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Responsive OHS Regulation in the Mining Sector

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Introduction

A graduated and responsive enforcement strategy requires a variety of different inspection and enforcement tools, to suit the various levels of the enforcement pyramid. Some of these tools will be designed to encourage and reward compliance (various forms of education, assistance, advice and persuasion), others will be geared to reminding enterprises of their regulatory responsibilities and nudging them to comply with them (improvement and prohibition notices, on the spot fines), and still others will involve credible sanctions at the top of the pyramid (penalties against individuals, criminal sanctions and the threat of closure). Although the latter may rarely be used, their existence and the credible threat to invoke them in appropriate circumstances are fundamentally important to the effectiveness of the pyramidal approach as a whole.

This working paper examines the range of available inspection and enforcement tools, identify some significant gaps in those options and suggest how they might best be filled with a view to achieving a more efficient, effective and responsive regulatory toolkit. It is also argued that some existing tools could be more appropriately used or be more finely honed to achieve greater efficiencies and responsiveness. In particular, emphasis is placed upon a risk-based approach.

Although not all the tools referred to in this working paper would be applicable where a safety case has been accredited, nevertheless, the general principles of pyramidal enforcement apply equally under a safety case, as does the need for a range of different enforcement tools suited to application at different levels of the pyramid. Specifically, while tools such as self-audit, which are geared to the circumstances of small organisations, are unsuited to firms that are being regulated under a safety case, mainstream enforcement tools such as improvement, prohibition and other administrative notices, various restorative justice strategies, and sanctions at the tip of the enforcement pyramid, would be equally necessary under a safety case regime.

The Bottom of the Pyramid: Advice, Persuasion and Self-Audit

The "advice" role of mines inspectorates at the bottom of the pyramid may include the provision of information, education and technical assistance. For example, regulators may disseminate information via their website or by other means on the OHS hazards duty holders face and how to deal with them, as well as on their broader legal responsibilities. They may conduct seminars, provide face to face advice, and develop guidance material as to which of a range of control measures is most appropriate to particular circumstances. And they may also introduce specific codes of practice that have a formal legal status. Such approaches have already been developed by most inspectorates, and some have gone further to develop more innovative mechanisms, such as the New South Wales Safety Management Plans questionnaire. Even so, it is not uncommon for duty holders to call for the regulator to provide further practical information and advice and for this advice to be taken into account in further interactions with the regulator (WorkCover NSW 2006, 5).

There may be particular opportunities to assist small mines that seek practical "hands on" advice. These enterprises have a disproportionately high rate of fatalities, and include a disproportionate share of incompetents. They

have generally been found to face particular hurdles in achieving safety improvements: shortages of suitably qualified supervision, impacts from geographical isolation, inadequate communication, misguided attitudes towards safety matters, a

restrictive shortage of resources to support safety improvement and a lack of understanding of the negative commercial impact of poor safety performance. Also ignorance of legislative imperatives is often a common factor (Regan & Moss 2002, 6).

Particular mechanisms designed to meet the needs of small and medium sized enterprises have already been developed, such as a successful New South Wales campaign designed specifically for the opal sector (Regan & Moss 2002, 5).

Formalising the advice given (for example through a Mine Record Entry) may also be an important way of emphasising that that advice, if not taken seriously, may lead to further action. However, there may be some reluctance on the part of inspectorates to giving such advice for fear it may be relied upon by the employer in a subsequent prosecution. This is particularly the case in New South Wales at the time of writing, where the potential for prosecution is perceived as a very real one. A more rational approach to prosecution may serve to minimise these concerns in the longer term.

Advice and information can and should also be provided to worker health and safety representatives/check inspectors and/or safety committees, thereby empowering them to act more effectively as surrogate regulators, particularly between inspectoral visits. Unfortunately, most inspectorates do not have sufficient dialogue with worker representatives and this is a matter of considerable concern.

More broadly, there may be virtue at the bottom of the pyramid in emphasising risk assessment and a systemic approach as a crucial part of an enterprise's OHS responsibilities — particularly given the increasing focus of mine safety legislation on risk management, and upon management systems and hazard management plans. Under this approach, an inspector, in addition to identifying specific hazards and breaches of individual legislative requirements, stresses the broader importance of risk assessment and the need for the enterprise to *manage* OHS and the work environment. Some mines inspectorates have developed significant initiatives to address these issues over recent years (for example in New South Wales the various DPI audit tools and the Queensland Department of Natural Resources and Mines approach to reviewing OHS management systems — NRM 2005a), while others seemingly remain locked into a narrower approach (Ritter 2004, Appendix 4).

Most valuable at the base of the enforcement pyramid may be those approaches which actively encourage duty holders to regulate themselves, and which give them a positive incentive to do so. Such approaches have particular importance as regards small mines, given the limited capacity of the mines inspectorates, and their inability to inspect such mines on a regular basis. Indeed, the small number of inspectors compared to the relatively substantial number of such enterprises (some 75% of the 1259 "employing businesses" in the Australian mining industry employ between 5 and 20 people — Australian Bureau of Statistics 2002, 1) seriously limits the application of many conventional regulatory strategies.

Two instruments with considerable potential to overcome this resource deficit are self-inspection and self-audit. These are less comprehensive and ambitious in scope than OHS management systems, insofar as they seek regulatory compliance, as opposed to continuous improvement, and generally apply to a more limited range of issues than management systems. However, they are far more suited to the scale and lack of sophistication of most small mines and, for this reason, are likely to have much greater practical impact in improving their OHS performance.

Queensland mine safety legislation requires operators of a mine "to audit and review the effectiveness and implementation of the safety and health management system

to ensure the risk to persons from operations is at an acceptable level" (MQHSA s 38(1)(e); CMHSA s 41(1)(f) and Guidance Note QGN09). Significantly, one of the priorities of the state Inspectorate in 2005 was to ensure that operators are aware of their duty to audit and review the safety and health management systems developed under the Acts by senior site executives (NRM 2005a, 9). New South Wales has also developed a sophisticated audit checklist, which is available on its website for self-assessment on a voluntary basis (Healey 2006). This checklist is also used when mine safety officers visit individual mine sites, when it will be used to help shape the action plan that is sent to mines following the safety officer's visit.

The key to encouraging the effective use of self-assessment tools, however, is the provision of appropriate incentives, and these must take the form of both carrots and sticks. Just how an appropriate *combination* of carrots and sticks might be developed is illustrated by the contrasting experiences of Minnesota's environmental regulation of auto-body and repair shops, and of underground storage tanks. In the case of the former, regulators wrote to 4,400 auto-body and repair shops notifying them of the introduction of an environmental self-audit program and urging them to use an enclosed self-audit check-list but did not threaten to inspect the facilities. The response rate was a modest 4.6%. In the case of the latter, a contrasting approach was tried. Letters were sent to the owners of these tanks notifying them of the audit program but also threatening inspection for those who did not participate in the program. The letter began:

As part of the Minnesota Pollution Control Agency (MPCA) Underground Storage Tank (UST) program, I will be inspecting the USTs at one or more of your UST facilities during the next six months ... The MPCA is giving you advance notice of our intent to inspect one or more of your UST facilities to give you the opportunity, if necessary, to bring your USTs into compliance.

As an *alternative* to facility inspections, the [agency] has implemented a new self-audit program which enables owners of facilities ... to self-evaluate their facilities to determine their state of compliance. If it is determined through the self-audit process that your facility is not in compliance with MPCA rules, you have 90 days ... to bring your facility into compliance. Violations disclosed and corrected as a result of the self-audit will not be subject to fines or other penalties.

A far higher response rate was achieved under this approach, whereby small enterprises are given a clear understanding that the choice is "not between compliance and non-compliance but between a low-cost, low-stress, collaborative route to compliance on the one hand and fines, liability, and public notoriety on the other" (National Academy of Public Administration 1997, 1270). The relatively poor response of the auto-body and repair shops can be attributed to the lack of a credible threat of inspection and enforcement.

The underground storage tank approach may be an effective model to follow in terms of reaching small mines that have gone relatively unregulated in the past. It also provides a pertinent example of the importance of establishing the correct balance between enforcement and assistance under a pyramidal approach:

Without maintaining a credible threat of enforcement [the regulator] lacks the leverage to get small businesses to invest in self-monitoring, let alone compliance. Without establishing an attitude of assistance and forgiveness [the regulator] will be unable to win the trust of small business owners, and those owners will be unwilling to accept the technical assistance they need to identify and correct their problems. A strong education and outreach program has successfully linked those levers ... [T]o make the system even more credible, [the regulator] must begin conducting spot checks of firms submitting audit and self inspection reports to determine if companies are doing a sufficiently good job on their self-inspections and corrective action and to demonstrate the risk of false

reporting. Of course, the agency also needs to make regular inspections of facilities that have not participated in the self-inspection program and to ensure that its entire regulatory program is credible (National Academy of Public Administration 1997, 134).

Under this approach, the regulator becomes the "overseer of the company's own efforts to regulate" (Hutter 2001, 305). The regulator, by gleaning as much information as possible from the regulated firm, at as little cost (in terms of time and resources) as possible, positions itself to adjust its enforcement response to the behaviour of the regulatee. For example, under self-audits, it will choose to focus its attention on the (say) 20% who fail to respond to the audit, and to respondents whose answers suggest a cause for concern (not just the few who admit to being seriously out of compliance, but also those whose response suggests they may not have provided genuine answers).

To the extent that regulatees prove responsive to co-operative, voluntary approaches at the bottom of the pyramid, then empirical evidence (as well as theory) confirms that these should be preferred to coercion. For example, a Government Accountability Office (GAO) review of the United States Occupational Health and Safety Administration's co-operative programs concluded that they had improved OHS by enabling the regulator to play a "collaborative, rather than a policing, role with employers" (GAO 2004, 43). The report documented not only improved OHS but also better relationships between the regulator and regulatee, and improved productivity and better industrial relations in participating enterprises. Moreover:

When the Clinton administration promoted the cooperative compliance program, which combined cooperative incentives with the threat of traditional enforcement, OSHA found that employers self-identified a dramatically greater number of hazards than could have been cited top-down by the agency and they significantly lowered their injuries rates compared to prior years (Simon 2005).

This last point is a telling one. It is not voluntarism alone that provides the best solution but the offer of voluntarism and co-operation in conjunction with the threat of sanctions. While leaders may either not be in need of, or respond readily to advice and persuasion, and the incompetent will certainly benefit from this approach, reluctant compliers and the recalcitrant are unlikely to respond well to this approach in the absence of demonstrable willingness on the part of the regulator to escalate a tougher approach if voluntary action is not forthcoming.

The Middle Levels

Moving to the "middle levels" of the enforcement pyramid, there are a range of possible options, including a variety of administrative notices at the lower end and court orders geared to preventative action and/or restorative justice, at the upper end. The most important distinction between these two types of approach is the considerable flexibility, speed and convenience of administrative action, as contrasted with the protracted, expensive and time consuming nature of obtaining court orders. Accordingly, the former are to be preferred, not only because they are less interventionist and intrusive and are located lower in the pyramid, but also for reasons of expediency. The latter should be reserved for a much smaller number of cases where closer scrutiny and direction is required of those who have not responded positively to less formal measures.

Generally, the lower middle layers of the pyramid can appropriately be invoked to deal with those who have not achieved compliance voluntarily, but in circumstances where a presumption of compliant virtue may still be justified. For example, there is

evidence to suggest that many organisations behave with "bounded rationality", failing to pay attention to regulatory requirements not because they choose deliberately to breach them, but simply because they have not yet become sufficiently visible or urgent as to gain corporate attention. In this context, the international evidence suggests that a regulatory agency can achieve a considerable impact by a regular program of inspections reinforced by some degree of formal enforcement action sufficient to bring the problem forcibly to the employer's attention even if the latter is not substantial (Gray & Scholz 1991).

In the case of the mining industry, current legislation provides inspectors with at least some powers that could be used to forcibly gain the attention of duty holders. For example 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.

However, by far the most important administrative tools in the inspectorates' armory are improvement and prohibition notices (and in some jurisdictions Stop Work Notices). Prohibition notices require either that remedial measures are undertaken within a specified time or that unsafe activities cease. They are preventative in nature, and allow action to be taken swiftly without the necessity of going to court. Appeals are rare and infrequently successful. As such they offer a quick and simple mechanism capable of being used to deal with serious hazards immediately upon detection.

Such notices are particularly flexible in that they do not necessarily specify how an employer may come into compliance thereby leaving her or him free to choose the least cost method and avoid unnecessary expense. Importantly, they can be served on individuals (eg particular managers) as well as on the employer. Moreover prohibition notices (which apply in situations in which workers are exposed to immediate risks to their OHS) have the potential not only to enable the prompt removal of an immediate threat, but may be used to promote systematic change, such as "prohibiting an activity until a risk management process has been implemented and the work process reorganised to remove the hazardous dimensions of the activity" (Johnstone 2004, 170). In New South Wales in 2004/5 there were 129 improvement notices and 28 Stop Work Notices (similar to prohibition notices under the then applicable mines legislation).

On-the-spot fines (sometimes referred to as infringement notices) also have considerable potential. The research of Gray and Scholz (1993), suggests the very considerable value, even of a slight slap on the wrist such as on-the-spot fines provide, in focusing attention on OHS issues (for anecdotal evidence in support of the same point, see Hopkins 1995, 90). This is confirmed by research in New South Wales conducted by Gunningham, Sinclair and Burritt (1998), which found them to be a very effective means of "getting the safety message across". Managers, and in particular safety managers, reported that they are treated as a significant "blot on the record" and for this reason act as a spur to the prevention of injuries. Moreover, in large companies they are treated as a performance indicator and a basis for judging the safety performance of site/line managers and that they have an impact beyond those directly fined by virtue of a "ripple effect" — word gets around as to the sorts of circumstances in which they have been issued to peers. Similarly, the broader international research on administrative penalties generally (Brown 1992) also

suggests that such penalties can provide credible deterrence at a very modest administrative and legal cost (Industry Commission 1995, 118).

Unfortunately, such administrative sanctions are not available in any of the mining states at the time of writing. According to Wran and McClelland (2005, 160, Appendix 19 (a)): "the ability to impose 'on-the-spot' fines is not utilised in the NSW mining industry". Although penalty notices are provided for by section 108 of the OHS Act 2000 (NSW), mining inspectors are not empowered to use them. In Western Australia, the Mines Safety Improvement Group (2005) noted that:

[o]n the spot fines are currently missing from the repertoire in Western Australia. These are necessary as an efficient enforcement mechanism for prohibition and improvement notices. They may also be appropriate for one-off safety violations that have occurred which do not seem to warrant the expenditure of resources involved in a prosecution.

Queensland has no penalty notices in either of the Acts or regulations.

Nor is it currently possible to invoke the sorts of variable administrative penalties whereby a regulator, at their discretion, would impose a penalty that they deem appropriate and proportionate, but at levels significantly higher than under fixed penalties such as "on the spot" fines. Such an option - consistent with the concept of OSHA citations in the USA but also recently proposed in the UK by the Macrory Report (2006, 45) - would enable the regulator to tailor the penalty to the specific circumstances of the offence and to the means of the offender. Of course this would necessarily be subject to safeguards — the regulator would have to adhere to published guidelines and criteria, guilt would need to be demonstrated to the civil standard, and the matter would be subject to appeal to an administrative tribunal. And variable administrative penalties would need to operate in parallel with, but also connected to, traditional criminal offences. This might best be achieved, as Macrory (2006, 46) argues, by giving the regulator an option, in line with its enforcement policy, to choose (in appropriate cases) the sanction of a variable administrative penalty rather than a criminal prosecution. As such, criminal sanctions and variable administrative penalties would be available as sanctions for the same regulatory non-compliance.

One further option that does provide for considerable inspectoral leverage however, particularly in New South Wales, is that of Stop Work order, such as can be issued under Part 8 of the Coal Mine Health and Safety Act and the Mines Health and Safety Act respectively. Although infrequently used, the capacity to halt production — potentially causing the very substantial economic loss — could in itself provide a substantial incentive to improved OHS performance.

However, even if the mining jurisdictions introduced a broader range of administrative penalties, there would still be a serious gap in the enforcement pyramid between less interventionist strategies such as improvement and prohibition notices (and on the spot administrative penalties) in the lower half of the pyramid, and punitive sanctions against individuals and corporations (rarely invoked) at the very top. A graduated and responsive approach is seriously compromised when regulators must jump from relatively non-interventionist measures, to those that involve substantial penalties.

What are needed, in the upper middle levels of the pyramid, are more constructive strategies, including the capacity to apply the benefits of restorative justice, to those who to this point have failed to respond voluntarily, are demonstrably reluctant to do so, but might still respond favourably to action short of criminal sanctions. For example where the employer has a bad OHS injury and claims record, and where

there is a clear failure to follow widespread industry approaches to OHS management, there is a need for a much stronger form of intervention than advice or administrative notices. But it may still be more effective, in preventative terms, to "forgive" these serious lapses, provided the offender is willing to commit to constructive preventative action in the future, and can be held to this commitment, although it is arguably that the views of the victim (if harm resulted) should also be taken into account. Under this approach, regulatees who demonstrate a willingness and a capacity to self-regulate, should be treated less punitively than the recalcitrant. Thus responsiveness in this context is more about reacting to the attitude and level of cooperation of the regulatee, than with whether or to what extent they have breached the law.

Here, the concept of restorative justice may have particular value (Braithwaite 2002). As the OECD has suggested:

when organisations do fail to comply in the first instance, a compliance-oriented regulatory approach will attempt to *restore* compliance rather than reverting immediately to a purely punishment-oriented approach. [In the case of corporate law-breaking] the aim of restorative justice is to restore enterprises to a position where they have both the capacity and willingness to comply after they have committed a breach. It is therefore an important tool for regulators to use in responding to compliance failures (OECD 2000, 41).

This point has been increasingly recognised by sophisticated regulators. For example, the UK Health and Safety Commission now argues that restorative justice:

used in conjunction with other enforcement tools may provide a good framework to proportionately match the breach, and involve and meet the needs of victims ... RJ may well result in improvements in health and safety outcomes in businesses as well as educate the organisation and managers (quoted in Macrory 2006, 71; see also WorkCover NSW 2006).

The essence of restorative justice, as it applies in the context of occupational health and safety, is to give the offender a chance to proactively put things right. Rather than focusing on deterrence or retribution (which often inhibit investigations into the causes of accidents and have other adverse side effects) it seeks to invoke mechanisms that require the offender to put in place systems that will prevent a recurrence of similar behaviour in the future.

For example, an enterprise found to be in serious breach might be required to introduce a Safety Improvement Plan (modelled on the concept of an Environmental Improvement Plan (Gunningham and Sinclair 2002)). This is a public commitment by a company to enhance its safety performance, outlining areas of a company's operations to be improved and negotiated in conjunction with the regulator and other stakeholders (especially workers) impacted upon by the previous transgression. It would contain clear timelines for completion of improvements and details about ongoing monitoring of the plan. Improvements could include new works or equipment, or changes in systems and operating practices. Monitoring, assessments and audits would be undertaken to plan and support these improvements and would be transparent to all stakeholders. Trade unions or workers representatives in particular, would be directly involved both in the development of the plan and in its monitoring and implementation.

Another potentially important tool capable of achieving constructive outcomes is an enforceable undertaking. This is a legally binding commitment made by the duty holder to undertake particular actions or develop particular programs geared, not just to remedy past misconduct, but also to prevent future breach. Not only are they less

adversarial than prosecution, they also enable regulators to tailor the response to the particular circumstances and management capacities of the regulated enterprise. They can, for example, focus on defects in management systems and structures and how these might be overcome (for instance, a requirement to implement systematic occupational health and safety management, with implementation subjected to third party audit). Significantly, Braithwaite's research on mine safety found that safety leaders in the industry were companies that not only thoroughly involved everyone concerned after a serious accident, in order to reach consensual agreement on what must be done to prevent recurrence, but also did this after "near accidents" (Braithwaite 1985, 67).

There is evidence that enforceable undertakings are quicker and more cost effective than court proceedings, yet still capable of being enforced and transparent (Australian Law Reform Commission 2002, Ch 16). According to Parker's research (2003, 8–9) in the context of trade practices, they provide regulators with:

more innovative, expansive and preventive remedies than are available through court orders. They can both attract management attention, and then can capitalise on that by requiring the company to appoint appropriate staff and implement a compliance program to meet particular standards and by requiring ongoing attention to audits and reports. This will, however, only be done if enforceable undertakings require independent review or audit of compliance with the undertakings.

The capacity to impose such undertakings has now been included in Tasmanian and Queensland "mainstream" legislation and more recently in the Victorian *Occupational Health and Safety Act 2004* s137 but not, to date, in New South Wales, although a 2006 review of the OHS Act 2000 recommended its inclusion as part of the compliance regime (WorkCover NSW 2006, 52). In a modified and limited form, this concept has been introduced under amendments made to the Western Australian *Mines Safety and Inspection Act 1994* (WA) (s 101C; see further Pt 9 Div 2). Courts are now able to make an order allowing an offender to pay a monetary penalty or enter into an undertaking with the State Mining Engineer to take action such as fixing up the problem, publicising their wrongdoing or engaging in some broader OHS initiative. In Queensland, enforceable undertakings can be issued as an alternative to court proceedings under the *Workplace Health and Safety Act 1995* but not under mine specific legislation. It is however a moot point whether such undertakings should only be contemplated as an alternative to prosecution (with the decision to prosecute in the alternative being the trigger) or whether such undertakings can and should be imposed even in the absence of that decision.

Macrory (2006, 68) suggests that it might be possible to combine both non-financial mechanisms, such as enforceable undertakings, with financial administrative elements of a sanction, in what he terms "Undertakings Plus". This would be invoked where, notwithstanding that "an undertaking offered by the business may be appropriate... the circumstances of the breach also require the payment of a financial penalty" (Macrory 2006, 68). For example, where non-compliance has demonstrably benefited the business financially, it might be stripped of this gain by imposition of a fixed or variable monetary penalty, but invited (not coerced) to contemplate engaging in a legally binding undertaking as to its future conduct and as to how it will go about achieving it, as an alternative to court action.

A variety of other flexible court orders also have value at a point in the pyramid short of punitive sanctions. For example, following the lead of many environmental statutes, OHS regulators might be empowered to seek a mandatory compliance audit — a systematic, documented and objective review of a mine's operations and compliance — to be undertaken by an independent third party auditor, but with the

audit being paid for by the regulated enterprise and the results made available to the regulator. Here “the process may be the punishment” since the cost of the audit may be substantially more than any likely fine. Such requirements can also be included as a condition of alternative court orders such as adverse publicity orders.

A variety of restorative orders (requiring the remedying of a situation deemed by the court to be unsafe) also have value at this point in the pyramid. For example, in New South Wales, the OHSA s 113 provides that after the offence is proved “[t]he court may order the offender to take such steps as are specified in the order, within the period so specified, to remedy any matter caused by the commission of the offence that appears to the court to be within the offender's power to remedy.”

In Western Australia the *Mines Safety and Inspection Amendment Act 2004* s101H (WA) has introduced provisions relating to community service orders, and restoration or remedial orders as part of its provisions relating to enforceable undertakings. These are similar to what are sometimes termed “Corporate Rehabilitation Orders”, whose aim is “is to rehabilitate the offender by ensuring tangible steps are taken that will address a company's poor practices and prevent future non-compliance” (Macrory 2006, 78). If used imaginatively, such orders could make a considerable contribution in terms of prevention as well as punishment, and might serve to focus attention on risk management and systemic OHS management (see generally, Parker 2002). Fisse and Braithwaite (1993) have gone further, arguing for the application of an accountability model whereby companies that have breached regulations be required to demonstrate how they have used internal controls to respond to a regulatory breach.

The Top of the Pyramid

To this stage, in the lower part of the pyramid, the strategy has emphasised carrots more than sticks, and even the sticks have been small ones, intended more as a “tap on the shoulder”, to prompt preventative and restorative action rather than to provide a punitive sanction. Nor has there been any concern with general deterrence. Improvement and prohibition notices, for example, create no incentive to comply with the law until the illegal behaviour has been detected and this is also true of enforceable undertakings and of restoration or remedial orders.

Notwithstanding the demonstrable value of the tools described above, there is strong evidence that they will not be sufficient across the board and that there will remain a minority for whom stronger action is necessary (Baldwin 2004, Braithwaite 2002, 63). As Gunningham & Johnstone (1999, 116) have argued:

it is absolutely essential to the credibility and thus to the success of the strategy that regulators are prepared to climb to the top of the pyramid where action at the lower end fails to achieve results... the penalties at the top of the pyramid must be sufficiently serious and effective that they do, indeed serve as an effective deterrent or to incapacitate the offender.

Such escalation up the enforcement pyramid will most likely be necessary when dealing with the recalcitrant, and with rational calculators, who believe that it is not in their self-interest (usually financially defined) to comply voluntarily, and are only likely to respond when the costs outweigh the benefits. The latter, as strategic “game players”, are only likely to change their behaviour where the severity and likelihood of potential punishment make it rational for them to do so. Only when they believe that

credible sanctions can and will be invoked at the top of the pyramid, will they be persuaded to comply at a lower level.

At the tip of the pyramid, the central strategy will be prosecution, both of key individuals and of the corporation itself (although amendment of licence conditions may also be possible in some circumstances). Prosecuting the corporation itself is the most common and easily pursued option. However, it is difficult to devise penalties sufficiently substantial as to have a deterrent effect, without making them so large that they will have crippling effects on the corporation and those who are dependent upon it (not least, employees). For example, a penalty that effectively results in the financial collapse of the corporation is rarely in the public interest. This is what the literature refers to as the "deterrence trap" (Coffee 1981).

Commentators have proposed a variety of mechanisms for overcoming this problem, including "the skillful use of responsive regulatory techniques that 'leverage' the deterrence impact of its enforcement ... strategies with moral judgments" (Parker 2006, 592). For example, this might be achieved by various mechanisms which use adverse publicity to shame corporations into compliance as described below.

In practice, in the Australian mining jurisdictions, it is not the deterrence trap but the failure of statutes to provide, or for courts to award, penalties commensurate with the seriousness of the offence, that is the most serious problem. The penalties imposed on corporations are usually modest with the result that "offenders can simply pay the fine and not remedy the hazard, review their OHS systems, or discipline the managers responsible for the offence — suggesting to offenders that offences are 'purchasable commodities'" (Hall et al 2004, 65). Partly for this reason, Macrory (2006, 74) recommends the introduction of Profit Orders as appropriate in circumstances where the current level of fines does not reflect the gains from non-compliance with regulatory requirements.

However, a failure to impose substantial financial penalties is not fatal to effective pyramidal enforcement, at least as regards reputation-sensitive organisations such as major mining companies, which are vulnerable to shaming and damage to their "social licence to operate" (Gunningham, Kagan & Thornton 2003). Being convicted of a criminal offence may generate adverse publicity and loss of corporate image, which may be far more important motivating factors than the level of financial penalty. Indeed Wright (1998), having surveyed the British literature on what motivates corporations, argues that one of the two main factors which lead firms to initiate OHS improvements is the fear of loss of corporate credibility (which is linked to the other main factor, the belief that it is morally correct to comply with OHS regulations). Wright (1998, 12) concludes that:

[t]he strongest motivator identified by research is the fear that the adverse publicity, loss of confidence and regulatory attention subsequent to a serious incident will cause serious curtailment of operations, imposition of additional costs, loss of corporate credibility and loss of business/interruption of operations.

Thus although fines, for example, may be viewed as a social "sanction" of the firm, their impact will be substantially stronger if they are coupled with strategies that capitalise on the reputation sensitivity of corporate management (Gunningham, Kagan & Thornton 2003, Ch 3). Here, publicity orders, such as are now available under the New South Wales (OHS Act 2000 NSW, s 115) and Western Australia *Mines Safety and Inspection Amendment Act 2004* s101H(2) may be particularly valuable in emphasising the social unacceptability of the conduct in question. However, much will depend upon how innovative the courts and tribunals are in invoking such orders, and in requiring broad dissemination, via adverts or inclusion in

annual reports, of information concerning corporate misconduct. So far there has been little use of such orders

Whether sanctions against the corporation, albeit involving adverse publicity and threatening reputation damage as well as financial penalties, are sufficient, however, is contentious. Trade unions, workers and victims' families often express considerable dissatisfaction with a status quo in which senior decision-makers in large corporations are almost never brought to trial, let alone convicted, and the corporation itself, at worst, pays a relatively modest financial penalty. Neither outcome, they feel, captures the moral culpability involved in the most serious cases, particularly those that have resulted in death. This leads them to argue that it is also necessary to prosecute responsible individuals, and in particular senior management.

This is also the conclusion reached, albeit for different reasons, by proponents of responsive regulation such as John Braithwaite (2002, 109–122). Braithwaite argues that the direct beneficiaries of corporate misconduct are not the only potential deterrence targets. He distinguishes between hard targets (such as corporations who cannot be deterred by modest maximum penalties or by regulators confronting a "deterrence trap") and vulnerable and soft targets. Vulnerable targets can be deterred by maximum penalties and soft targets can be deterred by shame, "by the mere exposure of the fact that they have failed to meet some responsibility they bear" (Braithwaite 2002, 110). Applied to OHS in the mining industry, this suggests the desirability of prosecuting senior management in circumstances where the required "guilty mind" can be established.

Finally, it can be argued that there is a role for "mega-penalties" at the very tip of the pyramid to reflect the moral seriousness of particular offences. An offence of industrial manslaughter, or under Part 2A of the OHSA 2000 (NSW) dealing with "reckless conduct causing death" are two means of achieving this result. Consistent with the theory of responsive regulation, the fact that such penalties exist, and can be invoked, means that much more is likely to be achieved by more co-operative strategies in the lower parts of the pyramid. As Braithwaite points out, the bigger the sticks at the disposal of the regulator, the more it is able to achieve results by speaking softly. When the consequence of firms being non-virtuous is escalation ultimately to corporate capital punishment, firms are given reason to cultivate virtue (Braithwaite 2004; but cf Haines & Hall 2004).

Conclusion

A diversity of tools is necessary for the effective enforcement of mine safety legislation. How these tools should be used, and in what sequence, should be guided by principles of responsive regulation in general and of pyramidal enforcement in particular. Even where a sequenced "tit for tat" strategy is not practicable, the pyramid can still be of value in indicating which arrow to select from the quiver.

Enforcement at the bottom of pyramid will be more successful if a substantial range of options is available and where necessary invoked, at higher levels. While different approaches will be suited to different sorts of organisations, the principles of pyramidal and responsive enforcement apply to all. In each case the regulator will form an opinion of both the behaviour and the cooperativeness of the regulatee and will tailor their enforcement response accordingly, invoking a mixture of advice, informal pressure and the threat of escalation to a higher point in the pyramid.

As indicated previously, inspectors would benefit from much clearer guidance on how, and in what circumstances, to use the various enforcement tools. Unfortunately, there appears to be no formal policy as to when such powers should be used (Wran and McClelland 2005, Appendix 4) and, regrettably, no structured effort to take advantage of the insights of pyramidal enforcement. One graphic way of encapsulating these insights is provided by the Macrory Report (Macrory 2006, 37), reproduced at table X below.

The inspectoral toolkit itself would benefit from a more sophisticated use of self-assessment tools coupled with appropriate incentives, the capacity to use a broader range of administrative sanctions including "on the spot" fines and variable administrative penalties, the application of a variety of restorative justice mechanisms in the upper middle levels, and a more nuanced approach to prosecution at the tip of the pyramid.

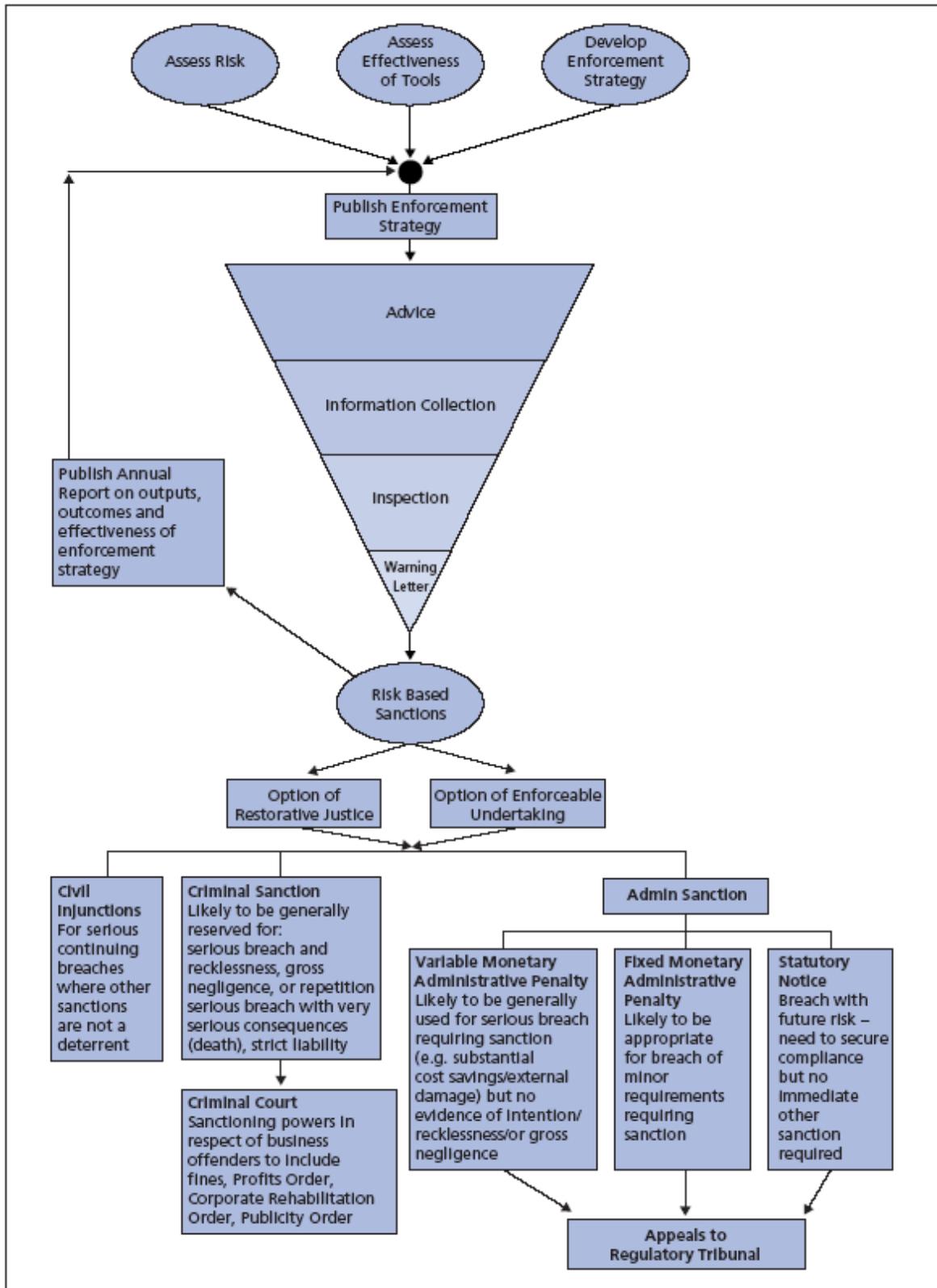


Figure 2 — An Effective Sanctioning System

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