumstances, the QMI needs to have clear guidelines for its staff on the compliance options available and the types of situations in which they should be used.

¹⁵¹ Parker, *Restorative Justice in Business Regulation*, p.3

¹⁵² NOPSA, *Enforcement Management Model*, p.4

9.7 Continuation of risk

Although the making of an informal recommendation (and a mine entry record of the recommendation) is often a convenient, flexible and non-confrontational way in which to deal with safety concerns, our audit found numerous examples of recommendations (some of which were essentially 'informal directives') for which no date for completion was specified.

The fact that the inspector made a mine record entry of a recommendation indicates that he or she had some genuine concern a safety risk existed at the mine. In such cases, an inspector should specify a period in which the mine operator should take the recommended steps to deal with the risk.

In one case we examined during our audit, we noted a recommendation made to an operator, relating to apparently serious electrical safety issues, in respect of which there was no record of QMI having followed the matter up for five years. At the time of our audit, ten years after the concern was raised by the inspector, the regional office was not able to track with any certainty what had happened.

This does not necessarily mean that the operator did not take the recommended action or that the QMI did not follow the matter up in a timely way but simply that the QMI was unable to readily establish from its records that it had done so.

It also means that it is impossible to obtain a broad picture of safety matters at the mine in question or to track the operator's compliance history.

Case study: Victorian occupational health and safety improvement notices

In an overview of improvement notices issued under the Victorian occupational health and safety system, Maxwell highlighted a problem that arises from the issuing of notices to address a safety concern even where a time is specified.¹⁵³ In Victoria, 'improvement notices' could be issued by inspectors, and completion of the required actions did not have to occur until at least seven days after the notice was issued.¹⁵⁴ Inspectors routinely gave longer times.

Prohibition notices, on the other hand, functioned somewhat like directives under the Queensland Coal Act and the Mining and Quarrying Act, in that the immediate cessation of the dangerous activity could be ordered. Maxwell commented:

In short, if an improvement notice is issued, and no direction is given under *[the Act]* with respect to interim measures, the effect is that the Authority, through the inspector, is tacitly acquiescing in the continuation of the risk – and the non-compliance with the Act – for at least seven days and often for much longer.¹⁵⁵

Maxwell also noted that:

The sheer number of notices issued underlines their utility but, at the same time, emphasises how often the Authority, through its inspectors, tacitly permits the continuation of a risk and of the duty holder's non-compliance with the Act – while a notice is on foot.¹⁵⁶

¹⁵³ Maxwell, *Occupational Health and Safety Act Review*, pp.328-331

¹⁵⁴ *Occupational Health and Safety Act 1985* (Victoria), and see the commentary in Maxwell, pp.328-329

¹⁵⁵ Maxwell, *Occupational Health and Safety Act Review*, p.330

¹⁵⁶ Maxwell, *Occupational Health and Safety Act Review*, p.330

His observations appear to be applicable to the QMI's common practice of issuing informal recommendations to address a safety issue, especially if a lengthy period or no period is specified for compliance.

Part of the recommended solution to this concern was that:

... the inspector should be required, when issuing an improvement notice and determining the period for compliance, to consider the question of risk to any person in the period between the period of the issue of the notice and the date for compliance ...¹⁵⁷

While informal recommendations (including those contained in substandard condition or practice notices) are clearly convenient, an inspector's primary responsibility is to ensure that the operator effectively deals with the safety concern and within a timeframe appropriate to the gravity and nature of the risk.

Therefore, inspectors should generally specify the period in which they expect their recommendations to be implemented and also have regard to whether the level of risk is acceptable in the interim.

9.8 Clarity of recommendations

Our audit established that the formulation of requests for action, advice and other 'informal recommendations' as well as directives varied considerably among inspectors, regions and sectors of the industry. To a certain extent, this is to be expected, as conditions at individual mine sites, and in different regions and sectors, will vary. Nevertheless, as with other aspects of mine record entries, there is a lack of consistency in terminology, even with directives.

Case Study: UK rail safety investigations

In 2007, the UK Health and Safety Executive released a report on its review of recommendations made by the Rail Accident Investigation Branch (RAIB).¹⁵⁸ These recommendations had arisen from 34 investigations into deaths, serious injuries to multiple people, or extensive damage to infrastructure, in rail operations in the UK.

The report found that, of 269 recommendations reviewed:

- 83% were 'achievable and measurable';
- 17% were problematic, in that they were:
 - not achievable and not measurable; or
 - questionably achievable and questionably measurable; or
 - questionably achievable but still measurable; or
 - achievable but not measurable.

One observation was that:

Recommendations which were neither achievable nor measurable tended to result from recommendations which were too general, or where changes had been recommended on a national scale.¹⁵⁹

¹⁵⁷ Maxwell, *Occupational Health and Safety Act Review*, p.330

¹⁵⁸ Health and Safety Laboratory, *Review of RAIB Investigations and Recommendations*, 2007

¹⁵⁹ Health and Safety Laboratory, *Review of RAIB Investigations and Recommendations*, p.16

According to the report, unclear recommendations were characterised by:

- an attempt to address more than one issue at the same time, resulting in longer, confused recommendations;
- unclear wording, preventing the effective communication of the underlying aim;
- unclear terminology;
- requiring an action which is difficult or impossible to achieve; or
- generalisations such as suggesting that an organisation should 'review' 'procedures', 'processes' or 'equipment'.¹⁶⁰

In relation to the last point, the authors stated:

Many recommendations are vague, suggesting action such as 'conduct a review of procedures'. Many of these recommendations seem to infer that the RAIB understand that no action will be taken, or indeed that for the involved company to take no action would be acceptable. It is hard to strike a balance between being overly prescriptive and being too general, however, it is considered that the RAIB should aim for clear, demonstrable improvement when writing recommendations ... It is the researchers' view that, by asking companies to conduct a review, RAIB are giving companies an easy opportunity to argue that they are not going to make any changes.¹⁶¹

The purpose of my investigation was not to determine whether individual recommendations, requests and directives issued by inspectors were, in fact, 'achievable and measurable', but to look at issues such as:

- inspectors' level of compliance with the QMI's procedures;
- the level of consistency in the use of the various compliance options; and
- the level of consistency in documenting formal and informal compliance action, including the clarity of directives and informal action, and the format and terminology used in documentation.

In relation to the last point, our audit clearly showed that there are significant differences in the format and terminology used even in respect of situations which appeared, to the layperson, to be factually similar.

9.9 Capturing the work

The informal safety activities described in mine record entries are vital to the work of the QMI, and provide an insight into the mine operator's attitude to safety issues. Furthermore, these activities need to be centrally recorded in a reportable manner; otherwise there is no way the QMI (or indeed, anyone) can obtain an accurate picture of what is actually happening in the particular mine or in the industry.

A large amount of important inspection work and informal guidance is often described in the body of a mine record entry. Summaries of discussions held with mine operators are also often described in some detail, together with details of action to be taken. This is useful and positive. The problem is that it is unlikely that this information will be centrally recorded by entering it on the QMI's Lotus Notes database, as current practice is that only certain categories of internally recognised compliance actions are formally recorded.

¹⁶⁰ Health and Safety Laboratory, *Review of RAIB Investigations and Recommendations*, pp.18-19

¹⁶¹ Health and Safety Laboratory, *Review of RAIB Investigations and Recommendations*, p.20

The implications of this practice are significant. Written copies of directives are issued by inspectors through the QMI's Lotus Notes database. At each regional office, staff demonstrated to us how the database operates. It is clear that the system is quite capable of recording all types of compliance work undertaken by the QMI.

Because many informal recommendations, suggestions, advice, etc, though described in mine record entries, are not entered on the QMI's reporting system, they are not linked to database action alerts or 'bring ups'. Consequently, they may be lost or forgotten by an inspector, particularly when the inspector who created them leaves the QMI. In an environment of high staff turnover, this is a significant risk.

This situation also means the DME chronically under-reports its inspection and compliance activities and is vulnerable to criticism that it routinely fails to enforce mine safety legislation. This is because the only enforcement activity on the public record is the number of prosecutions undertaken by the DME, and these are few and far between.

The term used for the broad mass of informal recommendations made every day by inspectors to mine operators is not of major importance (perhaps 'negotiated actions'). What matters is that these recommendations are appropriately formulated, categorised and recorded, and that this information is analysed by the DME to identify trends in safety concerns at mine sites and across the industry.

Case study: Lockhart River air crash

In 2005, an aircraft operating a flight from Bamaga to Cairns crashed into a mountainside near Lockhart River on the Cape York Peninsula. All 15 people onboard were killed. It was Australia's worst civil aviation incident since 1968.¹⁶²

The ATSB conducted an investigation into the incident, and found a large number of factors had combined to produce the tragedy.¹⁶³ These factors included:

- the co-pilot was not properly trained or experienced;
- the prevailing weather conditions were poor;
- the crew lost an awareness of their location relative to the terrain around Lockhart River;
- the crew had a very high workload on descent and may not have been able to adequately focus on everything they were required to;
- the airline's safety and training procedures were inadequate; and
- the oversight (including inspections) of the Civil Aviation Safety Authority (CASA) was inadequate.

The ATSB noted that CASA had conducted numerous audits of the airline's safety system and organisation over the period from 1999 to 2005. Arising from these audits, CASA had made a significant number of 'audit observations' which were not, however, legally binding. The ATSB found that, had CASA monitored the airline's response to its audit observations, it could have used this pattern of response 'as a basis for additional surveillance activity'.

¹⁶² ATSB, *Annual Review 2007*, p.2

¹⁶³ See *ATSB Transport Safety Investigation Report No.200501977*

It was noted, for example, that CASA inspectors had, as early as 1998, developed some concerns about the excessive number of duties of the airline's chief pilot. This role was a crucial component of the airline's safety system, yet the incumbent also acted as managing director and head of training for the airline, and conducted related work for other airlines in Australia and Papua New Guinea. This was also one of the matters of concern to the State Coroner in the inquest into the crash.¹⁶⁴

This case indicates the importance of ensuring that even relatively low-level, routine observations and recommendations are recorded and analysed. This enables a regulator to determine with greater accuracy where problems might be occurring in the industry, and enables more precise and appropriate targeting of enforcement strategies.

Case study: Safety of a Sydney bridge

In 2003, the NSW rail authorities were concerned about the safety of the Menangle rail bridge in the southern outskirts of Sydney. Despite an engineering report recommending closure of the bridge due to the potential for 'catastrophic collapse', the bridge remained open. Allegations were made to the Independent Commission Against Corruption (ICAC) that this decision had been made for improper reasons.

While the facts of the case are not specifically relevant to my report, the ICAC report¹⁶⁵ highlighted several problems with the way the engineering study of the Menangle Bridge had been conducted, and the results recorded. Comments the ICAC made included:

No matter how often or comprehensive an inspection, it will be of little value if the resulting information is not documented and accurately and fully communicated to those tasked with assessing safety issues and determining maintenance priorities. The flow of information is vital to maintaining up-to-date accessible knowledge on infrastructure condition.¹⁶⁶

The ICAC was particularly concerned that 'lower-order' safety issues were, in effect, being lost in the system:

The evidence indicated concerns by some witnesses that relevant information was not always gathered to enable the appropriate level of evaluation of the bridge or ongoing monitoring of defects ... [Reports] may not mention defects which are minor, do not contravene the standard and which are being monitored. If the valuable knowledge possessed by the local examiners is not recorded, available and accessible to others in the organisation, its value is considerably diminished. The ... bridge safety system should not be reliant on the retained knowledge of individual staff.¹⁶⁷

¹⁶⁴ State Coroner, *Inquest into the Aircraft Crash at Lockhart River*, 17 August 2007, pp.46-47

¹⁶⁵ ICAC, *Report on Investigation into Conduct of the Rail Infrastructure Corporation and Others in Relation to Menangle Bridge*, 2003

¹⁶⁶ ICAC, *Report on Investigation into Conduct of the Rail Infrastructure Corporation and Others in Relation to Menangle Bridge*, p.43

¹⁶⁷ ICAC, *Report on Investigation into Conduct of the Rail Infrastructure Corporation and Others in Relation to Menangle Bridge*, pp.43-44

In comments (consistent with my findings based on our audit of QMI files) the ICAC said:

Ideally what is required is a comprehensive, integrated, computerised bridge management system to ensure that all relevant information is electronically available and accessible. The use of hard copy Bridge Inspection Books and Inspection Notebooks that are not readily accessible and a reliance on local knowledge is not a sufficiently comprehensive approach. Much of the history of Menangle Bridge is contained in hard copy files.¹⁶⁸

One rail safety official summed up the situation as follows:

It is a core competency ... you need information ... readily accessible and available to people ... instead of trying to scabble round through bits of paper stored in cabinets, information held in people's heads, information is everywhere.¹⁶⁹

Based on our audit of QMI's record keeping and investigation files, I consider that there is a need for considerable improvement of its policies and practices in this area. The opinions and recommendations set out below are aimed at ensuring the administrative framework which underpins QMI's inspections and investigations is sound and consistent across the state.

Opinion 6

The QMI's failure to record much of its informal compliance activity constitutes unreasonable administrative action within the meaning of s.49(2)(b) of the Ombudsman Act.

Opinion 7

The extent of inconsistency in the use, format and terminology of mine record entries constitutes unreasonable administrative action within the meaning of s.49(2)(b) of the Ombudsman Act.

Recommendation 19

That the QMI develop a policy providing guidance to its inspectors on the making and use of mine entry records including:

- the types of compliance actions to be recorded; and
- the format and terminology to be used in such records.

¹⁶⁸ ICAC, *Report on Investigation into Conduct of the Rail Infrastructure Corporation and Others in Relation to Menangle Bridge*, p.44

¹⁶⁹ ICAC, *Report on Investigation into Conduct of the Rail Infrastructure Corporation and Others in Relation to Menangle Bridge*, p.44

DME response

DME agreed with this recommendation, noting that although formal training has previously been provided, this will be redone with a new policy in view of the staff turnover.

Recommendation 20

That the QMI develop, and require inspectors to use, standard terminology for all available compliance actions.

DME response

DME agreed with this recommendation, commenting that 'consistency is important and the use of different terminology particularly with respect to *SafeGuard* audits should cease'.

Recommendation 21

That, as part of its induction for all new inspectors, QMI ensure staff are trained in the appropriate use of mine record entries.

DME response

DME agreed with this recommendation.

Recommendation 22

That the QMI upgrade its Lotus Notes database to enable more accurate and standardised recording of requests for action below the level of directives.

DME response

DME agreed, and also advised that its Lotus Notes database will be upgraded to allow easy tracking of compliance with directives and substandard condition or practice notices. A dedicated programmer has been employed to undertake this (and other) upgrade tasks.

Recommendation 23

That the DME report publicly on the number and types of directives, substandard condition or practice notices, and other requests for action issued by its inspectors.

DME response

DME agreed with this recommendation.

Recommendation 24

That the DME require inspectors to specify a due date for implementation of each request for action the subject of a mine record entry.

DME response

In relation to requiring a due date to be specified for request for actions, DME advised it will need to consider further how to appropriately implement this as such requests are, effectively, only advice, and not mandatory.

Ombudsman comment

Including a time for compliance with the requested action does not change the request into a more formal compliance action. Furthermore, the operator's response to the requested action can then be reviewed after the specified period and an assessment made whether to issue a directive relating to the issue the subject of the request. Therefore, I consider the recommendation should be implemented.

Recommendation 25

That when an inspector specifies a due date for implementation of a directive or request for action, the inspector consider whether the level of risk is acceptable during the specified implementation periods.

DME response

In relation to risk, DME stated that it does always take this into account when deciding on an appropriate response. The Department stated that, in the 12 months to April 2008, it had directed the closure of 18 mines in full or in part where activities presenting an immediate danger of serious injury were detected by QMI inspectors.

Recommendation 26

That the DME implement a policy to the effect that, where an inspector makes a request for action to an operator to address a safety risk that could have been addressed by way of a directive, the inspector provide reasons in the mine record entry for not issuing a directive.

DME response

DME agreed with this recommendation and added that if a risk could be addressed by a directive, there should be a clear explanation in the MRE as to why a directive is not issued, just as the legislation requires an inspector to give a reason in the MRE for issuing a directive.

Recommendation 27

That, for the purpose of developing the policies I have recommended, the QMI review a sample of mine record entries (including some relating to directives) and incident investigations from all three regions and all sectors of the industry, and analyse:

- the nature, circumstances and appropriateness of the directives, requests for action and advice given;
- whether any request for action or advice should have been the subject of a directive;
- the clarity and practicability of each directive, request for action or advice; and
- whether due dates for compliance were specified and followed up.

DME response

DME agreed with this recommendation and indicated that auditing of MREs will occur to monitor consistency and appropriateness and to ensure directives and substandard condition or practice notices are 'closed out'.

Recommendation 28

That mine record entries produced by QMI inspectors be randomly and regularly audited by head office to identify whether:

- they are being made and recorded appropriately;
- directives were given wherever appropriate;
- due dates for compliance were specified and followed up; and
- risk is being adequately addressed in mine record entries.

DME response

DME agreed with this recommendation.

Chapter 10: Prosecutions

10.1 Criticism of Australian mines inspectorates

The prosecution records of all three major Australian mine safety inspectorates (Queensland, WA, NSW) have been publicly criticised. The Queensland and WA inspectorates, in particular, have been accused of failing to prosecute mine operators even when a prosecution would appear to be an obvious and reasonable course of action. For example, in a study of the Moura Disaster published in 1999, just prior to the introduction of the Coal Act and the Mining and Quarrying Act, Hopkins stated:

Coal mining inspectorates in Australia almost never prosecute for violations they discover. I was told that the Queensland Inspectorate has launched only two prosecutions in sixteen years, one of which was for repeated failure to comply with electrical rules. The policy is to seek compliance by asking, and only if defiance is encountered is prosecution contemplated. Not even deliberate violations are prosecuted.¹⁷⁰

More recently, Gunningham argued that the DME's Compliance Policy pays:

... insufficient attention ... to the relative weight of different factors, leaving a very large discretion to decision-makers. This in turn has enabled an 'advise and persuade' policy to prevail in almost all circumstances ...¹⁷¹

Gunningham also believes that:

... the evidence suggests that the sort of extreme 'advise and persuade' policy that the Queensland and Western Australian inspectorates have favoured will fail to send the appropriate deterrent signals to the recalcitrant.¹⁷²

Unions have also been critical of mining regulators' approaches to compliance. In a media release in relation to the NSW mines inspectorate, the CFMEU stated:

The statistics concerning NSW mining industry prosecutions reveals two important points:

1. The mining industry has historically been under-represented in the number of prosecutions undertaken relative to the incidence level of injuries and death; and
2. Since the NSW Government safety regulator commenced a more vigorous policy of prosecution there has been a significant improvement in the recorded level of death and serious injury in the mining industry.

Consider the following:

- Prior to 1999 there was not a single prosecution of a coal industry employer for any breach of safety laws (whether as a corporate defendant or natural person).
- In contrast, WorkCover NSW (which has the carriage of prosecutions in all industries bar mining) records several hundred prosecutions per year, and in year 2003-2004 exceeded 400 prosecutions for safety breaches.
- The mining industry prosecutor (Department of Primary Industries) has applied a more vigorous prosecution policy since the late 1990s. There were a total of 26 prosecutions initiated by the DPI in the years 2001-2004.
- Over the last 5 years there has been a 65% decrease in fatalities in the New South Wales coal mining industry compared with the previous five years.

¹⁷⁰ Hopkins, *Managing Major Hazards: The Lessons of the Moura Mine Disaster*, p.127

¹⁷¹ Gunningham, *Mine Safety: Law Regulation Policy*, p.173

¹⁷² Gunningham, *Mine Safety: Law Regulation Policy*, p.185

- The coal mining industry has had two out of the last 5 years without fatalities, and year 2004/05 recorded the lowest ever level of serious bodily injuries.

Clearly, prosecution is having an important deterrent effect in the mining industry.¹⁷³ [emphasis in the original]

10.2 Prosecution action by QMI

The QMI's Compliance Policy describes its enforcement practices as follows:

The Department's initial emphasis is on co-operation with stakeholders, including giving advice and encouragement to achieve required health and safety standards. This approach also includes the concept of staged escalation to deal appropriately with people or companies who fail or neglect to fulfil their safety or health obligations. The approach does not preclude prosecution as an initial response where, for example, situations involve gross negligence.¹⁷⁴

The Coal Act and the Mining and Quarrying Act both empower the DME to prosecute any person who breaches mine safety requirements. A complaint is made to an Industrial Magistrate by the Director-General of the DME.

Since the Acts commenced in 2001, there have been ten prosecutions, only three of which were under the Coal Act (see Table 7). We were advised that, prior to these three prosecutions, the first of which commenced in 2004, there had been no coal-related prosecutions by the QMI or its predecessors for 18 years. During this period, 44 people died in Queensland coal mining incidents, and many more were seriously injured. It is extremely surprising that none of these incidents led to prosecution action but the focus of my investigation is on the QMI's regulatory practice since the new Acts commenced.

Fines imposed by the court have varied from \$1,000 to \$30,000. Penalties at this level are unlikely to have a significant deterrent effect on most mine operators.

Table 7: Queensland mine safety prosecutions commenced between 2001 and 2007

No.	Incident	Hearing	Act	Nature	Outcome
1	October 2001	September 2003	Mining and Quarrying	Untrained worker in overturned forklift	Operator and SSE ¹⁷⁵ fined \$18,750 + costs and \$1,875 respectively
2	May 2002	October 2003	Mining and Quarrying	Worker caught in moving parts of a mill	SSE fined \$4,000 + costs
3	July 2002	October 2003	Mining and Quarrying	Seven-year old boy killed in rockfall at a tourist mine	Operator fined \$25,000; two directors fined \$2,500 each

¹⁷³ CFMEU, *Safety Alert – Briefing Note: The big business campaign to weaken mine safety laws*, February 2007

¹⁷⁴ QMI Compliance Policy, p.1

¹⁷⁵ SSE = Site Senior Executive (the senior official of the mine operator at the mine site)

No.	Incident	Hearing	Act	Nature	Outcome
4	December 2002	November 2004	Mining and Quarrying	Worker killed when caught in the articulation point of front end loader	Case against operator dismissed; contractor fined \$30,000 plus \$12,590 costs; SSE fined \$3,500 plus \$313 costs
5	January 2004	December 2004	Mining and Quarrying	Worker deliberately changed tags to show that he and others were working in a safe area when they were actually in a blasting area	Worker fined \$1,000 plus \$520 costs
6	July 2004	January 2008 – Settled out of court	Coal	Clay material fell onto workers, causing serious injury	Out of court settlement for \$300,000 plus \$236,000 costs
7	November 2004	December 2006	Mining and Quarrying	Air-trac driller killed when he and the drill fell over a cliff face	Operator fined \$30,000 plus \$20,409 costs; SSE fined \$3,000
8	October 2005	December 2006	Coal	Crane operator fell 11 metres and suffered serious injuries	Supervisor of injured worker fined \$3,000 plus costs
9	November 2005	Ongoing	Mining and Quarrying	Superintendent charged with failing to evacuate workers from work site where explosion occurred	Ongoing
10	February 2006	December 2007	Coal	Truck overturned and caught fire causing serious injuries to a worker	Operator fined \$35,000 plus \$9,000 costs; contractor fined \$44,000 plus \$18,000 costs; employee fined \$4,400
11	July 2006	Ongoing	Mining and Quarrying	Worker run over and killed by vehicle	Ongoing

No.	Incident	Hearing	Act	Nature	Outcome
12	October 2006	Ongoing	Mining and Quarrying	Worker crushed and killed by the cab of his loader when it rolled on its side	Ongoing
13	December 2006	Ongoing	Mining and Quarrying	Worker killed when a work basket detached from a tool carrier and he fell to the ground	Ongoing
14	March 2007	Ongoing	Coal	Mine vehicle rolled onto its side down a ramp. Worker suffered broken leg and spinal damage	Ongoing

By way of contrast, in NSW, there has been a significantly higher number of prosecutions (38 resulting in a conviction since 1999), with fines of up to \$200,000.¹⁷⁶

Following a 2005 review of the QMI, the Inspectorate has become somewhat more active in prosecuting mine operators. At the time of this investigation, there were three prosecutions in train against coal and/or metalliferous mine operators, some of which were major multinationals.

10.3 How is a prosecution launched?

The Coal Act and the Mining and Quarrying Act both empower inspectors (and certain other persons such as nominated workers' representatives and the senior site executive) to recommend prosecution to the Director-General in appropriate cases.¹⁷⁷ If the Director-General then considers it appropriate, a complaint is made to an Industrial Magistrate to commence the prosecution.

Between 2001 and 2005, the Acts authorised the Chief Inspector to commence prosecutions. In 2001, the DME implemented a Compliance Policy, which provided for review committees to be convened as needed.

Under the policy, the purpose of such committees was to provide the Chief Inspector of Mines with *'an opinion on the suitability of a recommended administrative response to serious non-compliance with fatal accidents or serious accidents or high potential incidents of special significance.'*¹⁷⁸

In 2005, the Acts were amended and the Director-General, as the chief executive, became the authorising officer for the purpose of commencing prosecutions. Since that time, review committees have provided their opinions to the Director-General on whether prosecutions should be commenced.

From the interviews we held during our investigation, and other evidence, it appears that the Review Committee, in effect, filters the recommendations of inspectors to prosecute. I note that review committees do not have any statutory basis.

¹⁷⁶ Freeman, *Observations on Mine Safety Management from Review of Major OHS Prosecutions and Investigations*, pp.1, 19

¹⁷⁷ Coal Act s.256; Mining and Quarrying Act s.235

¹⁷⁸ DME Compliance Policy (November 2001), p.14

The Compliance Policy had not been amended at the time of our investigation to reflect the changes to the Acts but was being reviewed.

The current Policy provides that the functions of the Review Committee are to:

- review the recommendations made as part of an investigation into a fatal accident or serious accident or high potential incident of special significance;
- provide the Chief Inspector with an opinion on whether the administrative responses recommended by an investigation into such an event are appropriate;
- review the recommendation to prosecute where the recommendation is associated with a fatal accident or serious accident or high potential incident of special significance; and
- provide the Chief Inspector with an opinion on whether sufficient grounds have been established to warrant a prosecution.¹⁷⁹

Membership of the Review Committee is, according to DME's Compliance Policy, to comprise:

- the Executive Director, Safety and Health;
- an inspector not involved in the investigation;
- a lawyer;
- a person with professional experience in the area under consideration; and
- a government officer (not necessarily from Queensland) with experience in health and safety matters.

The Review Committee's opinion is deemed to be that of the majority of its members.

Regardless of any change to the Compliance Policy, inspectors are authorised under the Acts to recommend prosecution to the Director-General. This means that a review committee must not prevent an inspector's recommendation from reaching the Director-General, or alter the inspector's recommendation, even if the committee disagrees with the recommendation.

Of course, the Director-General, in considering an inspector's recommendation, may seek the views of any person or persons including those of a review committee.

I am concerned that the Director-General is the authorising officer for the purpose of commencing prosecutions under the Acts, as the Director-General is also responsible for promoting and supporting the mining industry. This gives rise to a reasonable perception that such decisions may not be made impartially. I emphasise that I am talking about perception not reality. I have no evidence to suggest that the Director-General does not discharge this responsibility in an appropriate manner.

In Chapter 13, I deal with the perception arising from the QMI's location within DME's administrative structure and make recommendations to deal with that perception. Consistent with those recommendations, I consider that the perception of lack of impartiality in decision-making about prosecution action should be addressed.

Recommendation 29

That a proposal be developed for the Minister to consider amendments to the Coal Act and the Mining and Quarrying Act to authorise the Executive Director, Safety and Health, to commence prosecutions under those Acts.

¹⁷⁹ DME Compliance Policy (November 2001), p.14

Recommendation 30

That until the amendments recommended in recommendation 29 are made and commence, the Director-General of DME delegate the authority to commence prosecution action under the Coal Act and the Mining and Quarrying Act to the Executive Director, Safety and Health.

DME response and Ombudsman discussion – recommendations 29 and 30

DME did not support recommendations 29 and 30, stating that they are both contrary to a previous decision made by the Minister and Director-General to have prosecution decisions made at the highest level. DME indicated that any changes to this would require Ministerial support.

The Director-General stated:

The Department notes recommendations 29 and 30 and advises that the decision to prosecute is taken by the Director-General following legal advice and deliberation by the Compliance Committee which is chaired by the Executive Director Safety and Health Division. Given the involvement of the Executive Director in the detailed process of the Compliance Committee, I consider that the existing process is appropriate. I do note that since this process started the number of prosecutions has increased.

I note the Director-General's views in this regard, and fully appreciate that implementing recommendation 29 would require Ministerial approval as it would require legislative amendment.

As with several other recommendations in this report (namely, recommendations 39, 40 and 41), my intention in making recommendations 29 and 30 is to address the *perception* that the DME is influenced to an inappropriate degree by the mining industry and thereby compromised in its ability to discharge its statutory compliance functions in an impartial manner.

As the Director-General commented in his response to my proposed report, my investigation did not substantiate that regulatory capture¹⁸⁰ of the DME had occurred.¹⁸¹ However, previous investigations I have conducted, as well as academic studies of regulatory capture, indicate strongly that the perception of regulatory capture can, in itself, significantly detract from a regulator's effectiveness, including by prejudicing its reputation.

My primary concern with the current system is that the Director-General has responsibility for both mine safety and mining industry promotion (see Chapter 13 in relation to recommendations 39, 40 and 41). Safeguards are needed not only to insulate the QMI from regulatory capture but to publicly signal its operational independence from the DME's other important activities of promoting, encouraging and supporting mining in Queensland.

¹⁸⁰ See Chapter 13 for a discussion of the meaning of 'regulatory capture'.

¹⁸¹ The Director-General's comment appears in 13.5 after Recommendation 41.

Accordingly, I have decided to retain recommendations 29 and 30.

Recommendation 31

That if it is proposed to continue using review committees to advise on possible prosecution action, DME's Compliance Policy be amended to ensure no member of the Committee, whether an officer of the public sector or not, is involved in promoting the mining industry in Queensland.

DME response

DME agreed with this recommendation. It also commented that present policy is that persons involved in promoting the mining industry are not involved in the Review Committee and that its members are persons 'regarded as independent while having the necessary expert knowledge of the mining industry'.

10.4 'Parachuting lawyers'

One person to whom we spoke during the investigation claimed that a trend is emerging within certain parts of the mining industry in response to increased prosecution activity, whereby, following a fatality or serious injury, a legal team on retainer is flown in to the mine site '*... parachuting from a private jet ...*', and therefore arriving ahead of the mines inspectors. Officers at another regulatory agency the subject of a previous investigation we conducted described this practice as 'lawyering up'.

When this happens, the mine operator tends to take a defensive position from the very beginning of an investigation, seeking to challenge the activities of the QMI wherever possible. This is in contrast to the traditionally more common approach (at least in Queensland) of operators cooperating with the regulator to ascertain the 'nature and cause' of the incident.

Following any kind of serious incident, it is vital for investigators to inspect the scene, collect evidence and interview witnesses as soon as possible. Any delay can affect the reliability of people's memories, which, over time, become more prone to change and more reliant on assumptions. Physical evidence may also be lost or tampered with. Therefore, any significant delay to the commencement of an investigation can hinder its effectiveness.

The intervention of lawyers at the very outset of the investigative process may hinder investigators in their efforts to establish the cause of the incident and ways of preventing similar incidents occurring at the particular site or elsewhere.

Hopkins reports that this trend also developed in NSW following the 1996 Gretley prosecutions:

... companies were now asking managers to involve company lawyers in the investigation of any accident. It should be noted, however, that this development, is not a response by mine managers to the threat of personal liability, but a company response to the new era of prosecution ushered in by the Gretley case. There appeared to be two distinct strategies. The first was to formally place the investigation in the hands of the company's lawyers. Then, if government inspectors ask to see a report, lawyers can refuse to hand it over on the grounds that this violates lawyer/client confidentiality. The second strategy was to send draft reports to lawyers so that they could advise on what needed to be left out to avoid self-incrimination.

Interviewees complied somewhat reluctantly with these new policies because they believed that censoring reports in this way damaged relationships with local inspectors. Any such censorship of accident reports must be seen as an undesirable outcome of the Gretley prosecution, if anything, detrimental to safety.¹⁸²

This trend has also been observed elsewhere. In the USA, the national mine safety regulator (MSHA) appears to have often taken a more prosecutorial approach to mine safety than has been the case in Australia, and 'lawyering up' has been occurring there for many years. Braithwaite, writing as long ago as 1985, described an 'organised culture of resistance' at some USA mine operators, with workers being told by management not to speak to MSHA inspectors without legal counsel present.¹⁸³

10.5 'Hanging them out to dry'

The DME may, on occasion, be faced with little choice but to take prosecution action for a safety breach. This may be for one or more of the following reasons:

- the offender was grossly negligent, for example, knowingly disregarded serious safety concerns;
- the offender has demonstrated a pattern of disregard for safety;
- the offender shows little intention of rectifying safety concerns;
- prosecution is the only way, or the most effective way, to deter the offender and others from committing similar breaches of safety; and/or
- there is widespread public concern at the behaviour of the offender.

The QMI's Compliance Policy lists the following examples of situations in which prosecution may be appropriate:

- where perceived non-compliance has resulted in a fatal injury or grievous bodily harm;
- where perceived non-compliance has resulted in a situation that may have resulted in a fatal injury or grievous bodily harm;
- where an inspector alleges that a person has repeated the same offence;
- where an inspector alleges a person has been advised of the legislation but fails to comply; or
- where a person has failed to meet the requirements of a directive issued under the provisions of the legislation.¹⁸⁴

Quite often, these matters will relate to the behaviour of one or more individuals connected to a mine's operation, rather than the organisation as a whole.

Clearly, where someone at a mine has deliberately breached the safety rules, or was fully aware of a problem but recklessly failed to do anything about it, prosecution is likely to be the appropriate response. In addition, following a tragedy such as Moura or Gretley, public calls for the mine operator involved to be 'brought to justice' can be strident and difficult to ignore. The following case study is a good example of such a situation.

¹⁸² Hopkins, *Gretley Prosecutions*, pp.17-18

¹⁸³ Braithwaite, *To Punish or Persuade: Enforcement of Coal Mine Safety*, p.100

¹⁸⁴ QMI Compliance Policy, p.15

Case study: The Mount Kembla Disaster

The dilemma facing regulators is very old, going back virtually to the beginning of mine safety legislation. For example, in 1902, an explosion at the Mount Kembla Mine in NSW resulted in the deaths of 96 workers. The mine manager (Rogers) was convicted of breaching mine safety rules and suspended. A study of the case, made almost a century later, came to this conclusion:

Perhaps another manager in another time and place would have been taken before a magistrate, fined twenty pounds, and then allowed to resume his duties. However, 1902 and 1903 were not ordinary years for the New South Wales coal mining industry. The dominating fact was that ninety-six men had died at Mount Kembla, and there was a widespread feeling that something ought to be done to prevent recurrence. There was no doubt that the fatal ingredients had been gas, coal dust and naked lights, but the Parliament had failed to rise to the occasion ... therefore, if the lessons of the disaster were not to be lost, another course had to be found: Rogers would be used to warn all managers about the need to treat gas and coal dust with extreme caution, and to acquire knowledge with which to do so.

The ... inquiry was a mixed success ... but the very fact that there had been an inquiry and that Rogers had been suspended, put all managers on notice. Had the managers responded to [earlier] appeals for the introduction of safety lamps and had the Parliament amended the [legislation] to give him some real power in that regard, Rogers may well have found himself in a magistrate's court rather than [the] District Court ... Roger's misfortune was that he happened to be the manager of Mount Kembla when it blew up and killed more men than in any previous mining accident in New South Wales. Had the disaster not occurred, he would have carried on as usual, unreported by the government inspectors. As Judge Heydon had noted:

... I cannot look at the fact that Mr Rogers has been unfortunate enough to have been caught, when other managers not nearly so competent have escaped.

So, Rogers was the scapegoat for the ills of the entire industry. None the less, his punishment, in part, arose from a positive effort to improve safety in New South Wales coal mines.¹⁸⁵

The majority of incidents, however, are likely to be far less clear than this, and raise the question of whether prosecution is the most effective way to achieve higher levels of safety for the mine and the industry as a whole.

10.6 Power to prosecute

For the layperson, the mine operator is often likely to be seen as the party responsible for any breach of mine safety. However, this is not always the case, and indeed of the ten prosecutions launched by the QMI since the introduction of the Coal Act and the Mining and Quarrying Act, mine *workers* were named as defendants in four cases (either alone or with other parties). Contractors were also named as defendants in two cases.

At times, despite the best intentions of an operator, individual workers can deliberately or negligently ignore their safety and health obligations, putting themselves and their colleagues at risk. On other occasions, tragedies can occur without anyone being 'to blame' at all.

¹⁸⁵ Piggin & Lee, *The Mount Kembla Disaster*, pp.217-218

Both Acts impose safety and health responsibilities on a range of parties involved in the mining industry. The structure of obligations was described by the Queensland Supreme Court (in commentary on the Coal Act, which is equally applicable to the Mining and Quarrying Act) as follows:¹⁸⁶

By 1999, deficiencies in the regulatory regime covering safety and health in coal mines were widely recognised. That regime ‘concentrate[d] on telling industry how things must be done rather than the standards of safety which must be achieved while doing the task.’ The [Coal Act] ‘focuses on the standards of safety and health that must be met and allows the mine operator to use the most appropriate methods and technology to achieve these standards’. It is intended to ‘provide a modern legislative framework for the safety and health of those involved with Queensland’s most important industry’. Its objects are:

- ‘(a) to protect the safety and health of persons at coal mines and persons who may be affected by coal mining operations; and
- (b) to require that the risk of injury or illness to any person resulting from coal mining operations be at an acceptable level.’

It specifies eleven methods by which those objects are to be achieved.

The first method ... for achieving the Act’s objects is the imposition of safety and health obligations on just about everyone at a coal mine, from the workers upward. Depending upon the circumstances, breach of these obligations can result in imprisonment for up to two years.¹⁸⁷

Accordingly, the DME can prosecute anyone who breaches a safety obligation at a mine regardless of their position at the mine.

10.7 The sanctions dilemma

As with any other workplace, individual personalities and organisational cultures can vary widely between mines, even though the mines themselves may be physically and operationally similar. Mine operators, executives, employees, contractors and others involved in the industry work within a complex web of relationships and cultures. Many mine operators and workers strive to ensure the highest level of safety simply because it is in their interest to do so and there is a good safety culture in the organisation or at the particular mine. Others may seek to cut corners wherever possible. Some (hopefully a very small number) may deliberately or negligently disregard safety to minimise cost, or for some other inappropriate reason.

Therefore, the discovery of the same problem may be managed differently at different mines. QMI staff advised us that, often, a mine operator will be genuinely concerned about an unsafe practice or issue discovered during a QMI inspection and will seek to rectify it quickly. At these mines, organisational culture at all levels demands the highest level of safety feasible in the mining environment. At others, the response may be more adversarial, with operators or employees seeking to hide evidence of safety breaches from the inspectors.

Ultimately, this means that, at each mine and in relation to each type of problem discovered, the QMI must confront a dilemma: *Do we take enforcement action and risk alienating the operator, or take a softer option and risk having nothing actually change?*

¹⁸⁶ This commentary refers specifically to the Coal Act; however, it is equally applicable to the Mining and Quarrying Act.

¹⁸⁷ *CFMEU v Oaky Creek Coal* [2003] QSC 033 at paras 3-7 per Fryberg J

In this regard, Gunningham comments:

Trade unions and mining communities, especially following a fatality or serious injury, argue in favour of prosecution, even against those whose culpability is quite low. On the other hand, mining companies, managers and other statutory position holders are inclined to suggest that prosecution should be reserved for 'bad apples' which they tend to equate with the reckless and wilful. Accordingly, prosecutors, in determining which cases to prosecute, and in seeking to identify an acceptable basis for prosecution, find themselves between a rock and a hard place. They will inevitably offend either those who demand retribution or those who put prevention first ... As a result, politics, rather than rational decision-making, often holds sway.¹⁸⁸

One enforcement method open to the QMI is a directive that a mine (or part of a mine) be shut down while rectification of problems occurs. This may in many cases be a greater deterrent to poor safety practices than a prosecution. We raised this issue in our interviews with the QMI staff. One of our interviews ran (in part) as follows:

QMI officer: I'm a great believer in shutting [mines] down if they don't comply. There's nothing like a fiscal imperative to frighten a coal mine manager. If you shut a coal mine for a day it's – minimum, a million dollars that they've lost. You shut it for two days and the manager won't be there very long.

Interviewer: ... we've interviewed other people and they've also expressed this view, and that answer sort of summarises it. They say basically that if you're wanting to achieve an outcome it's much more sensible to say – look, this mine's going to be shut down unless you do something than to say – OK, we're going to prosecute you which could take ... 18 months [or longer].

QMI officer: And you might not win.

Interviewer: And [there might be a fine of \$2000]. It's nothing. So they're suggesting – well, it's ridiculous to go that litigation road ...

QMI officer: There's a public interest there from time to time. We have to address public interest, I believe. If someone's ... very badly burnt [for example] we're obligated to do something about that. Specially when ... we investigated [and] found [it was] eminently avoidable.

¹⁸⁸ Gunningham, *Prosecution for OHS Offences: Deterrent or Disincentive?* p.372

10.8 How others handle the dilemma

New South Wales

The mining health and safety system in NSW is not dissimilar to that in Queensland, although it is clear each state has different perspectives on mine safety regulation. A notable difference is that, as mentioned above, there has recently been a significant increase in prosecution activity by the NSW regulator (Department of Primary Industries) for breaches of mine safety legislation. Since 1999, the NSW Department of Primary Industries has maintained a dedicated Investigations Unit with a core function of investigating mine safety matters where prosecution is a possibility.

In 1996, four workers were killed at the Gretley Colliery near Newcastle. An inquiry was conducted into the incident, following which the NSW regulator prosecuted the mine owners and others.¹⁸⁹ Prior to this, there had not been a prosecution in seven years in NSW, despite 33 deaths in coal mines in the state during that period.¹⁹⁰

As Gunningham notes, the CFMEU considered the NSW regulator a 'dead duck'.¹⁹¹ Gunningham goes on to describe the aftermath of the Gretley disaster:

It was the unwillingness of the New South Wales Mines Inspectorate to prosecute, coupled with political pressure (especially from the CFMEU), that prompted the establishment of an independent Investigations Unit in 1998. Following the Gretley disaster, Justice Staunton's call for the 'timely prosecution' of the mining companies and senior officials, was particularly influential on enforcement policy.¹⁹²

This approach has not been without controversy:

The role of prosecution in achieving compliance with OHS legislation is a highly contentious issue, particularly in the mining industry. Nowhere is this more so than in New South Wales, where, following the Gretley Disaster ... the Department of Primary Industries ... developed a new found enthusiasm for punitive action ... It has, moreover, chosen to prosecute not just companies but also individual mine managers and other statutory duty-holders ...

The department's prosecution policy ... has precipitated a seething dispute between the New South Wales Minerals Council and major mining companies on the one hand, and the mine safety regulator and the mining trade unions on the other. The companies argue that prosecution is counter-productive, inhibits adequate safety investigation, encourages a defensive rather than a proactive OHS culture, and drives away would-be mine managers at a time of severe labour shortage ... The trade union, on the other hand, welcomes these developments as providing effective deterrence to corporate law-breaking and urge regulators to expand their use of prosecution to a far wider range of circumstances.¹⁹³

¹⁸⁹ The prosecutions commenced in 2000. See the discussion in *Newcastle Wallsend v McMartin* [2006] NSWIRComm 339

¹⁹⁰ Gunningham, *Mine Safety: Law Regulation Policy*, p.155

¹⁹¹ Gunningham, *Mine Safety: Law Regulation Policy*, p.155

¹⁹² Gunningham, *Mine Safety: Law Regulation Policy*, p.156

¹⁹³ Gunningham, *Mine Safety: Law Regulation Policy*, pp.152-153

The 2004 Wran Review of Mine Safety in NSW was prefaced with the following comments on the tripartite relationship between the mine operators, the unions, and the government regulator (the Department of Primary Industries):

Firstly, there is debilitating mistrust between the members of the tripartite process at all levels.

Secondly, there is a disconnect between the intentions of both DPI and the companies, on the one hand, to reduce risk through systems and management plans and, on the other, the reality of risk encountered at the 'coal face'.

This mistrust and disconnect must be acknowledged and addressed by all parties. The need to address these critical issues underpins the major recommendations of the Review.¹⁹⁴

During several of our interviews in this investigation, QMI staff and others expressed a view that the increased focus on prosecutions in NSW may not necessarily be achieving optimum safety outcomes for the industry as a whole, due to the 'lawyering up' phenomenon described at 10.4.

There is limited empirical evidence at the moment to confirm or deny this. In particular, statistics on mining deaths are not particularly revealing (see Tables 8 and 9).

Table 8: Mining deaths per year by state¹⁹⁵

	NSW	QLD	WA
TOTAL	23	17	30
2005-2006	0	3	5
2004-2005	1	4	2
2003-2004	4	1	4
2002-2003	1	3	5
2001-2002	2	2	3
2000-2001	4	2	5
1999-2000	11	2	6

Table 9: Mining deaths per million hours worked¹⁹⁶

	NSW	QLD	WA	National average
AVERAGE	0.09	0.04	0.04	0.05
2005-2006	0.00	0.04	0.04	0.04
2004-2005	0.03	0.06	0.02	0.05
2003-2004	0.12	0.02	0.04	0.06
2002-2003	0.03	0.05	0.06	0.03
2001-2002	0.06	0.04	0.03	0.08
2000-2001	0.13	0.04	0.06	0.09
1999-2000	0.31	0.04	0.07	0.05

¹⁹⁴ Wran, *NSW Mine Safety Review*, p.7

¹⁹⁵ Data sourced from Minerals Council of Australia, *Safety Performance of the Australian Minerals Industry 2005-2006*, p.11. Variations in reported deaths between this table and table 2 are likely due to the wider scope of the Minerals Council statistics.

¹⁹⁶ Data sourced from Minerals Council of Australia, *Safety Performance of the Australian Minerals Industry 2005-2006*, p.13.

While the NSW statistics have, since the 2004-2005 financial year, been lower than those of Queensland, the overall numbers of deaths remain very low in both states and are subject to one-off spikes which skew longer-term averages.

Therefore, I am unable to conclude on the basis of a comparison of mining deaths in NSW and Queensland that either state's mine safety regulatory practices are superior to the other's.

Opinion 8

The low level of prosecution activity by the QMI for breaches of the Coal Act and the Mining and Quarrying Act since the Acts commenced in 2001 does not, in itself, provide sufficient evidence of unreasonable administrative action within the meaning of the Ombudsman Act.

DME comment

DME advised that the QMI's investigation processes have been strengthened through the appointment of specialist investigation officers and the conduct of investigations on a team-based approach, which is leading to improved mine safety.

USA

Mine safety oversight responsibilities in the USA are shared between the federal and state governments. At the federal level, the national authority is the Mine Safety and Health Administration (MSHA) within the Department of Labor. MSHA administers the USA Federal *Mine Safety and Health Act of 1977*.

MSHA's investigation and enforcement practices are markedly different to those followed in Australian mine safety, focussing on a citation and fine-based enforcement model. MSHA describes this as follows:

To promote compliance with the provisions of the Act and its safety and health standards, all violations found during inspections and investigations must be cited. All violations are subject to civil penalties, and all violations must be corrected within the time frames established by MSHA.¹⁹⁷

At the time of writing, MSHA reported that its fines range from US\$55 up to a maximum of US\$55,000.¹⁹⁸

¹⁹⁷ US Department of Labor website: <http://www.dol.gov/compliance/guide/msha.htm>
[accessed on 19 February 2008]

¹⁹⁸ US Department of Labor website: <http://www.dol.gov/compliance/guide/msha.htm>
[accessed on 19 February 2008]

A 2006 *New York Times* article claimed that, in practice, there have been problems with this approach:

In its drive to foster a more cooperative relationship with mining companies, the Bush administration has decreased major fines for safety violations since 2001, and in nearly half the cases, it has not collected the fines, according to a data analysis by The New York Times.

Federal records also show that in the last two years the federal mine safety agency has failed to hand over any delinquent cases to the Treasury Department for further collection efforts, as is supposed to occur after 180 days.

With the deaths of 24 miners in accidents in 2006, the enforcement record of the Mine Safety and Health Administration has come under sharp scrutiny ...¹⁹⁹

A mine safety lawyer is quoted, as follows:

Most fines are so small that they are seen not as deterrents but as the cost of doing business.²⁰⁰

However, MSHA itself is quoted in the article as asserting that safety statistics were improving in the USA. Further, the USA's association for the mining industry is quoted as follows:

The agency realized in recent years that you can't browbeat operators into improved safety, and this general approach has worked.

Federal records show that fatalities across all types of mining have stayed relatively stable. In each of the last three years, 55 to 57 miners have died in all areas of mining. Experts say a long-term decline in coal mine fatalities is in part a result of growing mechanization.²⁰¹

South Africa

In a 2001 mining safety and health symposium, John McEndoo, Safety Manager for a South African mine operator, discussed the concept of 'no blame accident investigations'.²⁰² McEndoo commented:

There has traditionally existed a fundamental tension between investigating the truth of what really happened in an accident, and getting witnesses to an accident possibly to incriminate themselves by giving evidence which could be used against them in a legal inquiry ...²⁰³

¹⁹⁹ Urbina & Lehren, 'U.S. is reducing safety penalties for mine flaws', *New York Times*, 2 March 2006, accessed on 9 October 2007 at <http://www.nytimes.com/2006/03/02/national/02mine.html>

²⁰⁰ Urbina & Lehren, 'U.S. is reducing safety penalties for mine flaws', *New York Times*, 2 March 2006, accessed on 9 October 2007 at <http://www.nytimes.com/2006/03/02/national/02mine.html>

²⁰¹ Urbina & Lehren, 'U.S. is reducing safety penalties for mine flaws', *New York Times*, 2 March 2006 [Accessed on 9 October 2007 at <http://www.nytimes.com/2006/03/02/national/02mine.html>]

²⁰² McEndoo, *No Blame Accident Investigations*, paper presented to the 2001 Queensland Mining Industry Health and Safety Conference

²⁰³ McEndoo, p.91

In order to establish the causes of an accident, it is fundamental that a detailed understanding of the causative factors be accurately established. It is here that methods used by the state in investigating accidents vs. holding a legal inquiry, create a deep-seated tension between, on the one hand, the pursuit of basic causes, and on the other, the establishment of whether the law has been contravened, and most importantly by whom.

The South African *Mine Health and Safety Act 1996* contains a provision aimed at avoiding this situation, by enabling 'ring-fencing' of nature and cause investigations from formal legal investigations.²⁰⁴ This was designed to permit the investigation to discover why an incident occurred, and implement actions to fix the problem, rather than allow the investigation to become focussed on legal liability matters. The relevant parts of the provision state:

- (1) For the purposes of enhancing the effectiveness of an investigation ... the Chief Inspector of Mines, in consultation with the Attorney-General, may issue a certificate that no prosecution may be instituted in respect of any contravention of, or failure to comply with, a provision of this Act related to the event being investigated. If a certificate is issued, no fine ... or disciplinary action related to the event investigated may thereafter be imposed on or taken against any person.
- ...
- (3) Persons questioned during the investigation who are afforded protection under this section must answer to the best of their ability and may not refuse to answer any question on the grounds that the answer may be self-incriminating.

The South African mining industry is very different from the Australian industry, with different work practices, lower levels of mechanisation, and massively higher fatality and injury rates. As a reminder of this, during our investigation, 3,200 miners were trapped (but later rescued) more than two kilometres underground at the Elandsrand Gold Mine in South Africa.

Further, in the most recent (2006) reporting period, almost 200 workers were killed in South African mines. A media report on the South African mining industry's response included these comments:

A Johannesburg-based gold analyst ... said state-led inspections of mines were unlikely to be successful because the government lacked enough skilled staff to carry out such probes.

'That is a pipe-dream,' the analyst who asked not to be identified said. 'The government doesn't have the manpower to do this thing (audit). It is a nice gesture, but not much will come of it.'

The current law does not have prescribed minimum safety standards for mines, he added.

...

Minerals and Energy Minister Buyelwa Sonjica offered a mea culpa on behalf of the government on Friday, telling a mines safety summit that her department was suffering from a shortage of skilled staff to conduct regular inspections.

²⁰⁴ *Mine Health and Safety Act 1996* (South Africa), s.63 (Enhancing effectiveness of investigation)

'Our inspections have tended to be reactionary rather than pro-active,' Sonjica said, adding it was not yet clear who would conduct the audit ... although private sector experts might be used ...

Analysts said South African companies would be under pressure to follow in the footsteps of mining sectors overseas, some of which have far better safety records.

The labour-intensive nature of South African mines compared to operations in Canada or Australia, which are highly mechanised, also meant there was a higher incidence of deaths.²⁰⁵

The aviation industry

The mining and aviation industries, despite obvious differences, do share high levels of technical and engineering complexity, and the potential for catastrophic failures leading to multiple deaths and serious injuries. In terms of incident investigation, there is also considerable scope for common learning by the industries. A 2002 article on this issue stated:

Both industries have moved away from just finding out what happened. The focus is now on what can be learned from incidents and accidents. Generalised findings such as 'human error' are not much help if your aim is to prevent future accidents.²⁰⁶

The same article noted that the ICAM incident investigation system used by QMI and major mine operators was, in fact, developed by BHP Billiton and other parties with cooperation from the former Bureau of Air Safety Investigation (now a component of the ATSB).²⁰⁷

In a Coronial Inquest into a death in natural gas extraction operations near Surat, the State Coroner commented:

One need only consider the benefits that are now being realised in the health care sector as a result of medical administrators embracing the safety lessons learnt in the aeronautical industry to recognise the potential advantages of cross pollination of this kind, especially in industries that consider they are unique.²⁰⁸

There are also some similarities in the structure of both industries, with a small number of large (and often multi-national) operators, and a plethora of smaller operators.

Large operators in both industries (such as BHP Billiton and Xstrata in mining, and Qantas and Virgin Blue in aviation) have sophisticated 'in-house' safety systems, often with resources many times greater than the safety regulator. In many instances, the work of the safety regulator may be of relatively minor importance to the safety standards and practices of the large operators.

Small operators, however, are in a different position. On the one hand, a small operation will normally involve fewer risks and risks that are readily identifiable. On the other hand, a small operator may not have the capacity and resources to respond to those risks and may therefore rely heavily on the regulator to provide guidance on safety issues.

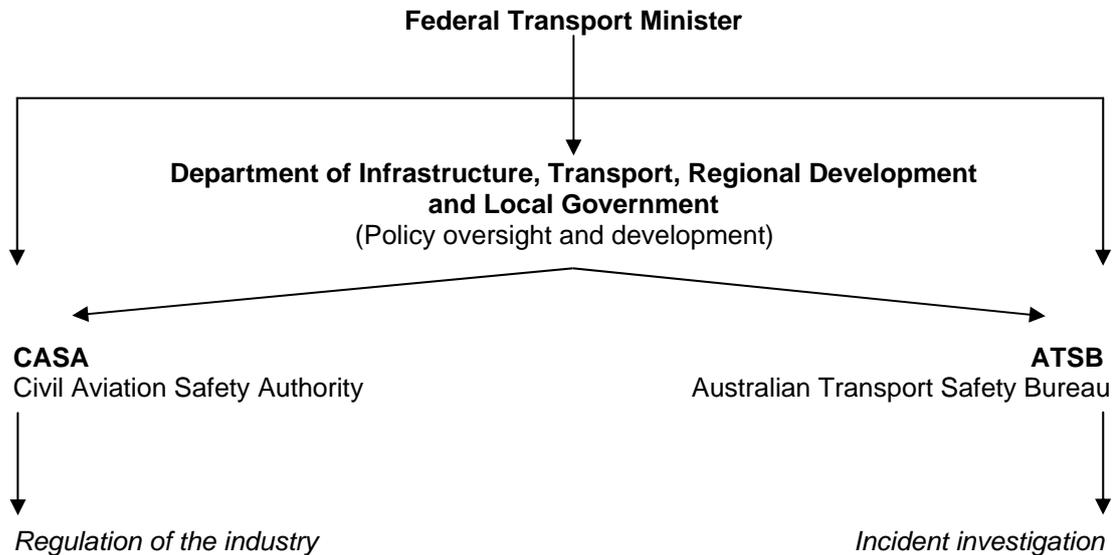
²⁰⁵ Macharia, *S Africa grapples with mine safety after mishap* [Accessed on 9 October 2007 at <http://africa.reuters.com/wire/usnL08334533.html>]

²⁰⁶ De Landre & Gibb, *'Blue sky mining'*, Flight Safety Australia, July-August 2002, pp.34-35

²⁰⁷ De Landre & Gibb, *'Blue sky mining'*, Flight Safety Australia, July-August 2002, p.36

²⁰⁸ State Coroner, *Inquest into the Death of Rodney Joseph Fiechtner*, p.13

Aviation safety in Australia is a federal responsibility. Aviation policy is managed by the Department of Infrastructure, Transport, Regional Development and Local Government. Aviation safety regulation (including routine inspections, licensing and enforcement) is the role of the Civil Aviation Safety Authority (CASA), a portfolio agency of the Federal Transport Minister. Aviation incident investigation is the responsibility of another portfolio agency, the Australian Transport Safety Bureau (ATSB).



What is noteworthy about this structure is that, although the functions of policy development, safety regulation, and incident investigation are managed by different entities, they are still the responsibility of a single minister.

The entire structure of aviation safety regulation in Australia is built on the concept that the first priority is *safe aviation*; ascertaining culpability and meting out punishment are secondary. In such an environment, the primary focus is on finding out why an incident or near-miss occurred, and taking steps to prevent similar incidents from happening, anywhere in the industry.

In July 2003, the Commonwealth *Transport Safety Investigation Act 2003* commenced. This Act regulates the ATSB's investigative activity. Unlike many other safety-related legislative schemes, this Act is based on the principle that the purpose of incident investigation is to establish why the incident happened, rather than who should be prosecuted. This approach to air safety investigations is accepted internationally.²⁰⁹

Section 7 of the *Transport Safety Investigation Act 2003* sets out the objects of the legislative scheme:

- (1) The main object of this Act is to improve transport safety by providing for:
 - (a) the reporting of transport safety matters; and
 - (b) independent investigations into transport accidents and other incidents that might affect transport safety; and
 - (c) the making of safety action statements and safety recommendations that draw on the results of those investigations; and
 - (d) publication of the results of those investigations in the interests of transport safety.

²⁰⁹ This principle is embodied in Annex 13 of the Convention on International Civil Aviation, signed in Chicago on 7 December 1944 (the Chicago Convention).

...

(3) The following are not objects of this Act:

- (a) **apportioning blame for transport accidents or incidents;**
- (b) **providing the means to determine the liability of any person in respect of a transport accident or incident;**
- (c) assisting in court proceedings between parties (except as expressly provided by this Act);
- (d) allowing any adverse inference to be drawn from the fact that a person is subject to an investigation under this Act. [emphasis added]

Instead of seeking to apportion blame for an incident or to determine liability, the Act focuses on penalising those who fail to cooperate fully with the investigation. Failure to report information on a significant matter is punishable by imprisonment for up to six months.²¹⁰ In effect, operators cannot refuse to cooperate with an investigation.

This focus on improving safety rather than on establishing culpability comes with greater public scrutiny of operators and persons the subject of investigation. The ATSB is generally required to publish investigation reports, and copies can be viewed by the public on its website.²¹¹ This means that aviation industry operators may not necessarily be prosecuted for failings, but they will almost certainly find that the full details of their failings are publicly reported. ATSB reports do not usually name the operator. However, it is often not difficult to ascertain this from other information in the reports such as the type of aircraft used, its registration, the location and time of the incident.

Case study: Inflight fuel exhaustion near Bundaberg

In 2005, an aircraft carrying 16 passengers and two crew from Thangool to Brisbane came within ten minutes of running out of fuel. The flight made an emergency diversion to Bundaberg and landed with only one of the two engines functioning. It was later discovered that, on takeoff, the aircraft fuel tanks had only held about 65% of the fuel the crew thought they had held.

The ATSB conducted an investigation under the *Transport Safety Investigation Act 2003*.²¹² Some of the key findings included:

- there had been defects in the wiring to the fuel gauge;
- calibrations of the fuel quantity indicating system had not been in accordance with the aircraft's maintenance manual;
- the operator's procedures and practices did not ensure validation of the actual fuel quantity on board the aircraft;
- a culture existed among the operator's flight crew of not following correct fuel quantity verification procedures; and
- the flight crew failed to declare an emergency to air traffic control or advise the reason for the diversion to Bundaberg, meaning emergency procedures were not in place for the aircraft's arrival.²¹³

²¹⁰ See, for example, s.18 (Immediate Reports)

²¹¹ http://www.atsb.gov.au/publications/investigation_reports/index.aspx

²¹² See ATSB Transport Safety Investigation Report 200504768, available at http://www.atsb.gov.au/publications/investigation_reports/2005/AAIR/aaair200504768.aspx

²¹³ ATSB Transport Safety Investigation Report 200504768, p.29

In response, a range of actions were taken by CASA, the ATSB and the operator. These included:

- inspections of aircraft in the fleet by government inspectors;
- issuing of an airworthiness bulletin to industry advising of the problem;
- amendment of the relevant civil aviation order to industry as a whole; and
- revision of the operator's procedures.²¹⁴

The full report of the incident and the subsequent investigation, along with the operator's actions in response to the recommendations, was made publicly available on the ATSB's website.

The report is prefaced by commentary on the ATSB's role in aviation safety, which states (in part):

The object of a safety investigation is to enhance safety. To reduce safety-related risk, ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not the object of an investigation to determine blame or liability. However, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. The ATSB prefers to encourage the relevant organisation(s) to proactively initiate safety action rather than release formal recommendations. However, depending on the level of risk associated with a safety issue and the extent of corrective action undertaken by the relevant organisation, a recommendation may be issued during or at the end of an investigation.²¹⁵

The role of the QMI includes some responsibilities comparable to the ATSB's and some comparable to those of CASA. Like the ATSB, the QMI conducts significant nature and cause investigations and issues recommendations to improve safety. However, like CASA, the QMI also conducts routine compliance inspections and undertakes compliance action (including prosecution) where necessary.

²¹⁴ ATSB Transport Safety Investigation Report 200504768, pp.31-35

²¹⁵ ATSB Transport Safety Investigation Report 200504768, p.vi

Chapter 11: Engagement of the many, prosecution of the few

11.1 Regulatory strategy

The QMI is confronted with the sanctions dilemma on a regular basis in its investigations. Its Compliance Policy encourages cooperation and the giving of advice to address safety and health problems as far as possible, leaving prosecution for the most serious cases of non-compliance. However, there is only limited guidance on the QMI's overall regulatory philosophy and strategy.

The DME Compliance Policy states:

The Department's initial emphasis is on co-operation with stakeholders, including giving advice and encouragement to achieve required health and safety standards. This approach also includes the concept of staged escalation to deal appropriately with people or companies who fail or neglect to fulfil their safety or health obligations. The approach does not preclude prosecution as an initial response where, for example, situations involve gross negligence.²¹⁶

The responses provided to my investigators by QMI staff clearly indicated that the QMI's approach to its compliance role is a prevention-focussed one. In general terms, the QMI prioritises its work as follows:

1. **Emergency management** (first aid for injured parties; prevention of immediate danger to others in the vicinity, evacuation, etc).
2. **Local rectification** (stopping the unsafe practice or adding new safeguards, etc, at the affected site to prevent a recurrence of the incident).
3. **Systemic rectification** (educating the industry as a whole on strategies to prevent a similar incident occurring elsewhere).
4. **Liability** (ascertaining culpability for the incident and taking prosecution action).

QMI staff described the reactive process of prosecuting as being somewhat 'alien' to their working culture. This is probably attributable to the fact that QMI inspectors are usually engineers or other scientific specialists, not lawyers. A scientific investigation and an investigation for prosecution purposes are often very different processes. Being a skilled engineer, for example, does not guarantee that a QMI inspector will be able to investigate whether sufficient evidence exists to support a prosecution.

Conversely, a focus on establishing legal liability following an incident may fail to identify the true cause of the incident and how similar incidents can be prevented. This results in the industry as a whole losing the opportunity to learn of a potential danger and taking steps to minimise it.

The introduction to BHP Billiton's ICAM guide, used by the QMI as a core part of its investigation strategy, states:

The principal objective of incident investigation shall be the prevention of recurrence and to advance safety. It is not the purpose of this activity to apportion blame or liability. This fact must be clearly understood by all members of the investigation team and, more importantly, by those staff/contractors called upon to provide statements/evidence to the investigation team.²¹⁷

²¹⁶ DME, Compliance Policy, p.1

²¹⁷ BHP Incident Investigation Guide, p.2

In the Ritter review, it was noted that:

The key steps in the ICAM process are:

- establish the facts;
- identify root causes and latent hazards;
- review adequacy of existing controls and procedures;
- report the findings;
- recommend corrective actions which can improve efficiency, reduce risk and prevent occurrence;
- detect developing trends that can be analysed to identify specific or recurring problems; and
- identify any key learnings for distribution.

It is said that the ICAM process does not apportion blame or liability, but identifies causes and the appropriate corrective actions.²¹⁸

It can be readily appreciated that this approach may not necessarily lead to the production of evidence suitable for use in a prosecution or other enforcement process.

The difficulties inherent in trying to conduct both a 'nature and cause' analysis, and an investigation for prosecution purposes, were apparent in my study of electrical safety investigations (reported in the *The Workplace Electrocution Project Report*). There, I found that:

... officers involved in [investigations] were, in the main, recruited for their technical expertise and not investigative experience. While they were competent in locating and identifying workplace and/or electrical deficiencies, there was at best minimal experience or expertise in the practical requirement of investigating an incident with a view to prosecution. This was so at all levels of responsibility.²¹⁹

The QMI appears to have decided, as an organisation, that, where an apparent safety breach occurs, immediate action through a directive (for example, to stop operations) is usually more effective than prosecution. To paraphrase a view we heard frequently throughout this investigation:

A prosecution might take two years, cost the Department tens of thousands of dollars, use as much of our staff time and resources as a major incident investigation, and result in a fine of maybe \$3000. By then, most in the industry will have forgotten the incident anyway. On the other hand, a directive to shut down a mine is effective immediately, can solve the safety problem rapidly, and costs the operator dearly – sometimes \$1 million or more a day. That approach achieves results quickly and focuses the minds of senior mine management on making the mine safe.

A QMI official told my investigators:

The mines inspectorate philosophy is if something is immediately dangerous to life or limb, stop it, and if that involves a conveyor or a problem with ventilation, there's a whole raft of things, stop the mine, they have to fix it ... well we'd like [them] to grab every [one] they [can] and get in and clean it up and [then] you can tell them to get going again. But the signal that it sends to the manager is if we shut a mine down more than once with the same manager ... the company won't wear it. This guy's not running the mine properly.

²¹⁸ Ritter, pp.79-80

²¹⁹ *The Workplace Electrocution Project Report*, p.66

In many industries, a prosecution resulting in a fine of several thousand dollars is likely to be a significant deterrent. The offender will also experience disruption to his or her business while defending the matter and may suffer damage to their reputation which may deter clients (regardless of the actual outcome of the case).

These considerations are less relevant to mine operators, particularly the multinationals and other large operators. Here, the production imperative is so great and consumer demand so high that a prosecution is usually little more than a nuisance. A large fine (even running into hundreds of thousands of dollars) will simply be factored into the cost of production. Demand for the product (for example, coal or nickel) will continue regardless.

Furthermore, in the case of a multinational, a mine perceived as 'troublesome' due to the number of safety issues arising there and consequential legal action may simply be closed.

Using BHP as an example (in the wake of the Moura Disaster), Hopkins expressed this opinion:

In short, if BHP loses a mine from time to time, this is of no financial consequence as far as shareholders are concerned. Nor, therefore, does it have any financial impact on the most senior executives of the company ... This is not to say that senior managers are unconcerned about safety; simply that financial considerations play an insignificant role in generating concern.²²⁰

However, Hopkins maintains that in some cases, prosecution action can focus the mind on safety issues.

Case study: Gretley Mine Disaster, NSW

In November 1996, four miners at the Gretley Colliery in NSW were killed when they drilled into disused mine workings. They had been misled by inaccurate maps into believing that what they were doing was safe, but they were drowned when water flooded the mine. The mine operator (among other parties) was prosecuted by the NSW equivalent of the QMI, and was found guilty. The operator was fined \$730,000.

In a November 2005 publication, Hopkins analysed in broad detail the outcomes from the prosecution.

Imagine for a moment that the Gretley management had discovered its mistake at the last moment and stopped mining just in time to avoid the disaster, and assume the inspectorate was aware of what had happened. It is inconceivable in these circumstances that the earlier failure to check the accuracy of the plans or to carry out an adequate risk assessment in relation to the danger from old workings would have resulted in prosecution.²²¹

Judgments about culpability are judgments about moral rectitude, about the degree of wickedness, if you like. These are fundamentally human characteristics. It is very difficult to talk meaningfully about the moral rectitude or wickedness of a corporation.²²²

²²⁰ Hopkins, *Managing Major Hazards*, p.118

²²¹ Hopkins, *The Gretley Coal Mine Disaster*, p.10

²²² Hopkins, *The Gretley Coal Mine Disaster*, p.16

One year later, Hopkins published a summary of research on the impact of the prosecutions on the industry.²²³ Hopkins interviewed a sample of coal mine managers in NSW in relation to how the prosecution had affected them.

Research generally shows that prosecuting companies for health, safety and environmental violations improves corporate performance in these areas. Companies do not however react as 'amoral calculators', comparing the likelihood and severity of punishment against the advantages of non-compliance. Their responses are more complex and less comprehensible from a strictly utilitarian point of view.²²⁴

By way of summary, the Gretley case created a fear of being personally prosecuted and many managers reported that this fear helped focus their minds on safety. It was not the only source of safety consciousness, nor even the most important, but it was clearly influential ... The strongest effect revealed ... is the increased tendency to write things down. Much of the motivation here was about self-protection in the event that managers find themselves in court. Written evidence that they had given certain safety instructions, or had warned workers about certain things, or had 'closed out' (i.e. carried out) recommendations from audits and incident investigations would enable them to demonstrate that they had acted with 'due diligence', as required by law. But regardless of this self-protective motivation, putting things in writing in this way makes it more likely that they are actually done. Here, then, is one very concrete benefit of the prosecution.²²⁵

A recent academic study of the prosecution record in the Australian minerals industry supports the view that high levels of prosecution activity may not necessarily translate into increased levels of safety. Galvin, writing in the journal *Mining Technology*, states that a policy of automatic prosecution in the industry may in fact have negative consequences for safety as:

- increased prosecution may impede cooperation between regulators and industry in determining the root causes of incidents, and appropriate improvement strategies;
- lessons learned from incidents are not disseminated throughout the industry due to legal privilege considerations;
- the fear of prosecution may discourage 'near-miss' reporting;
- such a policy may work against a culture of continuous safety improvement; and
- a perception of increased prosecution risk may discourage those who would otherwise wish to enter the industry from doing so.²²⁶

Some academic commentators have questioned the need to prosecute at all in some instances even when an individual can be identified as being directly responsible for an incident. Braithwaite, for example, says:

... after a disaster it is enough to name the individuals responsible in a public report; to prosecute them subsequently is overkill. There have been a number of cases of suicide and attempted suicide by persons held responsible for coal mine disasters ...²²⁷

²²³ Hopkins, *The Impact of the Gretley Prosecution*, 2006

²²⁴ Hopkins, *The Impact of the Gretley Prosecution*, p.10

²²⁵ Hopkins, *The Impact of the Gretley Prosecution*, pp.16-17

²²⁶ Galvin, 'Occupational Health and Safety Acts – performance and prosecution in the Australian minerals industry', *Mining Technology*, 114(4), pp.251-256

²²⁷ Braithwaite, *To Punish or Persuade – Enforcement of Coal Mine Safety*, p.140

There are clearly advantages and disadvantages in taking either a rigid, prosecution-based approach or a 'negotiated outcome' approach where recommendations and advice predominate. Sparrow states:

A stringent, rule-based system ... provides an agency with a strong defence against litigation, a strong base from which to pull back, external support ... a strong sense of mission, internal cohesion, and an effective mechanism for producing consistency across a far-flung agency without constructing a vast administrative apparatus. It helps to prevent corruption in situations in which regulators live and work closely with the people they regulate. It also lessens or eliminates the competitive advantage gained through non-compliance, by imposing financial penalties and requiring corrective actions. Negotiated compliance also has its merits. It minimises opposition to the agency over the longer term, reduces the burdens of compliance by allowing tailored responses, reduces levels of both localised and organised hostility, reaches further with fewer resources ...²²⁸

The most effective compliance option may also depend on the anticipated response of the mine operator which may be influenced by the approach of management, the individual personalities and the prevailing safety culture. As Zinn states:

Nevertheless, given the variation among 'types' of violator ... informal or negotiated enforcement might induce compliance from some firms but not others. Amoral calculators could feign compliance or withhold compliance, knowing that the costs of formal action make any threat of action merely a bluff. A general strategy of co-operation can actually undermine compliance by such firms.²²⁹

There is nothing inherently wrong in staff at various levels of the QMI exercising (appropriate) discretion based on their knowledge and experience of the mine operators. It is unrealistic to expect a law to be enforced in precisely the same way in all locations on every occasion. In fact, Sparrow states:

... regulators and enforcement officials exercise their judgment and discretion all day, every day. They always have, and they always will. Regulators and enforcement officers have a great deal of de facto discretion, even if not de jure. Even when bound by restrictive codes such as 'if you see it you must cite it,' inspectors may still choose whether or not to see it. They may even choose to look later, offering the opportunity for remediation beforehand.²³⁰

The enforcement policy of the UK's rail safety regulator (ORR), for example, states explicitly that:

ORR recognises that in practice consistency is not a simple matter. ORR inspectors are faced with many variables, including the degree of risk, the attitude and competence of management, any history of incidents or breaches involving the duty holder, previous enforcement action and the seriousness of any breach, which includes any potential or actual harm arising from a breach of the law. Decisions on enforcement action are discretionary, involving the judgement of individual inspectors.²³¹

²²⁸ Sparrow, *The Regulatory Craft*, p.37

²²⁹ Zinn, p.99

²³⁰ Sparrow, *The Regulatory Craft*, p.26

²³¹ Office of Rail Regulation, *ORR Health and Safety Enforcement Policy Statement*, p.6

Clearly, the QMI needs to target enforcement strategies to the sector and operator with which it is dealing in a particular case. This is not a licence for unfettered discretion or partiality in enforcement practices but rather, recognition that it is appropriate to exercise powers in a way that is best designed to achieve overall safety in each case. What matters, ultimately, is that the QMI is fulfilling the objects of the Acts under which it operates:

6 Objects of Act

The objects of this Act are—

- (a) to protect the safety and health of persons at [coal]²³² mines and persons who may be affected by [coal mining] operations; and
- (b) to require that the risk of injury or illness to any person resulting from [coal mining] operations be at an acceptable level.²³³

It is noteworthy that the relevant section in each Act does *not* mention prosecution as an object. This reiterates the point that prosecutions are a *means* to achieve a safe mining industry, not an *end* in themselves.

Recommendation 32

That the QMI amend its Compliance Policy to provide that, when determining how to respond to an unacceptable level of risk at a mine, it will have regard to the following priorities:

1. Prevention of immediate harm at the site;
2. Prevention of similar incidents occurring at that site or elsewhere in the industry; and
3. The taking of prosecution action in respect of serious or repeated safety breaches.

Recommendation 33

That the QMI refine its Compliance Policy to provide greater guidance to officers on the appropriate compliance options to use to address safety concerns in the various sectors of the mining industry (such as small quarries).

DME response – Recommendations 32 and 33

DME agreed to implement these recommendations as part of its current review of the QMI Compliance Policy.

²³² The Mining and Quarrying Act provision does not include the terms 'coal' or 'coal mining'.

²³³ Coal Act s.6; Mining and Quarrying Act s.6

11.2 The Macrory principles

I have commented earlier that prosecution action is a necessary (and expected) response to serious breaches of mine safety. Even then, it will probably need to be accompanied by some other compliance action to ensure effective action is taken to minimise future risk both at that site and elsewhere in the industry.

In respect of less serious breaches where there is no history of similar breaches, prosecution may be an ineffectual and costly response. As mentioned, it is unlikely that prosecution will have an adverse impact on a corporation's reputation or share price unless the breach is very serious. Nor will a fine, even a substantial one, be a significant deterrent for any substantial operator, except, perhaps, where an office holder or manager of the corporation is found to be personally liable.

In 2005, the British Government commissioned a review of the use of sanctions in government regulatory activities in the UK. The review was conducted by Professor Richard Macrory, who made the following comment about financial penalties in the review's November 2006 report:

Evidence presented to me over the course of the review has demonstrated that, in some instances, the fines handed down in court often do not reflect the financial gain a firm may have made by failing to comply with an obligation. This means that these penalties do not act as a deterrent and, in effect, give businesses an incentive to continue to fail to comply in return for a profit. In some cases fines do not fully reflect the harm done to society.²³⁴

Macrory cited the following examples from cases he reviewed:

- An Oxfordshire man was fined £30,000 for abandoning 184 drums of toxic waste. The man received £58,000 for disposing of the material, and the Waste Authorities had costs of £167,000 to incinerate the waste properly.
- A fine of £25,000 was handed down to a small waste disposal company which was operating without a licence. The company saved £250,000 by operating illegally over a 2 year period.²³⁵
- The largest fine handed down to date for a health and safety offence is £15 million imposed against Transco (for breaches of regulations that resulted in the death of four members of the same family in a gas explosion). The financial penalty, while significant in absolute terms, represented five percent of after-tax profits and less than one percent of annual revenues for the company. This shows that even large fines can be absorbed by companies and may not carry the necessary deterrent effect or motivate a change in a firm's behaviour although Transco began an accelerated programme of pipe replacement as an outcome of the incident and did change its behaviour.²³⁶

Similar examples are likely to be common in the international mining industry.

A further outcome of a successful prosecution of an individual may be that a conviction is recorded, which may later affect the offender's ability to, for example, apply for certain licences, secure employment, or hold a statutory position.

Again, such consequences do not apply to a corporation convicted of a breach of mining legislation unless relevant to determining whether the corporation is 'fit and proper' for the purpose of securing a licence of some kind.

²³⁴ Macrory, *Regulatory Justice*, p.20

²³⁵ Macrory, *Regulatory Justice*, p.20

²³⁶ Macrory, *Regulatory Justice*, p.21

In terms of the process of actually launching prosecutions, Macrory notes:

... the long and resource intensive process of taking a ... prosecution through court may seem inappropriate for a company that is being prosecuted for a strict liability offence ...

For a business this means that, although the time spent preparing and investigating a case is necessary, a rectified regulatory non-compliance can still be an issue several months on. Industry and the regulator may prefer a timelier and less costly resolution to appropriate cases of regulatory non-compliance as the delay and uncertainty of prosecution is burdensome for both ...

Furthermore, regulators may not choose to pursue cases for prosecution because of the low expected outcome. Enforcers may not pursue cases because the level of penalty is not seen to justify the time, effort and resources that will need to be deployed in order to bring a successful prosecution.²³⁷

The conclusion is that, although prosecution action is an important component of a sound regulatory scheme, it is rarely an effective method for ensuring a safety concern at a mine is addressed in a timely way.

Commenting on the overall use of regulatory sanctions in the UK, Macrory stated:

My vision for the penalties system is a step change from where we are today. It allows for a flexible and proportionate approach with a broad range of sanctioning options, where regulators can respond to the needs of individual cases and the nature of the underlying offence. Improving the ability of regulators to apply appropriate sanctions will improve overall compliance and add credibility to the regulatory system and means that minor breaches are treated as such. Effective sanctions can also incorporate wider aims such as restoring the harm caused by regulatory non-compliance and take into consideration the needs of victims, offenders and communities affected by regulatory breaches.²³⁸

Macrory recommended that, to be effective, an enforcement sanction regime should:

1. Aim to change the behaviour of the offender;
2. Aim to eliminate any financial gain or benefit from non-compliance;
3. Be responsive and consider what is appropriate for the particular offender and regulatory issue, which can include punishment and the public stigma that should be associated with a criminal conviction;
4. Be proportionate to the nature of the offence and the harm caused;
5. Aim to restore the harm caused by regulatory non-compliance, where appropriate; and
6. Aim to deter future non-compliance.²³⁹

²³⁷ Macrory, *Regulatory Justice*, p.23

²³⁸ Macrory, *Regulatory Justice*, p.5

²³⁹ Macrory, *Regulatory Justice*, p.10

Macrory also recommended that, in an ideal regulatory sanctions regime, regulators should:

1. Publish an enforcement policy;
2. Measure outcomes not just outputs;
3. Justify their choice of enforcement actions year on year to stakeholders, Ministers and Parliament;
4. Follow-up enforcement actions where appropriate;
5. Enforce in a transparent manner;
6. Be transparent in the way in which they apply and determine administrative penalties; and
7. Avoid perverse incentives that might influence the choice of sanctioning response.

Applied to mine safety in Queensland, the Macrory principles indicate that the outcome of QMI's enforcement practices in a particular case should generally comply with the formula:

Financial loss (direct or indirect) + Public embarrassment > Benefit of the unsafe action

Recommendation 34

That the QMI revise its Compliance Policy to incorporate, in an appropriately modified form, the principles set out in the Macrory Report.

DME response

DME agreed with this recommendation, stating that, to a certain extent, the Macrory principles are already followed. DME advised that its review of its Compliance Policy will consider this recommendation further. The Department also indicated that it is currently reviewing the Coal Act and the Mining and Quarrying Act and that penalty infringement notices and enforceable undertakings are being considered as additional compliance options.

DME also commented that the recent settlement with BHP Billiton Mitsubishi Alliance (see 10.2) is an example of achieving an appropriate outcome to compliance action without proceeding with a prosecution.

DME also commented that it was for the court to determine the appropriate penalty. That is, of course, correct. However, DME is likely in most cases to be able to estimate a range of penalty and, where appropriate, lost production, for the purpose of applying the above formula.

Chapter 12: Adding to the regulatory tool kit

12.1 Evidence-based enforcement practice

Prosecution activity is favoured by many government regulators as it provides an easily reportable measure of work and, superficially at least, provides evidence that the regulator is 'doing something'. Sparrow comments:

... counting enforcement actions is so much simpler than dealing with the complexities of measuring compliance rates, outcomes or impacts ...²⁴⁰

However, Sparrow argues that 'traditional measures' of enforcement activity (such as an annual prosecution count) are of limited value even though they may appear to:

... demonstrate convincingly that inspectors ... or other enforcement personnel are working hard and getting results (of a certain kind). For that, taxpayers should be thankful. What they will never be able to show, though, is whether these same personnel are working on the right things, or in smart ways, using the best methods, or actually influencing external behaviour or conditions.²⁴¹

In short, a prosecution count does not, by itself, tell us much about the QMI's effectiveness in achieving mine safety. Furthermore, a prosecution may not always achieve a useful outcome in terms of improving processes and practices in a particular mine or across the industry:

Because of the event focus of prosecutions, traditionally the courts have not been concerned with what proactive steps might need to be taken by a duty holder to address risks more holistically, across a business or undertaking, for all work performed.²⁴²

The objective of any health and safety regulator is not solely to prosecute offenders, but to ensure the highest possible standards of health and safety, and thereby minimise deaths and injuries. To put it simply, the QMI exists for the primary purpose of saving lives, not punishing wrongdoers. As Gunningham comments:

... prosecution does not work across the board and the available evidence suggests that prosecution should be used sparingly – carefully targeted to appropriate circumstances and to actors who are most likely to respond positively to it.²⁴³

Research shows that the effectiveness of the use of particular enforcement options can vary from industry to industry and operator to operator. Nevertheless, it appears the question '*Why does the QMI prosecute so little?*' is in fact the wrong question to ask. The right question would seem to be '*What works, and why?*' followed by the question '*Are the QMI's compliance strategies working effectively?*'

In short, the QMI needs solid, statistically valid evidence (and not just anecdotal evidence) on which to base its decisions about its enforcement practices. The key question to be answered is: What types of compliance action are most suited to different types of mine operators and sections of the industry?

²⁴⁰ Sparrow, *The Regulatory Craft*, p.114

²⁴¹ Sparrow, *The Regulatory Craft*, p.117

²⁴² Bluff & Johnstone, '*The Relationship Between 'Reasonably Practicable' and Risk Management Regulation*', (2004), National Research Centre for OHS Regulation, Working Paper 27, at p.15

²⁴³ Gunningham, *Prosecution for OHS Offences: Deterrent or Disincentive?* p.371

The QMI needs to research this question and use the findings to inform future compliance strategies, both in an overall, industry-wide sense and in relation to particular types of operators and safety hazards.

Recommendation 35

That the DME undertake research (preferably in collaboration with the mining industry, unions, universities, other inspectorates and other relevant bodies) on the effectiveness of the various types of compliance action in improving mine safety.

Recommendation 36

That the DME use the results of this research in developing a new Compliance Policy and regulatory strategy.

DME response – Recommendations 35 and 36

DME agreed with these recommendations, indicating that some work was already occurring in this regard within the National Mine Safety Framework. In relation to recommendation 36, the DME recognised that its Compliance Policy should be 'routinely reviewed using all relevant information'.

12.2 Aviation safety enforcement

As discussed at 10.8, the aviation industry, both in Australia and internationally, operates under an advanced system of regulatory enforcement policies. In Australia, the Civil Aviation Safety Authority (CASA) administers a far more complex regulatory framework under the *Civil Aviation Act 1988* (Cth) than currently exists under the Coal Act and the Mining and Quarrying Act. The range of enforcement measures available to CASA include:

- informal enforcement;
- enforceable voluntary undertakings;
- administrative action where there is a serious and imminent risk;
- infringement notices (including fines);
- demerit points;
- detaining aircraft; and
- prosecution.

CASA's **informal enforcement** practices cover counselling (where there is ignorance or misinterpretation of the law) and remedial training.²⁴⁴ The Authority's Enforcement Manual states that informal enforcement is to be used where the failings identified were:

- not deliberate or the result of a substantial disregard for safety; and
- where the person concerned displays a constructive attitude to safety; and
- there is no history of similar failings; and
- informal enforcement is likely to be a sufficient deterrent.²⁴⁵

²⁴⁴ CASA, Enforcement Manual, para 4.5

²⁴⁵ CASA, Enforcement Manual, para 4.4

CASA states that this level of enforcement is inappropriate where the failings:

- posed a serious or potentially serious risk to aviation safety or endangered life; or
- were the result of deliberate or fraudulent action or demonstrated a reckless disregard for safety; or
- resulted in an accident or serious incident.²⁴⁶

CASA, in undertaking its informal enforcement activities, is not directly exercising any of the enforcement powers in the legislation, so there is considerable scope for flexibility in addressing lower-level safety concerns. However, even at this level, CASA policy still requires that the informal enforcement action be recorded on the record of the individual or company the subject of the action. These entries are not made public but are available within CASA.²⁴⁷

The QMI's informal advice/recommendations, as recorded in mine record entries, are clearly at the same regulatory level as CASA's 'informal enforcement'. However, the noteworthy distinction is that CASA has a well-formulated and publicly available policy guiding its use of informal enforcement methods, whereas QMI provides little information internally or externally about its use of such methods.

At a higher level in its enforcement hierarchy, CASA uses **enforceable voluntary undertakings**. The air safety legislation specifically permits CASA to accept written undertakings from operators in relation to safety matters, and provides for enforcement of these undertakings in the Federal Court.²⁴⁸

According to CASA, this is not simply an 'easy way out' for offending operators, but is:

... an important enforcement tool for use in situations where there is evidence of a breach or potential breach ... which may justify regulatory action, but remedial action ... is in the best interests of civil aviation safety.²⁴⁹

Key features of this scheme are:

- it is offered at the regulator's discretion;
- it is limited in duration; and
- undertakings must be published (including on CASA's public website).²⁵⁰

CASA's Enforcement Manual includes the following commentary:

Enforceable voluntary undertakings are remedial in nature. Their purpose is to reduce risk to aviation safety by having [operators] voluntarily modify their practices, behaviour, attitude or skills to ensure they comply with effect and intent of the aviation law.

Publication of the details ... may provide a deterrent value but more importantly, promotes compliance with the aviation law by educating the aviation industry and the public at large ... [enforceable voluntary undertakings] are not intended to punish or penalise ... they are clearly administrative in nature, and in themselves do not give rise to criminal sanctions such as fines or imprisonment.

²⁴⁶ CASA, Enforcement Manual, para 4.4

²⁴⁷ CASA, Enforcement Manual, paras 4.5.12 and 4.6.2

²⁴⁸ *Civil Aviation Act 1988* (Cth), s.30DK

²⁴⁹ CASA, Enforcement Manual, para 5.3

²⁵⁰ CASA, Enforcement Manual, para 5.4.1

An [enforceable voluntary undertaking] is not an exclusive enforcement tool, and may be used in conjunction with other enforcement tools where the holder indicates a willingness to accept the other enforcement action in addition to giving the undertaking.²⁵¹

As with informal enforcement, CASA sets clear parameters around the use of these undertakings. Some of the factors which must be considered before offering an undertaking to an operator include:

- the offending party's compliance history;
- the extent to which meaningful undertakings can be given;
- the likelihood the undertaking will be fulfilled;
- the ability of CASA to monitor compliance; and
- the cost effectiveness of an undertaking, as opposed to other enforcement methods.²⁵²

A similar scheme exists in Queensland's generic workplace health and safety framework, with both the *Electrical Safety Act 2002* (Part 3) and the *Workplace Health and Safety Act 1995* (Part 5) providing for enforceable undertakings. The Department of Employment and Industrial Relations publishes guidelines on the scope of these undertakings.²⁵³

Likewise, the Australian Securities and Investments Commission states, in relation to its own power to use voluntary enforceable undertakings:

We consider that an enforceable undertaking can sometimes offer a more effective regulatory outcome than could otherwise be achieved through other available enforcement remedies, namely civil or administrative action. We will not enter into an enforceable undertaking that does not offer a more effective regulatory outcome.²⁵⁴

We will not contemplate an undertaking to forestall an investigation.²⁵⁵

The Western Australian counterpart of the QMI also uses enforceable undertakings as part of its mine safety enforcement mechanisms, although this must be on the basis of a court order.²⁵⁶

A 2006 mining industry conference paper reviewing the first five years of the current Queensland mine safety legislation commented, in relation to enforceable undertakings:

It would be beneficial to the mining industry for enforceable undertakings to be introduced to the existing safety legislation, as they are a suitable alternative to a prosecution, and provide a long term benefit to the organisation, its employees and the community. This is something for interested parties to consider for legislative review. The objectives of safety legislation can often be better met by investment in safety promotion via an enforceable undertaking, rather than simply imposing a financial penalty.²⁵⁷

²⁵¹ CASA, Enforcement Manual, paras 5.4.2–5.4.4

²⁵² CASA, Enforcement Manual, para 5.5.3

²⁵³ Department of Employment and Industrial Relations, *Enforceable Undertakings under the Workplace Health and Safety Act 1995 and the Electrical Safety Act 2002 – Information for Applicants*, 2007

²⁵⁴ ASIC, *Enforceable Undertakings – Regulatory Guide 100*, p.4

²⁵⁵ ASIC, *Enforceable Undertakings – Regulatory Guide 100*, p.7

²⁵⁶ WA *Mines Safety and Inspection Act 1994*

²⁵⁷ Smith, *Safety and Health Legislation – Five Year Review – The Good, The Bad and The Ugly*, Paper presented to the 2006 QLD Mining Industry Safety and Health Conference, p.5

A further innovation in regulatory practice in the aviation industry is the Aviation Self Reporting Scheme (ASRS). This scheme has been in operation since 2004 following amendments to the aviation safety legislation. An operator may, once in a five year period, report an unintentional breach of the regulations to the ATSB (within ten days of the breach), provided the breach did not cause or contribute to an accident or serious incident.

Once properly reported, the breach generally cannot later become the subject of enforcement action. The operator's identity will generally not be disclosed publicly by the ATSB. The aim of the program is to strengthen the foundation of aviation human factors safety research; identify deficiencies and problems in the aviation safety system; and provide data for planning and improvement to the system as a whole.²⁵⁸

Although these regulatory enforcement tools used in other industries would need careful adaptation to the circumstances of the mining industry, there could be considerable benefit to the QMI in investigating some of these options.

A possible model for a revised QMI regulatory toolkit is as follows:

Recommendation

(Informal advice with no set date for implementation and no legal implications for the QMI or the operator)

For example: *'The latest report on fatigue management from the MSHA in the USA contains some useful recommendations that you could consider adopting in your operation.'*



Substandard Condition or Practice Notice

(An informal request that an action be done by a certain date, with a specific safety concern in mind)

For example: *'During the inspection I noticed that copies of your fatigue management plan were not readily available to workers although your management told me they were. Copies should be displayed in the change rooms, on the company intranet, and noticeboards, by next Thursday 1 November.'*

²⁵⁸ ATSB, *Aviation Self Reporting Scheme* [Accessed at: http://www.atsb.gov.au/notification/asrs/asrs_more.aspx on 31 October 2007]



Voluntary enforceable undertaking/Self-reporting agreement

(An agreement (currently informal but could be included in legislation) between the operator and the QMI that action will be taken or an unsafe practice ceased)

For example: *'The operator accepts that its evacuation plan is unsatisfactory and undertakes to implement an appropriate plan within five days. If the QMI does not consider the plan acceptable, the operator understands that it may be liable to prosecution for failing to address an unsafe practice.'*



Directive

(A demand under the authority of the Coal Act or the Mining and Quarrying Act that certain action occur or that certain unsafe practices cease)

For example: *'I consider the operation of the conveyor belt is unsafe and that serious injury is likely to be caused unless a safety rail is erected. I direct under the Coal Act that the conveyor belt not be operated until a safety rail has been installed and approved by me.'*



Prosecution

Recommendation 37

That the DME develop a proposal for the Minister's consideration to amend the Coal Act and the Mining and Quarrying Act, and other relevant Acts, to provide for a wider range of compliance tools.

DME response

DME indicated that it agreed with recommendation 37, and also that consideration was being given in the current review of the Coal Act and the Mining and Quarrying Act to broadening the range of compliance tools available to inspectors to include PINs and Enforceable Undertakings. DME also advised that *'Safety and Health is currently consulting with industry on these proposals, however there is not tripartite support for some of these tools'*.

I accept that consultation with stakeholders is desirable when amendments to legislation are being considered. However, consultation is not the same as consensus and proposals for amendments should go forward if they enhance mine safety, even though they are not supported by all stakeholders.

Chapter 13: Regulatory capture

13.1 What is regulatory capture?

The term 'regulatory capture' describes the situation whereby a public interest regulator (such as a mine safety authority) becomes so identified with the industry or sector it is intended to regulate that it can no longer effectively discharge its regulatory functions. The theory is that once a regulator has been 'captured', it is more sympathetic to the interests of the regulated industry than to the public interest it was created to protect.

This leads to a situation where necessary compliance action is not taken or, when taken, is less severe than the circumstances warrant. To put it simply, once captured, a regulator goes easy on the industry. The issue is one of objectivity in making decisions to carry out enforcement action.

Another way of explaining the term is that the regulator and industry build working relationships that lead to the regulator becoming unwilling to perform its compliance tasks diligently and impartially in respect of that industry so as to avoid jeopardising the relationship.

It has also been defined as follows:

The concept of 'regulatory capture' involves a loss of impartiality due to an over-identification with the interests of [the industry], brought about through frequent dealings [with the industry] ... regulatory capture is best thought of as the development of a relationship between the regulator and the regulated which can create a conflict of interest for the regulator.²⁵⁹

As a result of systemic investigations my Office has conducted into other Queensland public sector regulators and research based on relevant academic discussion in this area, we have become aware of certain characteristics that *may* encourage the development of regulatory capture. These are shown in Table 10.

Table 10: Highest risk environment for capture of a regulator²⁶⁰

Regulator	Industry
<ul style="list-style-type: none"> • Small regulator 	<ul style="list-style-type: none"> • Large industry
<ul style="list-style-type: none"> • Limited resources and investigative capacity 	<ul style="list-style-type: none"> • Significant resources and access to top shelf technical and legal advice
<ul style="list-style-type: none"> • Low public profile 	<ul style="list-style-type: none"> • Significant contribution to state/national economy or to the provision of key services

²⁵⁹ ICAC, *Corruption Risks in NSW Development Approval Processes*, p.51

²⁶⁰ Adapted from a presentation entitled *The Telltale Signs of Regulatory Decay* by Assistant Ombudsman Peter Cantwell.

The presence of the following risk indicators also increase the likelihood of regulatory capture occurring:

Structural

- The regulator is part of the agency responsible for supporting and promoting the industry and shares the same Director-General/CEO and/or Minister;
- The regulator provides direct reports on operational activity to the Minister, for example, copies of correspondence are routinely forwarded to the Minister;
- The regulator's enforcement officers operate with high levels of regulatory discretion and low levels of supervision; and
- Limited pool from which regulator can choose enforcement officers, particularly where enforcement officers are likely to have worked for an operator in the industry being regulated.

Legislative

- Legislation requires Director-General/CEO to approve all recommended enforcement action, particularly where Director-General/CEO is also responsible for supporting and promoting the industry being regulated (the same risk factor can arise by way of policy); and
- Regulator interprets legislation in a way that favours the industry.

Geographical

- Geographic isolation of enforcement officers;
- Symbolic presence;
- Regular and expected social contact between enforcement officers and persons working in the industry, especially in regional areas;
- Lack of interaction with other officers in agency; and
- One enforcement officer in same location for a long period.

Operational

- Joint sponsorship of industry events and social events – the creation of one public face;
- Increasing use of 'informal or oral' warnings and acceptance of 'informal or oral' undertakings, which may not be documented;
- Pre-announced regulation activity (for example, audits);
- Lack of recorded reasons for failure to take action in obvious cases;
- Reluctance/inability to provide reasons when asked for an explanation about 'no action' or taking what appears to be a soft compliance option;
- Competing tensions of safety/environmental concerns vs. profit;
- Inappropriate use of industry resources;
- Regulatory fatigue – especially where the industry is growing rapidly and there is no corresponding increase in the funding of the regulator; and
- Poor data capture and analysis of data.

Personal

- Excessive mobility by enforcement officers between regulator and industry;
- Excessive executive mobility between regulator and industry; and
- Enforcement officers regularly receive hospitality/gifts and other benefits from industry.

Attitudinal

- Superficial denials are issued to questions about the regulator's independence and effectiveness, without supporting evidence;
- Regulator leaping to the defence of industry and industry practices in responding to questions from the media or politicians; and
- No complaints from industry about regulator.

Some of these indicators are described by Sparrow as follows:

The danger of capture arises from a variety of factors. Shortages of resources may leave regulators outgunned by those they seek to regulate. Regulatory agencies may have trouble retaining sufficient, well-qualified staff. The revolving door may place friends and former colleagues on the other side of the fence. Industry may control essential information and expertise ...²⁶¹

13.2 Has the QMI been 'captured'?

Gunningham (2007) summarises the criticisms of the mining inspectorates in NSW, WA and Queensland in these words:

In each of the three mining jurisdictions disquiet has been expressed by trade unions that the Mines Inspectorate has become too close to the industry it is responsible for regulating ... The implication is that the inspectorate has been 'captured' by the regulated industry and functions in a manner which is unduly sympathetic to their interests. For example, in the view of some trade unions, the inspectorate too frequently gives advance notice of proposed inspections, conducts too few 'surprise' inspections and fails to consult with site safety representatives and local check inspectors on a regular basis.²⁶²

Looked at superficially, many of the signs of regulatory capture identified above are evident in respect of the QMI. These include:

- the QMI is located within the Department responsible for promoting and developing one of the state's most significant sources of revenue and therefore reports to the same Minister;
- in departmental-level (as opposed to QMI-level) publications, safety appears merely as one goal alongside others such as economic development;
- the QMI itself has no institutional autonomy or statutory recognition;
- the Department has a low level of prosecution activity (especially on the coal side of the QMI);
- the Coal Act and the Mining and Quarrying Act allow wide discretion to act (or not act);
- decisions on whether to prosecute are made by the Director-General on the recommendation of a Review Committee that has no statutory basis and comprises some members from outside the QMI and its role is not referred to in any public report on the QMI's performance;
- there is a marked preference for informal recommendations and advice which do not become logged (that is, officially recorded) anywhere other than on mine record entries;
- there is a high turnover of inspectors, a number of whom go (or return) to the mining industry;
- Inspectorate staff are able to earn significantly more in industry (often twice as much as their QMI salaries);

²⁶¹ Sparrow, *The Regulatory Craft*, p.35

²⁶² Gunningham, *Mine Safety – Law Regulation Policy*, p.105

- the Inspectorate's budget and resources are insignificant compared with those available to many operators in the industry;
- there is frequent social collaboration between the industry and the Inspectorate, with many personal friendships formed over many years; and
- inspection work often takes place in isolated regional communities where 'everyone knows everyone else' and inspectors must often rely on the operator's hospitality and resources (accommodation, food, transport, etc) to conduct their work.

The *perception* of capture, therefore, is certainly not an unreasonable one.

Case study: Fire at King's Cross Station, London

In November 1987, a smouldering cigarette butt on an escalator ignited a fire at King's Cross Station on the London Underground. The fire grew rapidly and exploded into a 'flashover' which destroyed the ticket hall, killing 31 people and injuring many others.

The UK Department of Transport established an inquiry into the disaster. While the policies and practices of the London Underground operating company were the focus of the inquiry, reference was also made to the role of the Railway Inspectorate in failing to detect, and enforcing action to prevent, the risk of a catastrophic fire.

The inquiry found that the Railway Inspectorate had long known of the risk of fires on escalators, aggravated by the accumulation of dirt and dust in the inadequately cleaned escalator tracks. Evidence was given of many fires (albeit far smaller ones) having started in this way, without injuring anyone. At no time had the Inspectorate taken formal enforcement action in relation to the state of escalators anywhere on the Underground network.

In his report on the inquiry, Desmond Fennell QC stated that the Railway Inspectorate had:

... proceeded when possible by consultation with London Underground, using persuasion ... The service of prohibition or improvement notices was regarded as a last resort, partly because there was a concern that prosecutions might fail. Furthermore, the Inspectorate did not have the staff resources to undertake time-consuming preparatory work on prosecutions.

London Underground's Engineering Director ... confirmed that the route of consultation and persuasion was what he had come to expect of the Inspectorate, and said he had been extremely surprised in December 1987²⁶³ to receive a statutory prohibition notice on escalators at four stations – the first such notice he had known. Figures submitted in evidence showed that there had been two prohibition notices and one improvement notice served on London Underground since 1980 and no prosecutions ...

The question was raised in Court as to whether this informal approach led to a relationship which was too cosy between the London Underground and the Inspectorate ... [The Inspectorate] denied this, arguing that the amount of information on safety measures which a railway is legally required to give to the Inspectorate is extremely limited, and that it is mainly by a system of liaison and relatively informal exchanges with the operators that the Inspectorate is able to exert a positive influence on the development of railway safety ...

²⁶³ Immediately after the King's Cross fire.

In my view the powers of enforcement under the existing health and safety legislation are adequate to allow the Railway Inspectorate in its present form to fulfil its responsibilities for the safety of passengers. There needs, however, to be an increase in the number of staff coupled with an increased willingness to use its powers where necessary notwithstanding the uncertainties in the outcome of any prosecution. The experience in 1987 of the inspection of escalator machine rooms illustrates how long known unsatisfactory conditions can be allowed to persist if prompt enforcing action is not taken.²⁶⁴

While the King's Cross Inquiry did not find that the Railway Inspectorate had been 'captured', there was clearly an excessive reluctance on its part to use its enforcement powers against London Underground. This example demonstrates that what may appear to be evidence of regulatory capture may actually be an inappropriate choice of compliance strategies.

Our file audit did not reveal any evidence of inappropriate political, union or industry interference or influence in respect of the way the QMI performed its functions. There was limited anecdotal evidence that some inspectors or former inspectors were sympathetic to the industry but not at an organisational level. One QMI officer told us:

In the past we have had certain inspectors that were often reluctant to do anything and were regarded as wonderful inspectors by the industry ... This particular one, I had to keep reminding him of who he worked for ... I certainly would not approve of any interference or any issues coming up that way.

The officer also maintained that the opportunity for industry interference had been reduced now that the QMI reported directly to the Director-General and not through the DME's Bureau of Mining as had been the case until 2005.

Opinion 9

My investigation did not establish that the QMI is inappropriately influenced by the mining industry in the performance of its functions.

Opinion 10

There is a reasonable perception that the QMI is subject to inappropriate influence from the mining industry and from officers in the DME responsible for promoting and supporting mining in Queensland. The main reasons for the perception are:

- lack of organisational autonomy having regard to its position within the administrative framework of the DME;
- its compliance practices, especially the preference for informal compliance options, which are not recorded in a way that can be publicly reported on;
- regional factors, leading to the development of social relationships and reliance on mine operators' hospitality; and
- staffing issues, including a high degree of mobility between the QMI and the mining industry.

²⁶⁴ Fennell, *Investigation into the King's Cross Underground Fire*, p.147

DME response

Although DME said that it agreed with Opinion 10, it sought to justify the current administrative arrangement. In particular, it advised that reporting arrangements within the Department had changed from the time when mine safety was a portfolio responsibility of the former Department of Natural Resources and Mines in that the safety and health responsibility was now clearly separated from the industry development and policy components of the Department.

Additionally, DME stated that regional officers now have a direct linkage with head office.

In relation to the high degree of mobility between the QMI and the mining industry (a factor regarded as predisposing a regulator to regulatory capture), DME stated:

It is nationally recognised that there is a skills shortage in the mining sector resulting in significant pressure on organisations to recruit from across industry in Queensland with salaries well in excess of what government can offer. This mobility can be seen as a positive thing in that it provides the QMI with a skill base of employees in current mining methods and machinery. Similarly, the skills acquired while working for a regulator benefit industry through improved safety performance.

DME also contended that the perception that the QMI is subject to industry influence is anecdotal and is not supported by any factual evidence:

It is the DME's opinion that QMI is in the optimum position when mining companies and relevant unions perceive QMI as a watchdog.

However, I am not satisfied that the DME's response sufficiently addresses my issues of concern in Opinion 10.

Opinion 11

The QMI's practice of not recording and reporting on a significant part of its informal compliance activity means that it has a limited capacity to defend itself from allegations that it is too close to the mining industry and is not effectively regulating the industry.

DME response

DME agreed with this opinion and stated that it is:

Always looking to improve as exemplified by the recently introduced police style notebooks for evidence and interviews and the ordering of several state of the art electronic evidence recording systems.

In the QMI, the process whereby a mine operator is targeted for inspection, then potentially becomes the subject of enforcement action is, broadly speaking, as follows:

Stages in a routine inspection or investigation

Regional Inspector

- Decision on allocation of inspection priorities
- Decision on whether to inspect particular mine operators or particular mine sites
- Decision on who to allocate to inspections
- Decision on allocation of inspection resources to particular mine sites



Inspector

- Decision on whether to 'see' safety issues
- Decision on how to deal with safety concerns (that is, will a directive be issued, or merely an informal recommendation?)
- Decision on whether to recommend compliance action (for example, prosecution) be taken against an operator



Chief Inspector

- Decision on whether to recommend compliance action
- Staffing decisions
- Resourcing allocation decisions



Executive Director, Safety and Health

- Overall staffing and resourcing allocation decisions
- Actions in response to investigations and audits.

These decisions are potential 'capture points' – that is, points at which inappropriate influence could be exerted by the industry. I make the observation that these points will exist regardless of where the QMI is located in the public sector.

Regulatory capture can occur at any level in the organisation, although its nature and consequences will be different. What is important, however, is that the decision-making chain in the DME is analysed for its 'weak points' and that, wherever possible, steps are taken to address the risk of capture at these points.

Case study: Corruption in NSW development assessment processes

In September 2007, the NSW Independent Commission Against Corruption (ICAC) released a position paper in relation to corruption risks in planning development processes. One of ICAC's recommendations was in relation to the risk of regulatory capture (specifically, the risk that local council officers would become inappropriately sympathetic to the interests of applicants for development approvals). This recommendation was as follows:

- that individual councils consider measures to address the risk of inappropriate relationships forming between council officers and frequent applicants. Depending on the resources available, the following measures could be adopted:
- the allocation of development assessments from frequent applicants to different staff members;
- use of a random auditing system for development matters. For example, a supervisor may examine a random sample of development assessments allocated to council staff each year. Staff must justify decisions and discuss and resolve problems that arise;
- ensuring adequate mechanisms are in place to consider the outcomes of community consultation processes;
- adopting a system of peer review or countersigning for controversial matters;
- developing a statement of business ethics to promote awareness among the public of the ethical standards expected of council officers and what is allowable in relation to interactions with applicants.²⁶⁵

Superficially, planning and development assessment and mine safety are extremely different areas of regulatory practice. However, the lesson of the ICAC report is that the risks of regulatory capture can be analysed not only at an organisation-wide level (such as the discussion on where the QMI should be located), but also by considering the vulnerability of each stage of the regulatory decision-making process.

Recommendation 38

That the QMI conduct an audit to identify areas of its operational activity susceptible to inappropriate influence from the mining industry, based on the indicators discussed in this chapter, and develop strategies to manage the associated risks.

DME response

DME agreed with recommendation 38, stating that this should be a standard issue in the DME Risk Management Strategy. It also noted that the recommendation 'applies to all staff not just inspectors of mines'.

²⁶⁵ ICAC, *Corruption Risks in NSW Development Approval Processes*, p.52

13.3 Departmental priorities and the location of the QMI

As the DME itself reports:

While Queensland enjoys the economic benefits of the resources boom, we should never lose sight of the importance of safety in our mines.²⁶⁶

There has been considerable public discussion, both in Queensland and elsewhere, on the issue of where mining inspectorates should be located within the administrative framework.

Commentators such as Gunningham regularly call for mine inspectorates worldwide to be part of a broader, mainstream occupational health and safety regulatory function. In Queensland, a 2005 review by ACIL Tasman recommended this for the QMI, reasoning that mine safety would be better served by transforming the QMI into an operationally autonomous unit within the Department of Employment and Industrial Relations, much like the Electrical Safety Office.

The DME's Strategic Plan 2007-2011 sets out the department's vision:

Delivering a safe world-class mining industry and a reliable, sustainable and competitive energy industry to support strong economic growth and better services for the people who live and work in Queensland.²⁶⁷

The Strategic Plan continues by setting out the DME's core activities, as follows:

What we do

- Promote and support investment in the State's mining and energy sectors.
- Provide strong support to the mining and petroleum sector.
- Advance new projects and the exploration and development of Queensland's resources, and provide geoscience and resource information to assist new discoveries.
- **Protect the safety and health of workers employed in the mining, quarrying, explosives, petroleum and gas industries, and ensure public safety in the use of gas and explosives.**
- **Develop and market safety technology and training nationally and globally.**
- Encourage growth and development in the electricity and gas sectors with regard to sustainability and climate change.
- Manage Queensland's contribution to national energy market reform processes.
- Manage compliance with licence, permit and lease conditions.
- Improve the efficiency of energy use. [emphasis added]

The DME's *Agency Budget Highlights* document describes key items for the Department arising from the 2007-2008 State Budget. The commentary begins:

The Queensland Government formed the Department of Mines and Energy after the 2006 State election to take advantage of the synergies between these two closely related sectors.

The energy and mining sectors are key driving forces behind Queensland's strong economy.

²⁶⁶ DME Annual Report 2006-2007, p.17

²⁶⁷ DME Strategic Plan 2007-2011, p.1

The Department of Mines and Energy aims to deliver a world-class mining industry and a reliable, sustainable and competitive energy industry to support strong economic growth and better services for people who live and work in Queensland.

The Department will continue to play a leading role in promoting and encouraging new investment in the State's mining and energy sectors.

In supporting a mining sector that provided \$1.31 billion in royalties to Queensland last financial year, the Department is a primary catalyst for mining exploration and development in the State, and oversees health and safety in Queensland's mining and petroleum industries.

The most recent Annual Report for DME (2006-2007) continues in the same vein, highlighting the importance of the industry and makes limited reference to the Department's mine safety responsibilities.

In short, these documents give the strong impression that the DME's main priorities are the promotion and development of the mining industry and that mining health and safety does not have the same priority (although officers in the QMI certainly see mine safety as their priority).

A reasonable person reading the DME's web pages, budget statements, operational plans, etc, would be likely to gain this impression. This issue must be addressed to dispel any notion that the QMI is subject to undue influence or from elsewhere in the department or that the QMI's role is not being given sufficient prominence within the department.

A recent review of mine safety legislation in Victoria came to the following conclusion:

For a regulatory process to have credibility it must, of course, be independent, transparent and accountable ... 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.²⁶⁸

In the 2004 report of the Ritter Inquiry, the question of the WA Mines Inspectorate's location in a similar department to the DME was addressed as follows:

A recurrent theme in the inquiries which have examined the regulation of mines safety in Western Australia is whether the mining promotional and regulatory functions of the one body gives rise to at least a latent conflict such that it would be better to separate the two governmental roles into different departments.²⁶⁹

... in June 2001 the State government acted on the recommendations of the report received from the Machinery of Government (MOG) taskforce. One of the taskforce recommendations was to amalgamate the then Department of Minerals and Energy (DME) with the then Department for Resources Development (DRD) to create the Department for Minerals and Petroleum Resources (MPR). Within the MOG report, the review noted there is a need to separate clearly the regulatory/administrative resources functions of the Department of Minerals and Petroleum Resources from the promotional/facilitation functions ... This seems to be an acknowledgment of the conflict issue ...²⁷⁰

²⁶⁸ Pope, pp.56-57

²⁶⁹ Ritter, p.338

²⁷⁰ Ritter, pp.338-339

While it was clearly pointed out by the MOG taskforce that there was a risk associated with regulation and promotion being combined in one agency, DoIR (and the Department of Mineral and Petroleum Resources before it) was explicitly set up from its inception to manage the risk through geographical and structural separation. **Specifically, the senior officer of the department charged with the administration of safety legislation, as opposed to those charged with the attraction of industry investment, was provided with a direct reporting line, separate from that of the Director General, to the Minister for State Development. This officer is able and encouraged to provide alternative advice to the Minister in the event of any conflict arising between the two areas covered by DoIR.**²⁷¹ [my emphasis]

The officer in charge of safety legislation in the WA counterpart of the QMI (presumably fulfilling a similar role to the Executive Director, Safety and Health) was interviewed during the Ritter Inquiry. This officer's comments included:

Since assuming my current role, my use of the direct line of report to the Minister has tended to relate primarily to the issues of long term strategies for the regulatory areas of the department, including the mines safety inspectorate... Where issues have arisen in relation to specific mining related projects that may lead to a conflict of interest for the Director General I have identified what I consider to be the appropriate regulatory response. I have then discussed the issue with the Director General to ascertain whether our views differ. On each of these occasions I have found him to have reached the same conclusion as my own so it has not been necessary to go directly to the Minister. If his views did differ from my own on any of these occasions, I would have had no hesitation in contacting the Minister or his office directly to inform him of my concerns as I deal with he and his staff regularly without specific reference to the Director General.²⁷²

Ritter made the following comment on this point which, in my view, is also applicable to the QMI's current arrangements:

Without intended in any way as a criticism of the officer concerned, it does appear that the circumstances in which the reporting line has been used are fairly limited. It also appears that the 'success' of the arrangement is dependent not upon the structures but the strength of the individuals who hold the positions. What if those individuals do not agree on the issues identified in the quote above. Will any disagreement be managed in ways which undermine the 'independence' of the position of the person with responsibility for mine safety – whom it should be remembered, for at least some purposes, reports to the Director General?²⁷³

Ritter also drew attention to the issue of resource allocation:

Additionally there remains an issue with respect to resource allocation within the department ... the resources allocated to that part of the department is dependent upon the decision of the Director General, who also has responsibility for promoting mining investment.

In the opinion of the Inquiry, one of the key problems which exists as a result of this potential conflict is when a fatality or serious accident has occurred. In the planning for future investment in mining and regulation of safety, it can be cogently argued that the two go hand in hand. What happens, however, when things go awry? For example, what would happen if there is a fatality at a mine where the company operating that mine is hopeful of expanding the mine and attracting overseas investment?

²⁷¹ Ritter, p.339

²⁷² Ritter, p.340

²⁷³ Ritter, p.340

Once a fatality has occurred, what is the role of the department in the investigation of the incident and a possible prosecution of the mining company? At the same time, what is the role of the department in trying to assist the promotion of mining in Western Australia and encourage investment from overseas? Will a prosecution of the company possibly hamper the investment from overseas?

At the same time, and very importantly, what about the family and other loved ones of the person who has died? One needs to consider their position in potentially dealing with a department in relation to the investigation of the loss of their loved one, which at the same time might be trying to actively promote investment of overseas capital into the mine where the tragedy has occurred.²⁷⁴

Noting the enormous importance of the mining industry to WA, Ritter reached the following conclusion on the question of whether that state should have a specialist mine safety inspectorate:

It also needs to be borne in mind that the people working at mines play, individually and collectively, an important role in the substantial creation of wealth for the Western Australian economy. Also, they are statistically part of the industry within which most workplace fatalities occur in Western Australia. There seems to be no reason why this workforce and the companies who employ them should not have their own dedicated health and safety regulator which is not subject to a wider departmental structure which includes the promotion of mining.²⁷⁵

These are vital considerations. However, I believe that other factors (discussed below) also need to be taken into account before reaching a conclusion on this issue.

13.4 QMI's perspective on location

Almost everyone my investigators interviewed at the QMI had a role devoted to health and safety in the mining industry. Furthermore, their job descriptions did not require them to consider the economic importance of the mining industry when carrying out their duties. It is safe to assume, however, that all QMI staff are well aware of the potential economic impact of enforcement action, particularly on a large mine.

In a 2003 review of the South African counterpart of the QMI, it was said:

The DME²⁷⁶ state that they view the Mine Health and Safety Programme as contributing to two ... of its ... key objectives.

- To formulate and implement an overall minerals and energy policy to ensure optimum utilisation of mineral and energy resources
- To position the mineral and energy industry for global competitiveness.

Consequently it may be argued that the inspectorate, and the inspectors, as part of the DME, have a certain direct responsibility to take cognisance of the government's economic objectives to maintain efficient and competitive minerals and energy industries. It is essential therefore that the MHSI²⁷⁷ ensures that these other responsibilities in no way introduce unnecessary bias or pressure to compromise on health and safety policy and standards.²⁷⁸

²⁷⁴ Ritter, p.340

²⁷⁵ Ritter, p.342

²⁷⁶ The Department of Mines and Energy in South Africa

²⁷⁷ The South African Mine Safety and Health Inspectorate

²⁷⁸ IMC & The Resolve Group, *Executive Summary of the Review of Mine Health and Safety, Post-Leon Commission*, p.6

We raised this issue with the more senior QMI staff we interviewed. They agreed unanimously that being located with the DME was preferable to relocation to (say) the Department of Industrial Relations, as was recommended by ACIL Tasman. The concerns about such a proposal are summarised in the following response of one officer:

... one of the issues we're looking at is major disasters as well as general occupational health and safety. My concern is if, for example, we move to join Workplace Health and Safety Queensland, we would lose our focus and quite honestly we might end up without any knowledge of very dangerous aspects of health and safety issues in the mines ... If that was diluted there'd be a serious problem. We've got to recognise it. They are dangerous industries and they have to be properly regulated and properly inspected. And yes there are ways of looking at the general occupational health and safety issues of those industries. We try to do both.

In 2005, the Queensland Court of Appeal considered a case involving interpretation of certain provisions of the Coal Act. Fryberg J recognised the unique nature of safety regulation in mining:

[The] evidence disclosed, if evidence were needed, that underground coal mining is an extremely dangerous undertaking. One of the greatest dangers is a fire. A fire in an underground coal mine affects not only persons in its immediate vicinity but all persons who are underground at the time ... Compared to other countries mine safety accidents in Queensland coal mines are relatively infrequent. Deaths have been relatively few, although, of course, any death is too many. It is reasonable to assume this is the result of the provisions in the Act and Regulation and, perhaps, their predecessors. No doubt it is also due to the precautions adopted by mine owners and operators and the scrutiny of unions
²⁷⁹
 ...

In an interview with us, one QMI officer described the unique safety issues of the coal industry in the following terms:

But underground coal mining is quite unique in this state. Out of all the activities we undertake they represent the highest risk. That's where we're going to get multiple fatalities, 15 people dead, 17 people dead, 30 people dead. We're not going to get that at a quarry or an earthmoving operation or an open cut or even an underground metal mine. Because they don't catch fire very easily, underground metal mines ...

I know I sound like a broken record but coal mining is different. I keep saying it. I keep saying it to the mine guys, but what is going to get us here is the mine blowing up and every morning I wake up saying thank god the phone hasn't rung during the night telling me there's been a mine disaster.

I make the observation that regardless of the QMI's location in the public sector, it will inevitably be exposed to some degree of political influence simply because:

- it is a unit of the State Government; and
- all (or at least a large portion) of its funding will come from the State Government.

On the basis of the evidence gathered during this investigation, I am satisfied that steps need to be taken to enhance the QMI's operational independence. As mentioned, one option is to move the QMI from the DME to the Department of Industrial Relations. There is a precedent for such a move.

²⁷⁹ *CFMEU v Queensland* [2005] QCA 127 at para 13 per Fryberg J

In 2005, I reported to Parliament on our investigation of the regulatory practices of the Electrical Safety Office, which had previously been located within the DME. Some of the issues I considered in that investigation are very relevant to the issues I am considering here. More particularly, the DME had the role of promoting and supporting the electricity supply industry and there was substantial mobility of inspectors between the ESO and industry. The circumstances indicated there was a risk of regulatory capture. Part of the government's response to the issues raised in our investigations and in the report of an independent review it had commissioned was to transfer the ESO to the Department of Industrial Relations.

Such a step is a superficially attractive option in respect of the QMI. However, there are also some arguments against taking this option, namely:

- the disruption of moving and adjusting to new organisational structures and reporting hierarchies may distract staff and resources from their core job of being in the field promoting and ensuring mine safety;
- there is likely to be resentment against mine inspectors in a mixed workplace health and safety inspectorate, because mine inspectors are paid considerably more for doing similar work;
- there is no guarantee that another department would give any greater priority to mine safety matters than the DME; and
- the level of specialist expertise in the QMI could easily become diluted.

Nonetheless, if the QMI remains a part of the DME, it is vital that the organisational structure of the DME and its practices and procedures directly deal with the risk and perception of regulatory capture or inappropriate influence from areas of the DME responsible for promoting and supporting the mining industry.

13.5 Pre-eminence, not just survival

Ideally, the regulator of such a key industry should be a highly respected and well-resourced organisation that would attract quality staff from the industry itself and elsewhere. This would minimise the risk of regulatory capture and increase the capacity of the regulator to persuade and enforce as well as improve staff retention.

Having regard to the significance of the mining industry to the state's economic prosperity, the QMI is uniquely placed to become an international leader in mine safety regulation. Factors supporting this contention include:

- an enormous and diverse local mining industry;
- a strong commitment to mine safety at all relevant levels of government;
- a legislative framework for mine safety that is widely recognised as one of the best in the world;
- ready access to engineering and mine safety expertise and research, including at Queensland and interstate universities;
- the general goodwill of unions, industry and the community toward the Inspectorate;
- a marked willingness of both government and the industry to learn from experience elsewhere in Australia, and the world;²⁸⁰ and
- the presence of several other mine inspectorates with which to collaborate and share resources (notably NSW and WA).

²⁸⁰ As evidenced by the ongoing development of a national mine safety framework, participation in national and international mine safety research projects, and use of safety alerts, etc, from interstate and overseas to inform safety education campaigns

The factors hindering this at present are:

- the QMI's identity and role are blurred by those of the DME (for example, as mentioned, the QMI often appears on corporate plans and other corporate documents as 'Safety and Health');
- the perception that the QMI is prone to regulatory capture and to undue influence from those within the DME responsible for supporting and promoting mining in Queensland;
- resourcing constraints; and
- inconsistent compliance practices.

There are several ways of enhancing the QMI's separate identity and operational independence other than by transferring it to the Department of Employment and Industrial Relations, which could also have the undesirable effect of blurring its identity and reducing its expertise.

First, an initiative taken by government in responding to deficiencies in the electrical safety regime in Queensland was to establish the position of a Commissioner for Electrical Safety and to establish the Electrical Safety Board. The Commissioner's role is completely independent of the Electrical Safety Office.

The Commissioner's functions include managing the activities of the Board²⁸¹ and advising the relevant Minister on electrical safety matters.²⁸² During the first five years of this arrangement, electrical fatalities in Queensland fell from 3.6 per million (as at 2001) to 1.0 per million (as at 2007).²⁸³ Electrical fatalities in Queensland are now below the national average of 1.9 deaths per million.

Although I am not suggesting that establishing the position of Commissioner for Electrical Safety and the way the Commissioner has carried out his functions is the only, or the major, reason for this improved safety outcome, I believe that they have helped to significantly raise the profile of electrical safety in Queensland and ensured that the Minister is apprised of any emerging electrical safety concerns. The Commissioner also performs the role of an independent public advocate for electrical safety.

I consider similar benefits would result from establishing a comparable position for mine safety in Queensland, which would also go a considerable way towards addressing the perception that the QMI is susceptible to regulatory capture and to inappropriate influence from elsewhere in DME. Furthermore, such an initiative would publically reinforce the importance the government attaches to mine safety. One of the Commissioner's functions would be to monitor and report on the performance of the QMI.

Second, if the QMI remains within the current administrative framework of the DME, the Executive Director, Safety and Health, should be given a direct reporting line to the Minister similar to the arrangement in place in WA.

²⁸¹ Under s.76(1) of the *Electrical Safety Act 2002*, the Electrical Safety Board's primary function is to give advice and make recommendations about policies, strategies, and legislative arrangements for electrical safety.

²⁸² See the discussion at pp.32-36 of the *Workplace Electrocutation Project*

²⁸³ Department of Employment and Industrial Relations, Electrical fatalities 2006-07

[Accessed at <http://www.deir.qld.gov.au/electricalsafety/publications/outlook/200701/fatalities>]

Third, legislative recognition could be given to the existence and role of the QMI to firmly establish its operational independence. This would not necessitate disassociating the QMI administratively from the DME or establishing it as a statutory authority. A relevant precedent is the Office of the Queensland Parliamentary Counsel, established under s.5 of the *Legislative Standards Act 1992*. Section 6 of that Act provides:

6 Control of office

- (1) Subject to the Minister, the Parliamentary Counsel is to control the office.
- (2) Subsection (1) does not prevent the attachment of the office to the department²⁸⁴ for the purpose of ensuring that the office is supplied with the administrative support services that it requires to carry out its functions effectively and efficiently.

Another precedent for legislatively reinforcing an office's independence relates to the Office of the Public Service Commissioner, established by s.32 of the *Public Service Act 1996*. Section 35 of that Act provides:

35 Commissioner's duty to act independently etc.

The commissioner must perform the commissioner's functions independently, impartially, fairly, and in the public interest.²⁸⁵

Recommendation 39

That the position of Commissioner for Mine Safety be established by legislation to advise the Minister on mine safety matters, chair the Coal Mining Safety and Health Advisory Council and the Mining Safety and Health Advisory Council, report to Parliament on the performance of the QMI and act as an advocate for mine safety in Queensland.

DME response

The Director-General responded as follows:

The proposal in recommendation 39 to establish a Commissioner for Mine Safety requires further consideration by the Department as this appears to be contrary to previous reports which recommended the creation of a flatter, more efficient organisational structure while retaining an appropriate level of senior skill and experience and maintaining all current statutory functions. Considerable work went into developing this structure to ensure a reduction in administrative layers thus concentrating on service delivery. In addition, the future of the existing legislatively based tripartite advisory boards in the coal and metalliferous areas would need to be considered.

In this regard, it is important to keep in mind that the current legislation and practice is the outcome of an extensive tripartite process over 6 years, following upon the Moura mining disaster.

²⁸⁴ The Department of the Premier and Cabinet

²⁸⁵ A further relevant precedent for operational independence appears in s.17(1) of the *Commission for Children and Young People and the Child Guardian Act 2000*

Ombudsman comment

I agree that flatter and less bureaucratic structures are generally preferable in public sector agencies whether they perform a regulatory role or not. However, I am not suggesting that the Executive Director, Safety and Health report in any operational sense to the Commissioner.

Nor am I suggesting that the tripartite advisory boards for both industries be disbanded. At present, s.75 of the Coal Act establishes the Coal Mining Safety and Health Advisory Council. This consists of members from the QMI, industry, and relevant unions,²⁸⁶ appointed by the Minister,²⁸⁷ and tasked with giving advice and recommendations to the Minister about promoting and protecting safety and health in the coal mining industry.²⁸⁸ A comparable body is also established under the Mining and Quarrying Act.²⁸⁹ Meetings are chaired by the Director-General (as the Chief Executive) or the Director-General's nominee. In practice, I understand that the Executive Director, Safety and Health, acts as the Chair.

Clearly, the councils perform extremely useful functions and should be retained. However, I believe that the statutory appointment of the Director-General as the chair of each committee is not a good model as it adds to the perception of inappropriate influence from within the DME over the QMI's activities. The fact that the current arrangement is that the Executive Director perform the role of chair does not deal with this perception, as the arrangement could be changed at any time.

As indicated in recommendation 40, the structure I am proposing gives the Executive Director, Safety and Health, operational independence in discharging the QMI's functions. The position of Commissioner for Mine Safety would sit outside this structure. The Commissioner's functions would be to:

- chair the advisory councils and be the conduit for advice from the councils to the Minister;
- advise the Minister on mine safety issues on the Commissioner's own initiative or on request from the Minister;
- monitor the performance of the QMI and report to Parliament annually on its performance, whether in a separate report or a discrete section of the DME's annual report;
- monitor whether QMI is appropriately recording and reporting on its compliance activity;
- monitor the QMI to ensure it is not subjected to inappropriate interference from other areas of DME or from the mining industry; and
- in a similar manner to the Commissioner for Electrical Safety, act as a public advocate for the improvement of mine safety generally.

This role would enhance and complement the existing bodies and their functions under the Coal Act and the Mining and Quarrying Act, and go a considerable way to ensuring that the QMI is perceived as an independent regulator for mine safety regardless of any administrative changes that might occur in the DME.

²⁸⁶ Coal Act, ss.78-79

²⁸⁷ Coal Act, s.80

²⁸⁸ Coal Act, s.76

²⁸⁹ Mining and Quarrying Act, s.66

My officer spoke to the Commissioner for Electrical Safety about his role. He saw one of the benefits of his role as being that he could act as an independent advocate on electrical safety issues and bring to the Minister's attention any significant electrical safety concerns. He was not asked to endorse the establishment of a similar model for mine safety.

I have therefore decided to retain recommendation 39.

Recommendation 40

That the Executive Director, Safety and Health, be empowered to report directly to the Minister on mine safety issues.

Recommendation 41

That a proposal be developed for the Minister to give legislative recognition to the existence and role of the QMI and to recognise its operational independence.

DME response and Ombudsman comment

In response to recommendations 40 and 41, the Director-General stated:

... the organisational structure was changed about 12 months ago to the current arrangement whereby the Executive Director, Safety and Health, reports directly to the Director-General. This recognises the importance and independence of Safety and Health from other areas of the Department. As Director-General, I do not get involved in the day to day decision making on safety and health matters at Queensland mine sites. The Executive Director Safety and Health is also in very regular contact with the Minister's office on safety and health issues.

Any changes, such as giving further legislative recognition of the Inspectorate's independence, would require further analysis of the implications of the proposal taking into account government policy and the impact on the Petroleum and Gas and Explosives Inspectorates. There are also existing models in the Queensland Government and elsewhere that will need to be examined.

While I note the issues raised in your report about possible perceptions of undue influence from other roles of the Department on the safety function, this needs to be balanced against your other conclusions that:

- you have found no evidence of undue influence actually occurring; and
- there will always be some level of competing interest wherever this function is placed.

In light of this and based on the actual performance of the mine safety function as opposed to possible perceptions of its performance, I believe there is a sound balance between independence and oversight in the current structure.

I reiterate that my investigation found no evidence whatsoever that the Director-General is inappropriately influencing the QMI's compliance activity.

However, giving statutory recognition to the Executive Director's authority to report directly to the Minister on operational issues would reinforce the perception of the QMI's operational independence. I therefore retain recommendation 40.

I am aware that the QMI is located within the Safety and Health Branch of DME, along with the:

- Petroleum and Gas Inspectorate;
- Explosives Inspectorate;
- Boards of Examiners; and
- SIMTARS.

I appreciate that consideration will need to be given the impact of implementing recommendation 41 on these other units of the Safety and Health Branch.

However, I am not satisfied that the Director-General's submission satisfactorily addresses my concern about the perception of regulatory capture in relation to QMI. As I have stated, the perception itself can significantly undermine the QMI's effectiveness and good reputation.²⁹⁰

In light of this, I have decided to retain recommendation 41 also.

13.6 Funding

Clearly, a substantial increase in funding will be required to implement some of the recommendations in my report, such as recommendations 2, 3, 10, 12, 21, 25, 33 and 36.

The importance of mining to the state's economy flowing from the massive value of mining royalties, in my view, clearly justifies the additional expenditure. One option would be to fund the QMI through a direct levy on the industry. While superficially attractive, this would need to be carefully managed to avoid that process in itself giving rise to the perception of regulatory capture.

In a 2003 UK Cabinet Office report on independent government regulators, one solution suggested was a mix of funding streams to ensure adequate funding as well as protection from a reliance on a single funding source.²⁹¹

Ultimately, how funding is provided and the amount is a matter for the government. The point I am making is that there is a strong case for a substantial increase.

Recommendation 42

That the DME estimate the cost of implementing the recommendations I have made in this report and prepare a submission for the Minister's consideration for increased funding for the QMI to enable it to discharge the additional responsibilities I have recommended.

DME response

DME has agreed that a full costing of the recommendations I have made will need to be prepared for the Minister's consideration.

²⁹⁰ See the discussion of this issue at 13.3

²⁹¹ Better Regulation Task Force, *Independent Regulators*, p.19

Chapter 14: The 2005 review of the QMI

In 2005, a consortium of consulting firms led by ACIL Tasman conducted a review of the QMI, at the request of the then Minister for Natural Resources and Mines. The result has since become known as the 'ACIL Tasman report'.

The ACIL Tasman report was provided to State Cabinet and not released publicly. It is therefore subject to Cabinet privilege. However, at my request, the Cabinet Secretary provided a copy of the report for my perusal, and advised that no restriction would be placed on my use of it for the purpose of this investigation or report. I also note that the State Government has provided some public information on the review's outcomes and its response to them.²⁹² A public document describing the review stated:

The Minister requested that the review examine the current performance and future capacity of the Inspectorate to perform against government, industry and workforce expectations, including the skills base, structure and location of the Mines Inspectorate. The review was also to report on future skills, qualifications and training requirements of inspectors to enable the Inspectorate to provide world's best practice service to the mining industry.

The review was overseen by a Steering Committee consisting of union, industry and departmental representatives and engaged consultants ACIL Tasman to produce a report. The Steering Committee provided a report to the Minister on the consultants' recommendations. The Queensland Government then considered its response to the review.²⁹³

The review recommended, among other matters, that the QMI:

- expand the range of disciplines from which it recruits inspectors;
- implement further competency-based training for inspectors in matters such as compliance practice;
- differentiate the roles of inspector and inspection officer;
- flatten its management structure;
- increase its focus on team-based inspections;
- ensure its key databases such as RIPS and Lotus Notes are 'fit for purpose';
- revise its enforcement model to make it more transparent and in line with contemporary 'general duties' styles of legislation; and
- increase its emphasis on the provision of information and advice to industry.

The Department advised that, while Cabinet had accepted virtually all of the ACIL Tasman report's recommendations, it rejected one; namely, that the QMI be moved to the workplace health and safety division of the Department of Employment and Industrial Relations.²⁹⁴

While no further details of this decision have been provided publicly, QMI staff and others we interviewed informed us that this decision was likely taken due to a belief that mining presents unique and extreme health and safety risks which would be inadequately managed by a generalist inspectorate.²⁹⁵

²⁹² Department of Natural Resources and Mines, *Reforms to the Queensland Mines Inspectorate*, Brisbane 2005

²⁹³ DNRM, *Reforms to the Queensland Mines Inspectorate*, p.3

²⁹⁴ DNRM, *Reforms to the Queensland Mines Inspectorate*, p.5

²⁹⁵ See my discussion of this issue at Chapter 13.

I have not supported this recommendation for the reasons discussed in the previous chapter. However, my position on this issue is dependent on implementation of the recommendations I have made to address perceived risks to the QMI's operational independence. If those recommendations are not implemented, I would support the ACIL Tasman recommendation.

At the time of my investigation, the DME informed me that the recommendations of the ACIL Tasman report had (with the sole exception of the rejected relocation recommendation) been implemented under the guidance of a steering committee which included representation from unions and industry.

Chapter 15: Directive 13/06

In November 2006, the Public Service Commissioner issued Directive 13/06 – *Complaints Management Systems*. This Directive requires that (among other things):

- every Queensland public sector agency must implement and maintain a system or systems for managing complaints about itself or its staff;
- an agency's complaints management system is to be supported by written policies and/or procedures; and
- a complaints management system should take into account all types of complaints, both internal and external to the agency.

However, this Directive does not replace, modify or revoke any legislative requirements that apply to the management of particular types of complaints.

Directive 13/06 also requires that an agency's complaint management system:

- be visible and accessible;
- be responsive;
- enable timely and appropriate assessment and action by the agency;
- provide for feedback; and
- be monitored for its effectiveness.

The Directive required that such a system be in place in all State Government agencies by November 2007. The Directive provides for considerable flexibility for each agency to develop its complaints management policy in accordance with its own needs.

At the beginning of our investigation, DME did not have a formal policy for handling complaints about its own officers. However, following discussions with my Office, a Complaints Management Policy²⁹⁶ was implemented by 10 November 2007.

Many public sector agencies have traditionally seen complaints as a nuisance, and a distraction from the 'core work'. Some complainants can present voluminous issues and challenging behaviours, and use up an inordinate amount of an agency's time and resources. In fact, my Office is currently working with the Commonwealth Ombudsman and other state and territory Ombudsman Offices in developing resources to assist public sector agencies to deal with difficult complainant behaviour.²⁹⁷

It is natural that many agencies would prefer to focus on other work. However, complaints management, if used effectively and appropriately, can become a valuable tool for any organisation. Complaints (when analysed at a broader level for trends) can reveal systemic problems in an organisation's processes, and act as a 'warning light' revealing the need for action.

²⁹⁶ DME, Complaints Management Policy (Version 1.4), Policy CP/08/01

²⁹⁷ This is the *Unreasonable Complainant Conduct Project*, led by the NSW Ombudsman. See <http://www.nswombudsman.nsw.gov.au/dealing%20with%20difficult%20complainants%20project.htm?id=418>

The DME is likely to receive the following types of complaints from members of the public:

- complaints about the QMI's actions or inactions in relation to mine safety (for example: *'I've reported that concern to the QMI three times now and there hasn't been any inspection or action taken!'*);
- complaints about QMI that do not relate directly to mine safety (for example: *'Inspector AB was extremely rude when I asked about why a certain item of machinery needed to be inspected'*; and
- complaints about other areas of DME (for example, in relation to mine industry development, or energy).

The DME's complaints management system should also deal with internal complaints (for example, complaints by inspectors about internal policies and practices).

Recommendation 43

That the DME increase the public visibility of its general complaints management system.

Recommendation 44

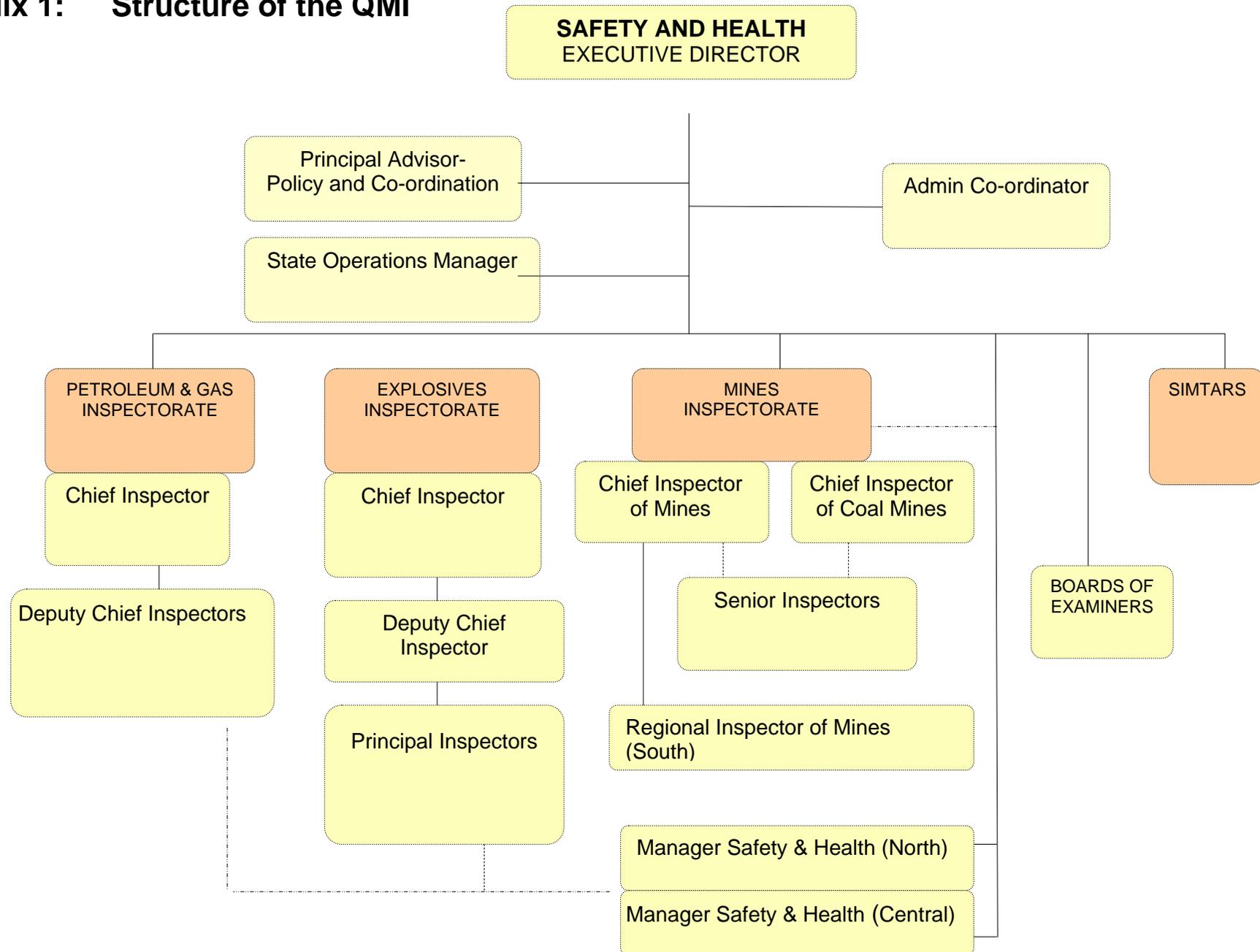
That the DME appoint an officer within the department for the coordination of its complaint handling function.

DME response – Recommendations 43 and 44

DME agreed with both these recommendations, stating that they were already being implemented. DME advised that a Complaints Management Officer has been appointed.

DME advised that it had recently published its general complaints policy on its website, and that the provisions of the legislation and the internal procedures for handling QMI-related complaints will be included on the QMI-specific web pages.

Appendix 1: Structure of the QMI



Appendix 2: Example QMI mine record entry



**Safety & Health, Mines
Inspectorate**

Townsville Office

P.O. Box 5318 MC,
TOWNSVILLE QLD 4810

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Mine Name	File #	Operator	Activity Type	Region	Activity Date
			Investigation	Northern	

Vision: Our Industries Free of Safety and Health Incidents

Mine Record Entry

This report forms part of the Mine Record under s59 of the Mining and Quarrying Safety and Health Act 1999. It must be placed in the Mine Record and displayed on Safety Notice Boards.

Today and on the previous Friday I was on site conducting enquires in relation to the serious accident to [person] on [date]. His role was that of an observer on conveyor CV 0101. I revisited Conveyor CV 0101, the place where the accident occurred, took some measurements of CV 0101, had discussions with a number of mill employees including the Site Safety and Health Representative and took some notes on conversations with several workers.

The findings are as follows:

The mine has already acknowledged in their investigation report that no JSA²⁹⁸ was conducted which is one of their requirements when a change in work process occurs. This JSA should have been done at the design stage. The mine is addressing this contributing factor.

[Person] was not the only person to climb up onto the top chord of the conveyor whilst it was running in order to free up a conveyor idler or side roller. One other worker also climbed up on the top chord while the conveyor was running for the same purpose. These two workers took an unacceptable risk perhaps because they did not want to inconvenience the operation by stopping the conveyor. [Person] took this action knowing he had been instructed by his supervisor to stop the conveyor and the other worker took this action after he had been told by another worker to make sure no rocks got caught and to pull the lanyard as quick as he could.

The two workers involved were not part of the usual mill crew.

There was an opportunity for supervisors to know that a person had climbed upon the conveyor prior to [Person's] accident either by observation or discussing with the conveyor observers any problems they may have been having. Further it appears that the side idler roller that was used to hit a jammed idler was conveniently placed up on the framework ready for use. Supervisors could have noticed this and queried why it was there.

Instruction given to workers who were about to perform the role of observer on the conveyor was not always given by his supervisor but on one occasion by another worker.

²⁹⁸ Job Safety Analysis

The nip point that where [Person] had his arm caught, was not where someone could accidentally get caught if they were standing on the conveyor walkway.

As the two workers were not part of the regular mill crew and had only been employed for a short period, they had limited opportunity to absorb the safety and health culture that the company is committed to.

One of the key opportunities to set the scene for the culture is at the site induction, however, the site induction although having three slides on conveyors does not have any questions on conveyors to demonstrate an understanding.

There is only an informal area induction into the mill by the supervisor.

The opportunity to impart the company's safety and health expectations by on-the-job instruction by supervisors was made more difficult due to the observer being in the crushing area and not the mill process area so two-way radio was the more convenient medium and ...

The site induction record for [Person] dated [date] has several pages missing.

<u>MRE No.</u>	<u>Substandard Condition or Practice</u>	<u>Due Date</u> <u>[date]</u>
1	Major hazards	
	Review the systems that ensure workers understand all the major hazards they may encounter in the course of their work in the mill area and the company's expectation in relation to taking unacceptable risks in relation to those hazards. Especially for recently employed workers in a new role, consider having some system that their supervisors use to monitor the worker's understanding of major hazards and their compliance with the established controls. Refer to M&Q S&H Regulation 2001 Part 2 and Section 96 (1).	

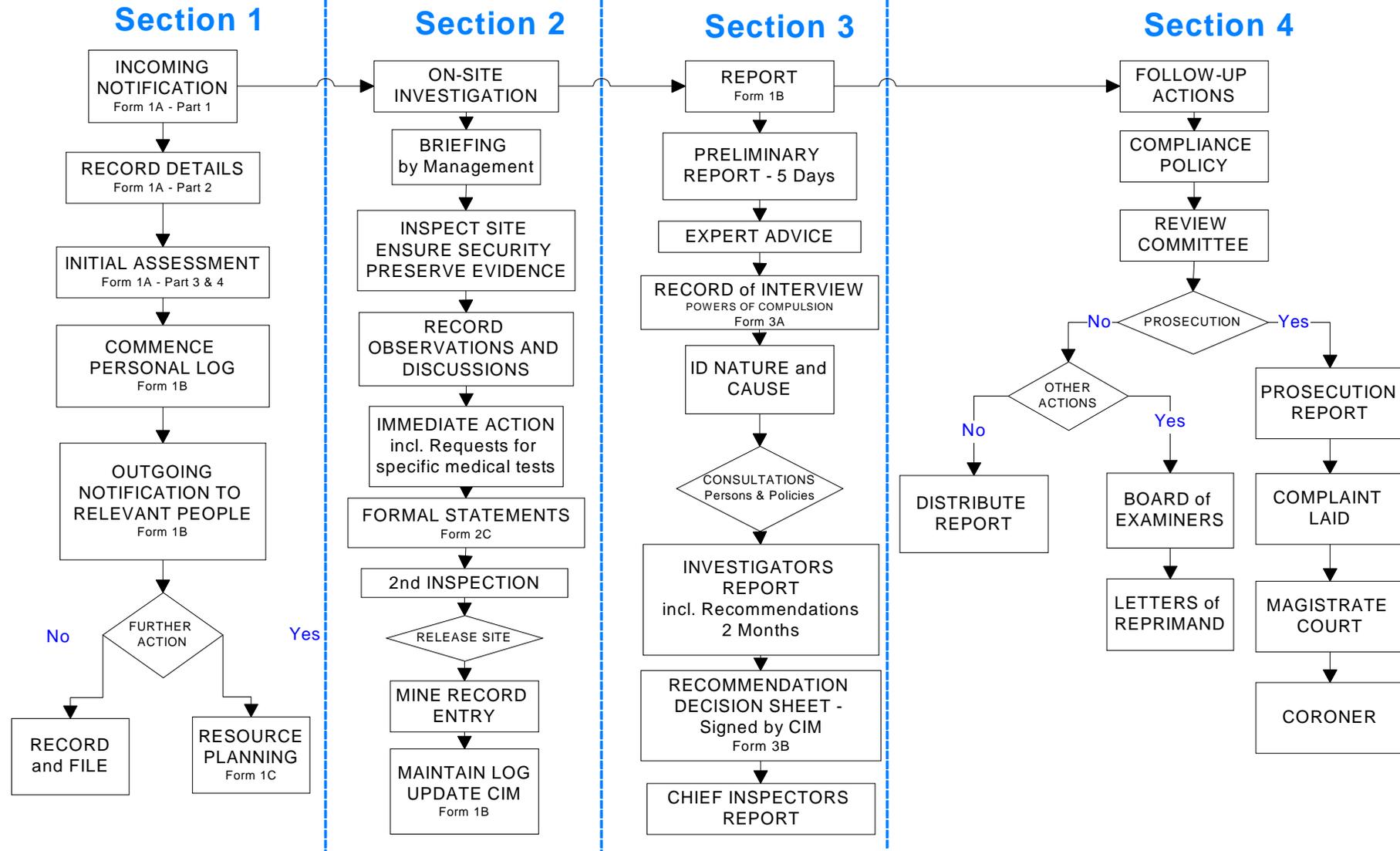
<u>MRE No.</u>	<u>Recommendation</u>	<u>Due Date</u> <u>N/A</u>
2	Induction record	
	Ensure that induction records for all present and future workers employed by [operator] show that the site induction process has been followed in relation to content and the workers signature.	

[Inspector]

Inspector of Mines

North Region

Appendix 3: QMI investigation process flowchart



Appendix 4: Example QMI safety alert to industry

Safety alert

Mines Inspectorate
www.dme.qld.gov.au

Safety Alert 183
Published 22 November 2007

Hand Crushed In Longwall Bretby Cable Handler

Mine Type: Coal Mine - Longwall

Incident: Having just left the maingate, a shearer operator attempted to remove coal spillage from the Bretby loop while the shearer was moving. He stumbled and his hand was jammed by the loop and dragged into the tray causing multiple fractures and severely torn flesh.

Equipment: Bretby Cable Handler

Hazard: Kinetic energy - trapping / pinch points

Cause: Attempting to remove debris from the Bretby loop while the shearer was moving.



Comments:

There was clear potential for even more serious injuries. The gap between the Bretby and the tray into which the operator's hand was dragged was only 15mm.

Two similar incidents have occurred recently where operators have been injured whilst trying to clear stone/coal from the Bretby in the active cable tray. They have been caught by the loop and pulled against the active tray structure.

Modern cable trays are purposely designed with an open structure to facilitate "self cleaning", as build up of debris within the tray has caused many cables to be damaged over the years. The downside to this design is the creation of many pinch points.

Mines Inspectorate

www.dme.qld.gov.au

Safety Alert 183

Published 22 November 2007

The shearer operator generally is only potentially at risk when the loop is adjacent to the shearer. Poor housekeeping standards can result in operators being closer to the Bretby hazard than necessary, (e.g. negotiating walkway obstructions such as hoses, or stumbling due to slip/trip hazards).

Recommendations:

1. Recognise that the Bretby is a moving part of a machine and ensure that it is incorporated in the Energy Isolation procedures in the Safety and Health Management System.
2. Review the operation of the Bretby to ensure an understanding of the risks for all locations on the shearer — where the risk is greatest — to which the operator(s) in particular is most exposed for a given location.
3. Review longwall training procedures to ensure that management of the risks associated with the Bretby is adequately communicated (particularly in light of Recommendation 2).
4. Review the design of cable trays to see whether the pinch points can be reduced.
5. Review means of highlighting the hazard (e.g. signage, reflective paint, etc), particularly where higher risk areas are identified.
6. Maintain a high standard of general housekeeping.

Doug White

Acting Chief Inspector of Coal Mines

Contact: Mike Walker, District Inspector of Mines, +61 (07) 4938 4121

See more Safety Alerts and Safety Bulletins at
www.dme.qld.gov.au/mines/safety_information___bulletins

Appendix 5: Investigative elements of the Coal Act and the Mining and Quarrying Act

Stage/requirement	Coal (CMSHA) ²⁹⁹	Metalliferous (MQSHA) ³⁰⁰
Inspectors monitor effectiveness of risk management at mines and take appropriate action	7(f)	7(f)
Site safety and health representatives have function of investigating complaints from workers about safety and health	99(1)(d)	92(1)(g)
District workers' representatives [industry safety and health representatives in coal mines] have function of investigating complaints from workers about safety and health <i>Note: Investigation Process Manual para 1.2.3.4 'The great majority of reported events will warrant investigation that is generally accomplished 'in house'.'</i>	118(1)(e)	115(1)(e)
Inspectors have function of investigating serious accidents and high potential incidents and other matters at mines that affect the successful management of risk to persons; and investigating complaints about matters relating to safety or health resulting from operations.	128(h) & (i)	125(h) & (i)
Chief Inspector's power to issue directives	160	157
Directives which may be issued	Part 9, Div 3	Part 9, Div 3
Immediately after serious accident/HPI/disease, senior site executive to notify inspector and district workers representative	198	195
Inspector to investigate death at a mine <i>Note: Investigation Process Manual para 1.2.3.3 'Professional judgements may need to be made with respect to other accidents, HPIs or serious bodily injuries ...'</i>	199	196
If there is a serious accident or HPI, senior site executive must carry out investigation	201	198
If s.198/201 report is about a matter prescribed in regulations, it is to be forwarded to inspectorate	201(1)(c)	198(1)(c)

²⁹⁹ Coal Mining Safety and Health Act 1999

³⁰⁰ Mining and Quarrying Safety and Health Act 1999

Minister may establish a Board of Inquiry for serious accidents or HPIs	202	199
An ad-hoc review committee is to be established to provide Chief Inspector with opinion on suitability of recommended response to fatal/serious accidents or HPIs of 'especial significance'	Compliance Policy (Appendix 2)	
Prosecution for an offence is by way of summary proceeding before Industrial Magistrate and is to be made on complaint of the Chief Executive	255	234
Recommendation to prosecute may be made by inspector, district workers' representative [industry safety and health representative in coal mines] or site senior executive	256	235
Proceeding to start within 1 year of offence, or within 6 months of it coming to complainant's knowledge (and within 3 years of commission)	257	236

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