
OBSERVATIONS ON MINE SAFETY MANAGEMENT FROM REVIEW OF MAJOR OHS PROSECUTIONS AND INVESTIGATIONS

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ABSTRACT

The NSW Department of Primary Industries (NSW DPI) Investigation Unit was established in 1999 as a result of the Gretley Inquiry and 1997 Mine Safety Review. The role of the Unit includes the conduct of major investigations into fatal accidents and other serious safety-related incidents.

Since its inception, the Unit has conducted or assisted more than 30 such investigations. This places the Unit in a unique position of being able to draw together common elements from the findings of the investigations, into some general observations about the NSW mining industry's OHS performance.

Observations are based on real life situations in mining, and are made at a time when, through a convergence of factors, the existing accident prevention framework has been tested to breaking point.

The major organisational failures identified as causations of the serious accidents and occurrences that the Investigation Units has investigated are:

- System of work
- Contractor management
- Risk management
- Supervision
- Training.

Prosecution is a small but important part of the NSW DPI's overall enforcement strategy. It is considered in all instances where significant breaches causing or likely to cause death occur. Since the introduction of the enforcement policy in 1999 there have been 38 successful prosecutions resulting in conviction.

As a result of reviewing several case studies of major investigations and analysis of the prosecutions that NSW DPI has undertaken, conclusions are drawn for the NSW mining industry to ponder – to best examine, in their own particular circumstances, the ways in which to target the identified deficiencies to establish a more robust safety management system.

INTRODUCTION

The report includes an outline of the objectives for the review and methodology used. A review of the principles of relevant OHS legislation is included before the analysis and findings are discussed. The conclusion includes limitations of the review and suggestions for further research by the mining industry.

NSW DEPARTMENT OF PRIMARY INDUSTRIES AND INVESTIGATIONS

The NSW Department of Primary Industries was established to give rural and regional NSW a stronger voice in government and to better support primary industries in NSW.

The Mine and Forest Safety Performance Branch, as part of the Biosecurity, Compliance and Mine Safety Division, has responsibilities for safety improvement strategies, including the management of standards of investigations and prosecutions, to improve the safety performance of the mining industry.

The Investigation Unit of the Branch investigates major accidents, deaths, serious incidents and certain 'prescribed matters'. The Unit can investigate any mine accident or incident in any part of the mining industry within NSW. The Unit prepares an investigation report that may result in legal proceedings and further action by the Director-General for breaches of legislation.

OBJECTIVES OF THIS REPORT

Part A

- Review and analysis of 22 mining incident events and their decisions (caselaw) relating to prosecutions undertaken by the NSW DPI¹ for breaches of legislation
- Develop trend data.

Part B

- Review six case studies (investigations) to determine current organisational failure modes.

Part C

- Produce a report
- Lessons learned.

PART A: ANALYSIS OF MINING PROSECUTIONS RELATING TO CAUSATIONS AS DEFINED BY OHS LEGISLATION IN NSW

METHOD

A review and analysis of decisions (case reports) of the Industrial Relations Commission of New South Wales (NSWIRC) relating to the mining industry.

The review encompassed the following elements:

- Desktop review and analysis of the decisions available to the general public from *Lawlink new south wales* (<http://www.lawlink.nsw.gov.au/>) online Caselaw service providing published judgements and decisions of NSW courts,
- Development of trend data,
- Production of a review report.

¹ The *Gretley* Mine disaster and the prosecution undertaken by the *NSW WorkCover Authority* are included as it is regarded as a significant event in the history of prosecutions in NSW and the mining industry.

The documented decisions of the Industrial Court of New South Wales (NSWIRC) and its predecessors² since 1995 were examined.

The 53 decisions examined as part of this review were documented from 30 August 1995 to the most recent decision of 4 April 2007. The information from the NSWIRC decisions were reviewed and reformatted using a tool developed from the general duty provisions of the occupational health and safety legislation.

After analysis of the decisions, information regarding causation of the event was collected in tabulated form to further identify issues or trends involved in the events.

NSW OHS LEGISLATION

The *Occupational Health and Safety Act 2000 (OHS Act 2000)*, and its predecessor; the *Occupational Health and Safety Act 1983 (the Act)* (repealed), is relevant to all NSW workplaces including mines. It describes the general requirements necessary to ensure a safe and healthy workplace, and is designed to reduce the number of injuries in the workplace by imposing responsibilities on individuals and corporations.

The general duty of care, risk management and consultation provisions are further embodied in associated mining OHS legislation.

Associated legislation

- Coal Mine Health and Safety Act 2002,
- Mine Health and Safety Act 2004 (not yet commenced),
- Mines Inspection Act 1901.

Occupational Health and Safety Act 1983 and 2000

The documented decisions reviewed related to prosecutions pursuant to the *Occupational Health and Safety Act 1983* and *Occupational Health and Safety Act 2000*. Extracts of the main provisions related to those prosecutions are shown in Appendix 1.

These provisions relate to the general duty of care that employers have to persons who work at mines, in particular, the health, safety and welfare of employees and non-employees at places of work. These are responsibilities of both individuals and corporations, including manufacturers and suppliers.

Other prosecutions identified were pursuant to sections 16(2), 17(1), 18(2)(a) and 19(a) of the 1983 Act.

Charges of event relating to prosecutions

The general provisions relating to health and safety of people at the workplace relate to failures of the employer or self-employed persons. To assist in analysing and reformatting the prosecution events the charge or causation tool, based on the *Occupational Health and Safety Act 1983* and *Occupational Health and Safety Act 2000*, shown in Table 1, was developed.

² The name of the Commission has changed over time. Up to 1992, it was known as the Industrial Commission. From 1992 to 1996, there was a separate Industrial Court and Industrial Relations Commission. Since September 1996, the Commission has been known as the Industrial Relations Commission of New South Wales and may sit either as the Commission or as the Industrial Court of New South Wales.

The elements of the offence and/or charges are therefore shown in the database (refer Appendix 2) against each decision. These elements are drawn from reported failings and keyword searches of the decisions and judgements.

Table 1: Analysis tool for coding of causation and charges

Act		Code	Description
1983	2000		
s15(1)	s8(1)	Ensure health, safety and welfare	Employers general duty to ensure the health, safety and welfare of their employees
s15(2)(a)	s8(1)(e)	Systems of work	Employer to provide systems of work that are safe and without risks to health
s15(2)(b)	s8(1)(b)	Plant and substances	Make arrangements for ensuring safety and absence of risks to health in connection with the use, handling, storage or transport of plant and substances
s15(2)(c)	s8(1)(d)	Inform, train, instruct, supervise	Provide information, instruction, training and supervision as may be necessary to ensure the health and safety at work of employees
s15(2)(d)	s8(1)(a)	Safe place of work	Any place of work under the employers control to be maintained in a condition that is safe and without risks to health. Provide or maintain means of access to, and egress from it that are safe and without any such risks
s15(2)(e)	s8(1)(c)	Work environment	Provide or maintain a working environment for employees that is safe and without risk to health and adequate as regards to facilities for welfare
s15(2)(f)	s10(2)	Plant and substances information	Adequate information available in connection with the use of any plant or substance at the workplace including use for which plant is designed for safe use, and any research or results of tests in connection with a substance and any conditions necessary to ensure safe use and without risks to health when properly used
s16(1)	s8(2)	Non-employee exposed to risks	Employer must ensure that persons not employed by the employer are not exposed to risks to their health and safety arising from employer's undertaking whilst at the place of work
s16(2)	s9	Self-employed and non-employee exposed to risks	Self-employed person must ensure that persons not employed by that person are not exposed to risks to their health and safety arising from person's undertaking whilst at the place of work
s17(1)(a)	s10	Safe premise and access/egress	Persons in control of non-domestic premises used as place of work shall ensure that the premise, and the means of access or egress, are safe and without risks to health
s17(1)(b)	s10	Safe plant or substance	Persons in control of plant or substance shall ensure that the plant, or substance is safe and without risks to health
s18(2)(a)	s11	Safe plant and substances	Designers, manufacturers and suppliers to ensure health and safety as regards to plant and substances for use at work. Applies only if plant or substance is designed, manufactured or supplied in course of trade, business or undertaking
s19(a)	s20(1)	Employee care	Every employee shall take care for the health and safety of persons who may be affected by their acts or omissions at work
s50(1)	s26(1)	Offence by corporation	Where a corporation contravenes Act or regulations, each director, and each person concerned in management of corporation shall be deemed to contravene the same provision.

The charges or causations are further subdivided into the related occupational sub-systems and issues that are circumstances directly related to the charges and appear in the documented decisions and judgements. The occupational sub-systems relate to the particulars of the charges as documented in the decisions.

Particular issues in regard to causation and circumstance for the event are also listed. These “issues” are based on a holistic-method (Reason) which focuses on identifying the local factors and failures of the organisation, rather than intentional or unintentional acts of human error.

RESULTS

Of the events relating to the decisions underground coal mines were the dominant sector of the mining industry with 13 incidents (one at an abandoned underground coal mine), opencut coal mine 1, underground metalliferous mines 4, extractives (quarries) 3, and underground opals responsible for 1 incident.

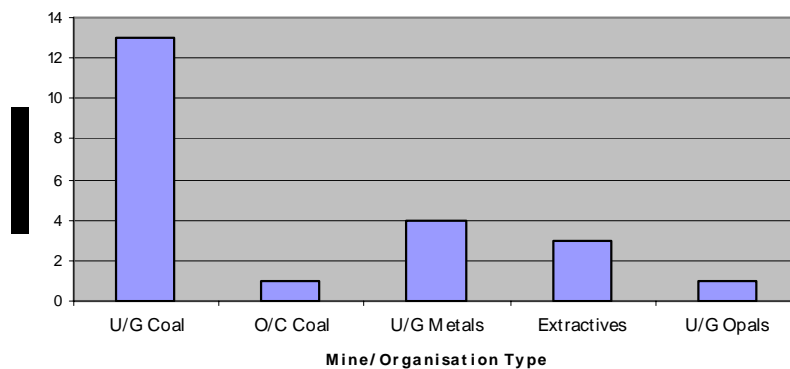


Figure 1: Number of events related to proceedings by mine-type

Of the 53 decisions examined, 28 were judgements, or related to judgements and the remainder being appeals or submissions of the prosecutor or defendant(s).

Similar to the ratio of events, the underground coal sector was dominant in prosecutions with charges against 15 companies, 1 opencut, 5 underground metals, 2 extractives, 1 underground opal mine operator, 4 manufacturers/suppliers and 5 contracting companies.

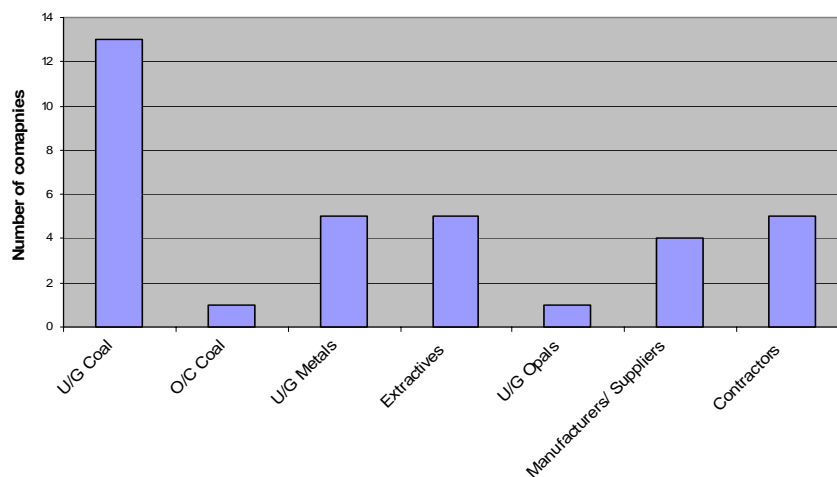


Figure 2: Number of prosecutions against sector companies

The vast majority of prosecutions (about 82 percent) have been undertaken under the employers' general duty to employees (pursuant to sections 15(1) and 16(1) of the 1983 Act, and sections 8(1) and 8(2) of the 2000 Act). Further prosecutions relate to the safety and risk of premise, plant and substance (14 percent), and individuals acts or omissions by virtue of section 50(1983 Act) and section 26 (2000 Act) (14 percent).

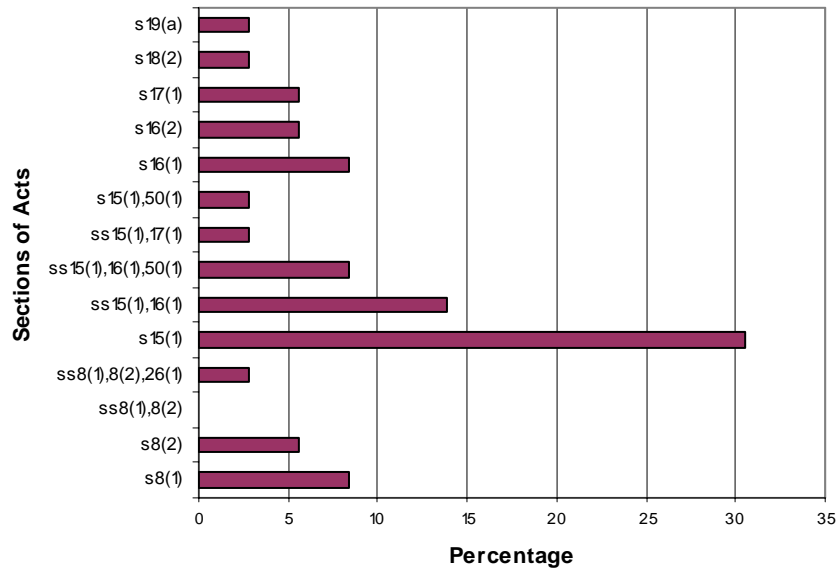


Figure 3: Percentage of prosecution types in cases reported³

Turning to the types of matters prosecuted, 73 percent of prosecutions involved a fatality. About 20 percent involved serious bodily injuries and 7 percent dangerous occurrences.

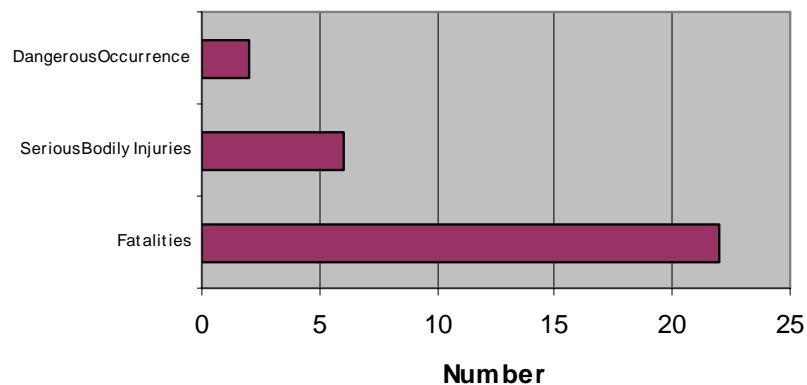


Figure 4: Number of outcomes related to prosecutions

The tabulated form (refer Appendix 2) of the case reports defined particular issues relating to the prosecution and the relevant charges. These are the established failures as reported in the NSWIRC decisions.

³ Table 1 specifies the code as applied to the provisions of the OHS Act 1983. Related percentages of such provisions are shown in figure 2.

The data from the tabulated form revealed that Contractors (19.7%) were the dominate issue. This was followed by components of risk management, that is, Control risk (16.4%) and Assess risk (14.8%). However, the initial component of risk management, Identify risk (8.2%) shows a much lower percentage. Overall risk management accounted for 23% of issues. They were followed by Competent persons (9.8%) and Procedures/work methods (9.8%), with Information/instruction/communication (4.9%), Remote control machinery (4.9%) and Maintenance of control (4.9%). Lower percentages were recorded for - Unsafe machinery (3.3%), Emergency plan (3.3%), Supervision (3.3%), Investigate safety matters (1.6%), Visitor control (1.6%), and Shift work (1.6%). A graphical depiction of these findings is shown at Figure 5.

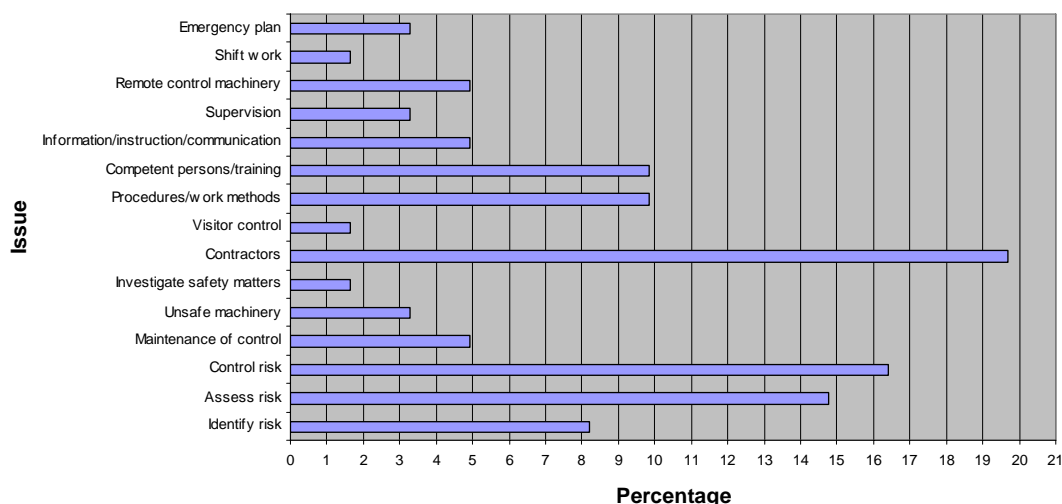


Figure 5: Percentage of issue-types related to all prosecutions

PART B: REVIEW OF INVESTIGATION CASE STUDIES

Since 1999 the Investigation Unit has secured 38 convictions for breaches of OHS legislation and is currently involved in a total of 17 matters ranging from continuing investigation through to pending prosecutions.

To determine if the findings of the review of prosecutions (Part A) are indicative of current causations determined during investigation of incidents, the following six investigation case studies will be reviewed. It should be noted that the case studies are of past and present investigations and that the findings in this report are cumulative of what investigators have, and are observing. In some cases the final cause(s) may have yet to be determined. The Department produces reports on investigations, available at: <http://www.dpi.nsw.gov.au/minerals/safety/mine-safety-results/accident-investigations>.

Case No.	Mine type	Incident	Outcome
1	Underground coal mine	Failure of mechanical components	Serious bodily injuries
2	Underground coal mine	Crushed between roof and mine machinery	Serious bodily injuries
3	Coal preparation plant	Electric shock	Injury and trauma
4	Underground coal mine	Struck by high pressure fluid	Fatality
5	Opencut coal mine	Collision of machinery	Serious injury
6	Underground metalliferous mine	Crushed between machinery and sidewall	Serious bodily injury

The investigation case studies are included at Appendix 3. The following organisational failure modes have been observed by investigators as major contributing causations associated with these case studies and are tabulated in Figure 6.

Failure mode	Case Number					
	1	2	3	4	5	6
System of work	x	x	x	x	x	x
Contractor management			x	x	x	x
Risk management	x	x	x	x		x
Supervision	x	x	x	x		x
Training	x	x	x	x	x	x

Figure 6: Major organisational failure modes from investigation case studies

Note: the *System of work* failure mode includes documented safety procedures and work methods.

These organisational failures from the six case studies are about the so called “disconnect” of safety management. Disconnect occurs when what is planned to be done (documented OHS management system) and the actual practices in the workplace differ.

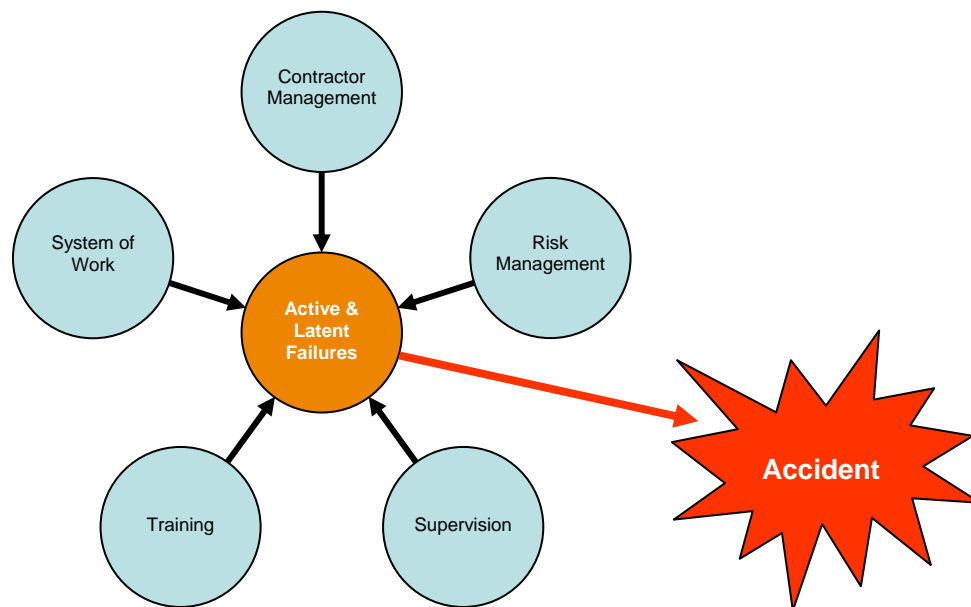


Figure 7: Major organisational failure identified during investigation

These five organisational failures have been found to be the most common amongst major causations of the Unit’s investigations of incidents. The *disconnect* shows up as:

- Failure to follow the documented work method,
- Failure in training practices,
- Failure in supervision,
- Failure in risk management,
- Failure in contractor management.

These failures are often all failing at once. They don't just fail on the day of the incident; evidence shows that they are continuously in a failed state. We will now take a macro look at the main failures. Training is identified as a major organisational failure, but is implicit in each of the following failures and thus will not be dealt with separately.

ORGANISATIONAL FAILURES

Risk management

In regard to risk management, and particularly risk assessment, the collective observations of the Investigation Unit are:

Quantity rather than quality

Each investigation has discovered large quantities of risk assessments that are conducted for the same activity. The evidence shows different team members but no change to the risk assessment regardless of environment or other change. There are multiple examples of use of adapting another risk assessment, even from another source, for that particular job and just changing header information.

All energy sources not identified

On review of risk assessments it has been found that potential energies, other energy sources and energy releases are not being identified.

Inappropriate risk controls

Many risk assessments have inappropriate controls to protect people when human error can lead to damaging outcomes. The hierarchy of controls is not being adapted. An example of this and the most common found, is where a risk control points to, or references, another safe work procedure (SWP), all of which are demonstrated to be not followed.

Failure to source information

Over and over again it is found that readily available information identifying risk and appropriate controls is not resourced or researched prior to, or as part of conducting the risk assessment. Information can be safety alerts, operation and maintenance manuals, industry guidelines and handbooks to name a few.

"Power of One" risk assessments

Many risk assessments are conducted without a work group, have no review, and are usually tick and flick varieties. These risk assessments, presented as job safety analysis or, in some cases, as a safe work procedure, are conducted by a lone individual without input from experts or people involved in the task to be undertaken. They are presented to the work group as a completed risk assessment, to be reviewed at the toolbox talk immediately prior to the task being undertaken. There is generally no consultation undertaken in regard to the risk assessment.

Little or no review of risk assessments

In most cases known standards⁴ for review of adequacy of conducted risk assessments are not being utilised. Knowledge about common risk assessment failures are not being sourced or used by those facilitating the risk assessment.

Systems of work

The observations regarding systems of work are as follows:

Documented systems not followed in the workplace

Evidence shows that there is a *disconnect* between the OHS management system and the workplace. It has been observed that the way of doing a job on a particular shift, day or crew can vary or be completely different than that specified by the safe work procedure or job instruction. In many cases safe work procedures are implemented without monitoring of their usage.

Fit-for-purpose plant and equipment

Plant and equipment is often found to be incorrect for the job undertaken. In some cases plant and equipment specified in safe work procedures are not always available and substitutes are being used. When substitution occurs risk assessments should, at least, be revisited. This is not happening.

In other cases plant or equipment was never intended to be used in the manner that may have lead to the incident. Here if risk assessment was conducted the potential risk of using that plant or equipment may have been identified.

Safe work procedures used as risk controls

As discussed in the risk management section, there is a reliance on other safe work procedures and documents (administrative controls) as the main risk control mechanism. In many investigations it is observed that there is scant regard for the hierarchy of controls. This is particularly evident with man-machine interfaces. Hard barriers that do not rely on the memory of the operator or workforce are not being considered before secondary administrative controls that have been written for generic application, such as isolation procedures.

Poor monitoring, review and auditing of OHS management systems

There is a lot of talk but no action in regard to monitoring and review. Evidence shows that there is poor monitoring and review of safety management systems and procedures. Or if it is done, there is little or no analysis of results of this monitoring by management.

There are examples of internal auditing occurring but no third party auditing. There have been cases where third party audits have been conducted but recommendations given little attention or not actioned at all.

⁴ Publications such as the Department's *MDG 1014 Guide to Reviewing a Risk Assessment of Mine Equipment and Operations* and Australian Standard *AS 4360:2004 Risk Management* are available as guidance for the monitoring and review of risk management.

Fatigue management

The effects of fatigue are not being identified. Variable standards are encountered at a whole range of operations. From investigation it has been observed that the overriding concern of management and contractors has been about optimising production rather than safety. There is no monitoring of long-term effects associated with fatigue-related issues such as work environment, travel arrangement such as fly-in/fly-out, roster arrangements and the length of shifts.

Contractor Management

Scope of work

The scope of work to be conducted by the contractor is often not specified by the principle, or when it is it is a verbal scope only. This informal approach to the engagement of contractors does not allow the contractor to prepare or submit a safe work method statement⁵.

Supervision

The supervisory role of the principle and that of the contractor are not always well defined. Often one party believes that a particular level of supervision is the responsibility of the other thus leaving a void resulting in inadequate supervision.

Failure to monitor

In many cases where contractors are associated, there has been a failure by the mine to adequately enforce, maintain and audit standards of contracts or the contractor's safety management plan. Evidence has shown that the principle has only focused on visible safe conditions such as vests, helmets and safety glasses, ignoring or giving little attention to the less visible OHS system issues.

Fatigue and hours of work

It has been the experience of investigators that a mine may have one standard for their employees in regard to the hours that they work and fatigue management, and no enforced standard, or a standard that is something less, for contractors working at the same mine.

Supervision

The following observations relating to supervision were noted:

Many supervisors are not competent to monitor tasks being undertaken. In some cases the supervisor has no experience or knowledge of the tasks undertaken or is given the supervisory role even though that particular task may require expert knowledge.

There has been a failure of supervisors to enforce rules and safe work procedures. In some cases the rules and safe work procedures not enforced are common throughout the mining industry and generally known by most mineworkers.

⁵ Assessment of risk and preparation of a written safe work method statement is a duty of contractors required by the *Coal Mine Health and Safety Act 2002* and *Mine Health and Safety Act 2004* (yet to commence).

There is a failure of supervisors to identify foreseeable risk. This includes 'risky' behaviour, such as riding on machines and entering 'no-go' zones.

Supervisors are not identifying when change management is required. There is little recognition of the indicators of work environment or other conditions changing. Supervisors do not identify with the need to stop a job and reassessment of potential risk.

PART C: LESSONS LEARNED

SUMMARY OF RESULTS

Part A: Review of caselaw and prosecutions

The organisational issues related to prosecutions are:

- Risk management 23%,
- Contractors and contractor management 19.7%,
- Systems of work (procedures/work methods) 9.8%, and
- Training (competent person) 9.8%.

Part B: Review of investigation case studies

- OHS management systems are appearing to be of greater quality.
- But there is a "disconnect" between the system and what is done by supervisors and employees.
- Risk management systems are being plagued by time-consuming procedures that inadvertently create token-compliance.
- Contractors are strongly represented in incidents. Contractor management has been found wanting.

CONCLUSION

The observations on mine safety management have implications for the mining industry in NSW. The review provides an indication of the major organisational failures relating to the investigation of incidents that, in many cases, lead to charges and to prosecutions in the Industrial Court of New South Wales (NSWIRC). The major organisational failures identified as causations of the serious accidents and occurrences that the Investigation Units has investigated are:

- System of work,
- Contractor management,
- Risk management,
- Supervision, and
- Training.

Prosecution is a small but important part of the NSW DPI's overall enforcement strategy⁶. It is considered in all instances where significant breaches causing or likely to cause death occur. Since the introduction of the enforcement policy in 1999

⁶ Prosecution Principles, *The Enforcement of Health and Safety Standards in Mines*, January 1999, p19, Rev 1.0, Department of Mineral Resources NSW.

there have been 38 successful prosecutions resulting in conviction. Of the matters prosecuted 73 percent related to death.

The Industrial Court of NSW has played a major part in the process of examining, constructing and adjudicating all aspects of the OHS offences, particularly the determination of whether an offence has in fact been committed, and the level of punishment that applies. The OHS offences are absolute or strict liability offences, breaches of the Occupational Health and Safety Act are serious criminal offences. In *R v Wiltshire and Rattray Haynes Industries Pty Ltd*⁷ the County Court of Victoria, Dee J, accepted that the “*Act is intended to be strict and tough*” (Johnstone 2002). Walton J⁸, in the NSW Industrial Relations Commission, suggested that the purpose of criminal punishment under the OHS Act included retribution and “reform”. The “principal and particular purpose” was the protection of workers from breaches of the Act and to compel employer attention to OHS.

The vast majority of prosecutions reviewed (about 82 percent) have been undertaken under the employer’s general duty to employees. Of concern for the mining industry and the regulator are the issues of contractors (about 20 percent) and risk management (23 percent) that is in these prosecutions and the OHS management systems failures in the investigation case study review.

It should be noted that the caselaw review was conducted based on the information published and readily available from the Industrial Court of New South Wales only.

From the collective experience of the Investigation Unit there is one outstanding issue; that is, that the actual practices in the workplace bear little relationship to the documented OHS management systems. This is termed “disconnect”. This disconnect repeatedly occurs in the OHS management system elements of risk management and contractor management.

During the past seven years or so OHS legislation and mining-specific OHS legislation has compelled operations to prepare mine safety management plans so that the operator of the mine has duly established documented OHS management systems. It should be noted that in some cases the resultant mine safety management plans are very good systems, based on best practice.

The applicability of these observations on mine safety management should be used as a general guide as to the factors that are contributing to incidents in the NSW mining industry and should focus the mining industry on a systematic approach to OHS management.

As a result of reviewing several case studies of major investigations and analysis of the prosecutions that the department has undertaken, conclusions are drawn for the NSW mining industry to ponder – to best examine, in their own particular circumstances, the ways in which to target the identified deficiencies to establish a more robust safety management system.

⁷ Unreported, County Court of Victoria, Criminal Jurisdiction, (Dee J), 29 November 1990.

⁸ *WorkCover Authority of NSW (Inspector Ankucic) v McDonald’s Australia Ltd & Anor* (1999) 95 IR 383 at 427.

REFERENCES

Johnstone R, "*Safety, Courts and Crime*". August 2002. Working Paper 6. National Research Centre for OHS Regulation. Australian National University, Canberra, Australia.

The Enforcement of Health and Safety Standards in Mines. January 1999. NSW Department of Mineral Resources, St Leonards, Australia.



APPENDIX 1

Occupational Health and Safety Act 1983 (repealed)

15 Employers to ensure health, safety and welfare of their employees

15(1) Every employer shall ensure the health, safety and welfare at work of all the employer's employees.

16 Employers and self-employed persons to ensure health and safety of persons other than employees at places of work

16(1) Every employer shall ensure that persons not in the employer's employment are not exposed to risks to their health or safety arising from the conduct of the employer's undertaking while they are at the employer's place of work.

50 Offences by corporations

50(1) Where a corporation contravenes, whether by act or omission, any provision of this Act or the regulations, each director of the corporation, and each person concerned in the management of the corporation, shall be deemed to have contravened the same provision unless he or she satisfies the court that:

- (a) (Repealed)
- (b) he or she was not in a position to influence the conduct of the corporation in relation to its contravention of the provision, or
- (c) he or she, being in such a position, used all due diligence to prevent the contravention by the corporation.

Occupational Health and Safety Act 2000

8 Duties of employers

(1) Employees

An employer must ensure the health, safety and welfare at work of all the employees of the employer.

That duty extends (without limitation) to the following:

- (a) ensuring that any premises controlled by the employer where the employees work (and the means of access to or exit from the premises) are safe and without risks to health,
- (b) ensuring that any plant or substance provided for use by the employees at work is safe and without risks to health when properly used,
- (c) ensuring that systems of work and the working environment of the employees are safe and without risks to health,
- (d) providing such information, instruction, training and supervision as may be necessary to ensure the employees' health and safety at work,
- (e) providing adequate facilities for the welfare of the employees at work.

(2) Others at workplace

An employer must ensure that people (other than the employees of the employer) are not exposed to risks to their health or safety arising from the conduct of the employer's undertaking while they are at the employer's place of work.

26 Offences by corporations—liability of directors and managers

- (1) If a corporation contravenes, whether by act or omission, any provision of this Act or the regulations, each director of the corporation, and each person concerned in the management of the corporation, is taken to have contravened the same provision unless the director or person satisfies the court that:
 - (a) he or she was not in a position to influence the conduct of the corporation in relation to its contravention of the provision, or
 - (b) he or she, being in such a position, used all due diligence to prevent the contravention by the corporation.

APPENDIX 2: Prosecutions Database

No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
1	5 May 1993 Portland Quarry	Quarry Extractives	Fatal fall of machine (dozer) from highwall	30 Aug 1995	Department of Mineral Resources of NSW v Blue Circle Southern Cement Limited	1995/167	S15(1) OHS 1983 Guilty Penalty \$85,000	Systems of work	<ul style="list-style-type: none"> provide and maintain safe plant 	RM (controls) ROPS seatbelt
2	21 Jan 1996 Coal Cliff Colliery	U/G Coal (Abandon)	Serious bodily injury: burns to public	16 Aug 1999	Department of Mineral Resources of NSW (Chief Inspector Bruce Robert McKensy) v Kembla Coal and Coke Pty Limited.	1999/353	S16(1) OHS 1983 Guilty plea Fined \$50,000	Non-employee exposed to risks	<ul style="list-style-type: none"> system for preventing gas escape access by non-employees 	RM (identify risk) adit seal and barriers maintenance of controls
3	23 April 1996 Berrima Colliery	U/G Coal	Fatal injuries from fall of roof	12 Jun 2001	Department of Mineral Resources (Chief Inspector McKensy) v Berrima Coal Pty Ltd & Anor	2001/130	S15(1) & S15(2)(c) OHS 1983 Guilty plea Fined \$91,000	<ul style="list-style-type: none"> Exposed employee to risk Inadequate supervision 	<ul style="list-style-type: none"> supervision safe place of work 	Unsupported roof
4	14 Nov 1996 Gretley Colliery	U/G Coal	Fatal (4) inrush of water Prosecutions filed	2002	WorkCover Authority of New South Wales (Inspector McMartin) v Newcastle Wallsend Coal Company Pty Ltd and ors (2002) 116 IR 283	2002/??	S15(1), S16(1) & S50(1) OHS 1983	<ul style="list-style-type: none"> Systems of work Non-employee exposed to risks Offence by corporation 	<ul style="list-style-type: none"> persons exposed to risks planning 	RM (identify & assess risk) Inrush of water and/or gases investigate safety matters raised
			Submissions rejected Refer	14 Jun 2002	McMartin v the Newcastle Wallsend Coal Company Pty Ltd and other matters	2002/1024	Defendant submissions on technical arguments	Prosecutor WorkCover	Defendant's submissions re: proceedings struck out or stayed rejected	Prosecutor to serve form of orders Defendant's notice of motion rejected
			Refer 2002/1024	10 Jul 2003	Inspector Stephen McMartin v Oakbridge Pty Limited; Inspector Stephen McMartin v Richard Porteous; Phillip Pritchard; Michael Alston; Mark Robinson; Jonathan Romcke; Michael Coffey; Christopher Nicholls; Terence Shacklady	2003/214	S15(1), S16(1) & S50(1) OHS 1983	Application by defendants dismissed	N/A	N/A

APPENDIX 2: Prosecutions Database

No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
4	14 Nov 1996 Gretley Colliery	U/G Coal	Summonses amended	21 Jul 2003	Stephen Finlay McMartin v Newcastle Wallsend Coal Company Pty Limited; Oakbridge Pty Limited; Richard Porteous; Phillip Pritchard; Michael Alston; Mark Robinson; Jonathan Romcke; Michael Coffey; Christopher Nicholls and Terence Shacklady	2003/219	S15(1), S16(1) & S50(1) OHS 1983	Prosecutor amend 33 summonses	N/A	N/A
			Witness statements generally inadmissible	10 Sept 2003	Stephen McMartin v Newcastle Wallsend Coal Company Pty Ltd; Oakbridge Pty Limited; Richard Porteous; Phillip Pritchard; Michael Alston; Mark Robinson; Jonathan Romcke; Michael Coffey; Christopher Nicholls; Terence Shacklady	2003/292	S15(1), S16(1) & S50(1) OHS 1983 Re: S137 Evidence Act 1995	Prosecutor & admissibility of expert witness statements	N/A	N/A
			Issue to be determined	3 Nov 2003	Stephen Finlay McMartin v Newcastle Wallsend Coal Company Pty Limited and ors	2003/392 & 2003/393	S15(1), S16(1) & S50(1) OHS 1983	Prosecutor: admissibility of expert witness statement	N/A	N/A
			Hearing continues	16 Dec 2003	Stephen Finlay McMartin v Newcastle Wallsend Coal Company Pty Limited & others	2003/470	S15(1), S16(1) & S50(1) OHS 1983	Prosecutor: call expert witnesses	N/A	N/A
			Offences proven	9 Aug 2004	Stephen Finlay McMartin v Newcastle Wallsend Coal Company Pty Limited & others	2004/202	S15(1), S16(1) & S50(1) OHS 1983	Systems of work	planning, research & assessment	Night shift

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No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
4	14 Nov 1996 Gretley Colliery	U/G Coal	Penalty and costs	11 Mar 2005	Stephen Finlay McMartin v Newcastle Wallsend Coal Company Pty Limited & others	2005/31	S15(1), S16(1) & S50(1) OHSA 1983 Penalty \$1.46M Individuals: \$102,000	Systems of work	Planning, research & assessment	Night shift
			Order for penalties stayed	2 May 2005	Porteous & Others v Inspector McMartin	2005/122	Appeal by parties of judgements Staunton J & Wright J.	N/A	N/A	N/A
			Appeal upheld in relation to two matters and dismissed in relation to all other matters	5 Dec 2006	Newcastle Wallsend Coal Company Pty Limited & Ors v Inspector McMartin	2006/339	Appeal by parties of Staunton J judgements to full bench	N/A	N/A	N/A
5	20 Jan 1997 Dartbrook Colliery	U/G Coal	Fatal crushed by roof support	7 Nov 2003	Rodney Morrison v Tecrete Industries Pty Ltd	2003/371	S15(1) OHSA 1983 Convicted Fined \$122,500	Inform, train, supervise	<ul style="list-style-type: none"> ▪ procedure ▪ supervision ▪ training 	contractor
				19 Nov 2003	Rodney Morrison v Anglo Coal (Dartbrook Management Pty Ltd)	2003/397	S16(1) OHSA 1983 Convicted Fined \$139,750	Non-employee exposed to risks	<ul style="list-style-type: none"> ▪ procedures ▪ training ▪ instruction 	contractors
6	27 Nov 1997 United Colliery	U/G Coal	Fatality	29 Nov 2003	Rodney Morrison v United Collieries Rodney Morrison v United Mining Services	Unknown	Convicted Fined \$135,000	Decision not documented		

APPENDIX 2: Prosecutions Database

No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
7	17 Jul 1998 Awaba Colliery	U/G Coal	Fatal fall of roof Charge dismissed Charge not established	21 Nov 2003	Morrison v Powercoal Pty Ltd	2003/342	S15(1) & S50(1) OHSA 1983	<ul style="list-style-type: none"> ▪ Systems of work ▪ Offence by corporation 	<ul style="list-style-type: none"> ▪ information notification of danger 	RM(assess risk) communication
			Guilty plea Convicted	10 Dec 2003	Rodney Morrison v Gregory Alan Gardiner	2003/440	S19(a) OHSA 1983 Judgement Fined \$1,275	Employee care	<ul style="list-style-type: none"> ▪ acts or omissions 	supervision
			Appeal upheld	18 Nov 2004	Morrison v Powercoal Pty Ltd & Anor	2004/297	Appeal by prosecutor Powercoal fined \$200,000		<ul style="list-style-type: none"> ▪ 	
8	1 March 1999 Elura Mine	U/G Metals	Fatal: struck by rocks	18 Nov 2005	Morrison v Zinifex Australia Limited (formerly Pasmenco Australia Limited)	2005/340	S15(1) OHSA 1983 Guilty of charges Fined \$115,000	<ul style="list-style-type: none"> ▪ Employee exposed to risk 	<ul style="list-style-type: none"> ▪ safe place of work ▪ procedures 	RM (identify risk)
9	6 May 1999 Wye Colliery	U/G Coal	Prosecution appealed Matters stayed permanently	23 Jul 2004	Rodney Morrison v Bradley Dean Murray & Ors	2004/174	S15(1) & S50(1) OHSA 1983 Appeal	N/A	N/A	N/A
			No proceedings against Powercoal Proceed against individuals.	22 June 2005	Morrison v Murray	2005/142	S196 IRAct S5AE Criminal Appeal Act	Whether prosecutions commenced with requisite written consent	N/A	N/A
			Dangerous occurrence: injury	25 May 2006	Rodney Morrison v Powercoal Pty Ltd	2006/157	S15(1) OHSA 1983 Guilty of offence Fined \$160,000	<ul style="list-style-type: none"> ▪ Safe plant ▪ Employees exposed to risk 	<ul style="list-style-type: none"> ▪ procedures ▪ training ▪ information ▪ instruction 	maintenance

APPENDIX 2: Prosecutions Database

No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
10	1 Jul 1999 Cooranbong Colliery	U/G Coal	Fatal crushed by machine (Joy CM)	18 Nov 2002	Rodney Morrison v Powercoal Pty Limited	2002/298	S15(1) OHSA 1983 Guilty Penalty \$65,000 (NB increased refer 2003/416)	Systems of work	<ul style="list-style-type: none"> ▪ exposed to risks ▪ information ▪ procedure ▪ supervision ▪ training ▪ competency 	RM remote control contractors
			Leave granted Appeal by prosecutor upheld	28 Nov 2003	Rodney Morrison v Powercoal Pty Ltd	2003/416 re: 2002/298	Appeal against sentencing Fined \$155,000	N/A	N/A	N/A
11	20 Jul 1999 United Colliery	U/G Coal	Refer 2002/298	19 Mar 2004	Rodney Morrison v Waratah Engineering Pty Limited	2004/38 re: 2002/298	S15(1) & S16(1) OHSA 1983 Penalty \$64,800 (appealed 15/3/05)	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non-employee exposed to risks 	<ul style="list-style-type: none"> ▪ information ▪ procedure ▪ supervision ▪ training ▪ competency ▪ rib spall 	RM remote control contractors
			Appeal by prosecution upheld	15 Mar 2005	Rodney Morrison v Waratah Engineering Pty Limited	2005/63 (re: 2004/38)	Appeal Fine increased to \$112,000	Submission re: "No case to answer" <ul style="list-style-type: none"> ▪ Systems of work 		
			Serious bodily injuries from rib spall	26 Feb 2003	Rodney Morrison v United Collieries Pty Limited	2003/36	S15(1) OHSA 1983	Safe place of work Exposed employee to risk		
			Charges dismissed	16 Dec 2003	Morrison v United Collieries Pty Limited	2003/439 re: 2003/36	S15(1) OHSA 1983	Exposed employee to risk		

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No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
12	30 July 1999 Tahmoor Colliery	U/G Coal	Fatality – drowning Summons dismissed	3 Dec 2002	Rodney Morrison v Tahmoor Coal Pty Ltd. Prosecution under s 15(1) of the Occupational Health and Safety Act 1983	2002/327	S15(1) OHSA 1983	Exposed employee to risk	<ul style="list-style-type: none"> ▪ employee drowned ▪ supervision 	Unaccompanied work underground
			Summon dismissed Application for costs dismissed	4 Sept 2003	Rodney Morrison v Tahmoor Coal Pty Ltd	2003/280 re: 2002/327	Judgement re: issue of defendants costs	N/A	N/A	N/A
13	23 Aug 1999 Cumnock No.1 Colliery	U/G Coal	Fatal crushed by machine	4 Jun 2004	Inspector Morrison v Cumnock No.1 Colliery Pty Ltd	2004/151	S15(1) OHSA 1983 Guilty Fined \$123,500	<ul style="list-style-type: none"> ▪ Systems of work ▪ Foreseeable risk 	<ul style="list-style-type: none"> ▪ provide and maintain safe plant 	location of controls
		Manufacturer/ supplier	Appeal: costs of motion	12 Aug 2004	Morrison v Joy Manufacturing Co Pty Ltd	2004/224 re: 2004/107	Appeal against decision by prosecutor re: costs	N/A	N/A	N/A
14	24 Nov 1999 Northparkes Project (E26N Mine)	U/G Metals	Fatal (4) fall of rock: air blast	10 Apr 2003	Morrison v North Mining Limited	2003/84	S15(1) & S16(1) OHSA 1983 Guilty Penalty \$41,250 Guilty Penalty \$41,250	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non-employee exposed to risks 	<ul style="list-style-type: none"> ▪ safe place of work ▪ procedures 	RM (assess & control of risk)
15	14 Feb 2000 Cressfield Bentonite Mine	Quarry Extractives	Fatal burns	23 May 2003	Morrison v Normandy Industrial Minerals Ltd	2003/165	S15(1) OHSA 1983	Inform, train, supervise	<ul style="list-style-type: none"> ▪ procedure ▪ supervision ▪ training ▪ competency 	RM hot work permit welding qualifications
16	18 Feb 2000 New England Antimony Mine	U/G Metals	Fatal struck by rock	19 Jun 2003	Morrison v New England Antimony Mines NL	2003/194	S15(1) & S16(1) OHSA 1983 Fined \$140,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non-employee exposed to risks 	<ul style="list-style-type: none"> ▪ procedure ▪ training 	RM communications

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No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
17	28 March 2000 Claim 26313 Dead Bird, Coocoran Opal Fields	U/G Opals	Fall of roof Serious injuries	3 Aug 2004	Rodney Dale Morrison v Peter James Buchanan	2004/223	S16(2) OHSA 1983 Convicted of offence Fined \$4,500	Non employee exposed to risk	<ul style="list-style-type: none"> ▪ safe access/ egress 	RM (identify risk)
			Summons dismissed	16 Mar 2005	Rodney Dale Morrison v Eureka Opals Pty Limited	2005/80 (re: 2004/223)	S17(1)(a) OHSA 1983 (Company duties)	Safe premise and access/egress (non- employees) N/A	<ul style="list-style-type: none"> ▪ N/A 	U/G communication system emergency procedures N/A
			Appeal upheld Eureka Opals guilty of an offence	25 Nov 2005	Rodney Morrison v Eureka Opals Pty Limited	2005/437	Appeal by prosecutor			
18	13 Jun 2000 Emu Plains Quarry	Quarry Extractives	Serious accident Crush injuries	21 Feb 2003	Rodney Dale Morrison v GPR Engineering (Central Coast) Pty Limited	2003/56	S15(1) OHSA 1983 Convicted Penalty \$26,000	Inform, train, supervise	<ul style="list-style-type: none"> ▪ information ▪ instruction ▪ supervision ▪ training ▪ hours of work 	RM (assess risk)
			Refer 2003/56	18 Jul 2003	Morrison v ACR Maintenance Pty Limited	2003/222	S17(1) & S15(1) OHSA 1983	<ul style="list-style-type: none"> ▪ Safe premise and access/egress ▪ Safe place of work 	<ul style="list-style-type: none"> ▪ safe place of work ▪ procedure ▪ training 	induction in SWP
19	14 Jun 2001 CSA Mine	U/G Metals	Dangerous incident: inrush of fill	12 Apr 2005	Rodney Morrison v Cobar Management Pty Ltd	2005/124	S15(1) & S16(1) OHSA 1983 Guilty of offences Fined \$110,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non- employee exposed to risks 	<ul style="list-style-type: none"> ▪ safe place of work ▪ procedures ▪ training ▪ information ▪ instruction 	RM (assess risk) contractor

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No.	Date of Event/ Mine Name	Mine Type	Outcome	Date Re: Decision	Citation	NSWIRComm Year/ Number	Prosecution	Causation or Charge	Sub-system	Issues
20	31 Jan to 7 Feb 2003 Glennies Creek Colliery	U/G Coal	Dangerous occurrence	30 Jun 2006	Rodney Dale Morrison v Peter Keith Ross; Rodney Dale Morrison v Glennies Creek Coal Management Pty Ltd	2006/205	S26(1) - S8(1) & S8(2) OHSA 2000 Guilty of offences Fined \$16,000 S8(1) & S8(2) OHSA 2000 Guilty of offences Fined \$160,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non-employee exposed to risks 	<ul style="list-style-type: none"> ▪ procedures ▪ training ▪ information ▪ instruction 	RM (control risk) emergency procedures access permits contractor
				15 Dec 2006	Rodney Dale Morrison v JVUM Pty Ltd (formerly known as United Mining Pty Ltd) t/as United Mining Services	2006/407	S8(1) OHSA 2000 Guilty of charge Fined \$90,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Employee exposed to risk 		
21	20 Nov 2003 Kayuga Mine	U/G Coal	Fatality – crushed by fall of equipment	6 Feb 2007	Robert William Regan v Anglo Coal (Kayuga Management) Pty Ltd	2007/12	S8(2) OHSA 2000 Guilty of breach Fined \$125,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non-employed exposed to risk 	<ul style="list-style-type: none"> ▪ procedures and standards ▪ contractor management 	RM (assess risk) contractors
				6 Feb 2007	Robert William Regan v Muswellbrook Crane Services Pty Ltd	2007/13	S8(1) OHSA 2000 Guilty of breach Fined \$125,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Employee exposed to risk 		<ul style="list-style-type: none"> ▪ procedures ▪ information ▪ instruction ▪ training ▪ supervision
22	24 May 2004 Mount Thorley Warkworth	O/C Coal	Fatality crushed by equipment	4 Apr 2007	Rodney Dale Morrison v Marathon Tyres Pty Ltd	2007/77	S8(1) OHSA 2000 Guilty of offences Fined \$135,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Employee exposed to risk 	<ul style="list-style-type: none"> ▪ procedures ▪ training ▪ information ▪ instruction 	RM (identify, assess, controls) Remote control machinery
				4 Apr 2007	Rodney Dale Morrison v Rio Tinto (NSW) Pty Ltd	2007/78	S8(2) OHSA 2000 Guilty of offences Fined \$135,000	<ul style="list-style-type: none"> ▪ Systems of work ▪ Non-employee exposed to risks 		<ul style="list-style-type: none"> ▪ procedures ▪ training ▪ information ▪ instruction

Definitions:

- IR Act 1996 – Industrial Relations Act 1996
- OHSA 1983 – Occupational Health and Safety Act 1983
- OHSA 2000 – Occupational Health and Safety Act 2000
- Procedure – includes safe work procedures (SWP), safe work method statements (WMS & SWMS), job safety analysis (JSA)
- RM – risk management (includes hazard identification, risk assessment, risk control, job safety analysis etc).

CASE STUDY No.1



Mine Type: Underground coal

Incident description: Installation of longwall – shortening of AFC (armoured face conveyor) chain using shearer (36 tonne line pull)
Two chain assemblies placed around the tailgate ranging arm
Titan connector placed in side load
Titan connector failed

Outcome: Major head injuries to employee

CASE STUDY No.2



Mine Type: Underground coal

Incident description: Two persons riding on a continuous miner during cable recovery
Machine pivoted over canche⁹
Employee pushed into roof

Outcome: Severed spinal cord and paraplegia

⁹ A *Canche* is a step in the floor or roadway

CASE STUDY No.3



Mine Type: Coal preparation plant

Incident description: Contractors were planned to do maintenance in an high voltage (HV) switch room

It was planned to remove all of the power from the board

On the day the mine decided to leave power on and only service half of the board. Of the 15 cubicles, 7 were isolated and 8 were live.

An employee of the electrical contractor contacted live 11 kV bus bars

Outcome: 11kV electric shock. Burns to a thumb and finger.

CASE STUDY No.4



Mine Type: Underground coal mine

Incident description: Contractor obtaining solcenic oil sample from a longwall pump station
Struck in face with solcenic oil at 303 bar from high pressure manifold

Outcome: Fatality

CASE STUDY No.5



Mine Type: Opencut coal mine

Incident description: Contractors working in the bucket of an elevated work platform (EWP)
Safeguards to prevent movement not available or used
Inadvertently drove the basket into the loader bucket

Outcome: One contractor employee trapped – bruising to foot
One contractor employee injured – crush injury to index finger, severing the tip and breaking the bone, required surgical repair

CASE STUDY No.6



Mine Type: Underground metalliferous mine

Incident description: Contractors working in a drive using a Jumbo bolter
A fitter loosened a hydraulic fitting to a check valve allowing the boom arm to roll from the vertical
The operator was trapped and crushed between the 750kg feed rail/arm assembly and the side wall of the drive

Outcome: Serious internal and head injuries, paralysed from waist down, quadriplegic.