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OVERCOMING THE DISCONNECT: INTERNAL REGULATION, OHS AND THE MINING INDUSTRY

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Abstract: For decades, regulatory theorists and policy analysts have studied how and why corporations comply (and in recent years, to go beyond compliance) with social regulation. The principal focus of their attention has been on the “external drivers” of corporate behavior, whether these be instrumental, normative or social. But even companies that are committed to achieving social goals have variable success in doing so. This suggests the need to also understand internal regulation: the instruments, mechanisms and strategies through which a firm which is committed to achieving given outcomes (whether prescribed by regulation or otherwise) seeks to do so. This is no small issue. There is increasing evidence that large complex organizations have been much less successful in this regard, than in achieving their primary, profit-related targets, for reasons related in large part to the difficulties of aligning individual manager and site goals with those of the corporation itself. In the language of contemporary social policy, there is often a “disconnect” between corporate commitment to social and/or regulatory goals, and facility level performance. In recent years many large corporations have sought to overcome this disconnect through “management based regulation”: introducing sophisticated internal planning and management practices designed to achieve these goals across their often diverse operations, but with what success? This article explores internal and management based regulation through a case study of one multinational corporation and its attempt to reduce work related injury and disease across multiple operations. It examines the disconnects between corporate goals and site level behavior, the corporation’s attempts to overcome them and why these largely failed. The findings have important implications for internal regulation generally and for management based initiatives in particular.

Overcoming the Disconnect: Internal Regulation, OHS and the Mining Industry

1. Introduction

For decades, regulatory theorists, policy analysts and others, have questioned how best to induce corporations to comply (and in recent years, to over-comply) with social regulation. The principal focus of their attention has been on various “external drivers” of corporate behavior, whether these be instrumental, normative or social. There is continuing debate as to whether, in what circumstances, and to what extent, general or specific deterrence influence corporate decision making; or whether compliance stems not so much from fear of legal sanctions as from a sense of social or legal obligation; and as to the importance of informal social sanctions and the “social license to operate”. And regulatory practitioners continue to grapple with the related issue of what instruments (or combination of instruments) are best capable of achieving compliance, and what roles might best be played by incentives, management-based approaches and informal mechanisms of social control (Gunningham and Grabosky 1998:Ch 2).

But irrespective of whether a corporation is motivated by regulatory, social license or normative pressures, or what public policy instruments it must respond to, it faces the challenge of ensuring that objectives and priorities established by senior management at Head Office, are successfully communicated to *and implemented by* its various operations. This is no simple matter. Corporations have considerable difficulty in ensuring that their various far flung operations behave as corporate HQ would wish them to, and in making commitments at the centre, work at the edges. Put differently, aligning corporate social goals with those of managers, supervisors and workers at individual sites is a substantial, and largely unresolved, organizational challenge and there is often a substantial “disconnect” between Head Office goals and facility level commitment and performance.

As regards profit maximization, this of course, is hardly new, and successful corporations have become relatively refined in their techniques for ensuring that their various operations “make their numbers”. But achieving their social goals has been much more problematic, for reasons which relate in substantial part, to the tensions between social and profit-making goals, to the opportunities for signals and incentives to be received and interpreted in different ways at different levels of the organization, and to the problems of overcoming bounded rationality¹. Indeed, the limited evidence available suggests that aligning corporate objectives with those of their (often distant) operations remains a major and unresolved challenge with regard to many issues of social regulation and corporate social responsibility. For example, it seems that multiple facility firms do worse when it comes to issues such as environmental protection than single facility firms², which is counter-intuitive given that the former benefit from considerable economies of scale, and suggests that overcoming the Head Office-facility disconnect may be a considerable challenge. This is also a reasonable conclusion to draw from Gray and Deily’s (1996) finding that single-plant firms are more likely to be in compliance, notwithstanding that they had “expected multi-plant firms to have a greater incentive to invest in a reputation for firm-wide compliance”. Similarly, it seems that foreign firms (in the United States at least) lag their local counterparts in preventing waste, a result attributed “to the difficulty that foreign firms face in managing complex and contingent improvement processes (like pollution prevention)” (King and Shaver 2001:1070).

This large gap between corporate intentions and behaviour at site level is in no way peculiar to the area of environmental regulation or specific to the United States. It is also evident in the case of occupational health and safety in Australia. For example, a government inquiry into a large explosion at an Exxon facility causing loss of life and extensive property damage, found serious failings at site level, notwithstanding relatively extensive efforts at corporate HQ to prevent such an occurrence (Hopkins 2000) as did a 2004 inquiry into fatalities at worksites in Western Australia (Ritter 2004), while only a few months later, the New South Wales *Mine Safety Review* identified as a central finding, the “disconnect” between the sorts of OHS systems and

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protections put in place by corporate head quarters, and what happened “at the coalface” (Wran & McClelland 2005).

Notwithstanding the seemingly widespread and serious nature of this disconnect, far less attention has been given to the instruments, mechanisms and strategies through which a firm which is committed to achieving given social outcomes (whether prescribed by regulation or otherwise) may best succeed in doing so – what we might term *internal regulation*³ - than has been given to the various external drivers of corporate social behavior.

Those limited studies that have been conducted on internal regulation (also referred to as “internal compliance”, “indigenous regulation”, “internal control”, and “regulating from the inside”) have focused very largely on the application by firms of various “management based” strategies. Those strategies rely on internal planning and management practices, such as management systems and standards and form the cornerstone of internal regulation in most large companies. While this recent literature⁴ makes a valuable contribution in exploring this approach it still leaves many important questions unresolved. For example, although it has done much to identify the particular instruments, mechanisms and strategies that constitute management based regulation and has provided some preliminary assessment of their effectiveness⁵ nevertheless, much work remains to be done in understanding how this form of internal regulation works in practice, in identifying the obstacles to its successful implementation and in determining whether, to what extent or in what circumstances it is capable of institutionalizing corporate social objectives across the firm.⁶ In short, there is much that is still not known about the capacities, strengths and limitations of internal regulation.

One intriguing finding is that companies in very similar situations (and using much the same management tools) sometimes react very differently to the same external stimuli (Gunningham, Kagan & Thornton 2003). This suggests the possibility that

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“management style” matters much more than management systems and that effective internal regulation may be about much more than the formal management based tools companies have at their disposal. It was that insight that was a substantial motivator for engaging in the present project.

In the remainder of this article, internal regulation will be examined through a case study of one company and the behavior of its managers, employees and contractors at a number of individual sites with regard to one area of social regulation. The case involves BHP Billiton (hereafter BHP), Australia’s largest company, and the study concerns the manifest “disconnect” between the ambitious occupational health and safety strategies, systems and standards established by Head Office and the actual behaviour of individual managers, employees and contractors at site level in its various mining operations in the Pilbara region of Western Australia. While the case is confined to one social issue in one jurisdiction, the lessons it provides are of much broader application, and have implications for the internal regulation initiatives of complex organizations in diverse areas of social regulation.

Nevertheless, there are limits to a case study approach and dangers in seeking to generalize from specific cases drawn from particular contexts. But at an early stage in the development of a field, such studies may provide substantial insights and address questions which quantitative studies are ill-equipped to answer⁷. In any event, at the present time there are no large N studies addressing the questions that are the central concerns of this paper. Accordingly, there is considerable virtue in conducting individual case studies. These can provide in-depth qualitative analysis of firm or facility-level behavior, of corporate and managerial motivations and of the connection between motivations and management-based strategies. There may be particular value in studying behavior at different facilities within the same company since this approach enables one to hold constant a number of variables (as where the company seeks to impose the same form of management based regulation on all its facilities) while enabling variation in others (such as differences in site level culture) to form the focus of study.

Before proceeding further, it is important to locate management based internal regulation within the broader field of management based strategy. Following Coglianese and Nash (2006:14, see Box 1 below) management based strategies (internal planning or other management practices aimed at achieving broader social objectives) can be classified in terms of: (i) government initiatives where management-based strategies are either mandated or encouraged; and (ii) non governmental approaches which are either mandated (as when a firm requires its various operations to adhere to this approach) or encouraged (as where individual operations within the firm are left some discretion as to how to achieve corporate goals). All these strategies have the considerable attractions of providing flexibility to enterprises to devise their own least-cost solutions to social challenges, and of being applicable to a broad range of circumstances and to heterogeneous enterprises. And all of them have been made possible by the development, over the last decade or so, of a range of management tools designed to assist firms to focus on systemic problems rather than individual deficiencies, and involving the assessment and control of risks and the creation of an in-built system of maintenance and review. While the focus of this article is on only one of those options (internal regulation, the top right quadrant in the diagram below) its findings have important implications for management based strategies more generally, which are explored in the concluding section.

Box 1. Types of Management Based Strategies

	Government User	Nongovernmental User
Management Required	<p><i>Management-based regulations</i></p> <p>(<u>external regulation</u>)</p> <p>Examples:</p>	<p><i>Management-based mandates</i></p> <p>(<u>internal regulation</u>)</p> <p>Examples:</p>

	<ul style="list-style-type: none"> • Risk Management planning required under Clean Air Act Section 112(r) • NSW/Qld Major Hazard Management Plans 	<ul style="list-style-type: none"> • Chevron requires all facilities to adhere to risk management requirements • American Chemistry Council’s Responsible Care Program • Ford Motor Company’s requirement that suppliers become certified to ISO 14001
Management Encouraged	<p style="text-align: center;"><i>Management-based incentives</i></p> <p style="text-align: right;">Examples:</p> <ul style="list-style-type: none"> • U.S. EPA’s National Environmental Performance Track • Victoria’s Accredited Licencing Scheme 	<p style="text-align: center;"><i>Management-based pressures</i></p> <p style="text-align: right;">Examples:</p> <ul style="list-style-type: none"> • International Organization for Standardization’s (ISO) 14001 Standard

Types of Management-Based Strategies (Coglianese and Nash 2006).

The article proceeds as follows. Part 2 describes the circumstances of the Australian mining industry before examining the OHS performance in the Pilbara of Australia’s largest company, BHP Billiton. Part 3 shows how the tensions BHP Billiton confronted between a commitment to achieve high standards of OHS on the one hand, and production imperatives, contractor related issues and an adversarial industrial relations agenda, on the other, served to substantially derail the OHS agenda at site level. Part 4 seeks to explain serious implementation failures through an analysis of the role and limitations of OHS safety management systems, incentives structures and its

ideological agenda, suggesting that a failure to take account of workplace culture served to undermine many of the company's safety initiatives. Part 5 concludes.

2. OHS, the Mining Industry and BHP Billiton

In Australia, the mining industry is of considerable economic importance, contributing some 9 % of total earnings and approximately 1/3 of total exports of goods and services. However, the industry also has exceptionally high levels of occupational injury and disease – over twice the national average. And while it has improved its safety performance considerably over recent years, mining is still an exceptionally dangerous occupation. In Western Australia for example, mining accounts for only 5% of the workforce but is responsible for about 25% of total workplace deaths (Ritter 2004).

The mining industry includes a number of large companies with multiple operations and facilities. It is these that have the greatest need for internal management based regulation and which are the focus of this article. Such companies are “faced with a pattern of low credibility and social opposition, which drives from a general perception that mining is a dirty business... The image of abandoned mines, tailings dumps, waste-rock piles, and abandoned communities has significant resonance with the general public” (The Mining Journal 1999:441). Fatalities and serious injuries contribute significantly to that negative image, and BHP has struggled to maintain its legitimacy and social acceptance.

The importance of maintaining their reputation and protecting their licence to operate is now widely recognized by major mining companies. The dividends of doing so include greater access to government and planning approvals, greater worker and community acceptance, less regulatory scrutiny and preferred access to prospective

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areas and projects (Yakoleva 2005). Accordingly, such enterprises are inclined to view regulation as merely a baseline, a minimum standard which they will seek to go beyond, to the extent that they believe this is necessary to reduce risk and achieve their broader OHS goals. For the most part, such companies now aspire to go “beyond compliance” and have their own, internally determined targets. As such their managers and agents are likely to be influenced to a much lesser extent by “external” drivers such as regulation and far more by the company’s own internal goals and aspirations.

BHP falls squarely within this group. It is a large player, highly visible and vulnerable to external pressure, with an international reputation to protect. Like many other major mining companies, it has come to regard occupational health and safety as a high priority, for which, in managerial jargon, there is now a compelling “business case”.⁸ Mining injuries can cause serious disruption of the production process⁹, escalate (already punitively high) workers compensation costs¹⁰, increase staff absences, as well as threaten the company’s “social license”¹¹. For all these reasons, BHP has set itself ambitious “beyond compliance” OHS targets.

At corporate level, perhaps what is most striking about BHP’s approach to OHS in its Western Australian mining operations (as indeed regarding its operations elsewhere) is the very great effort that it had devoted to this issue, particularly in terms of policies, systems, standards and procedures, employee involvement, communication, expert advice and auditing (Ritter 2004:63). Not only does BHP have a set of values and a set of corporate OHS goals, it has a Charter, a Health, Safety, Community and Environment (HSEC) Policy, Comprehensive Management Standards, Company wide HSEC guidelines and procedures, Business based HSEC management systems, and operational HSEC procedures. And at the core of this elaborate framework are 15 corporate OHS standards, and a very detailed and sophisticated OHS management system. The overall corporate goal in terms of OHS is stated to be ‘zero harm’ meaning managing risks so no injuries to employees, property damage, environmental impact or community harm occur while doing work” (Ritter 2004:62). This

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framework, and the OHS standards and system in particular, address in some detail a comprehensive range of OHS issues. In terms of the sort of performance indicators, mechanisms and processes one might expect from a corporation that was serious in its endeavours to improve OHS, the BHP approach has been rated highly (Ritter 2004:Appendix 4) and its version of management based regulation was without doubt a sophisticated one.

But in May 2004, in the Pilbara region of Western Australia, there were three deaths at sites owned and/or operated by BHP subsidiaries: BHP Billiton Iron Ore Pty Ltd (BHPBIO) and Boodarie Iron. Three deaths in the space of a month, in unrelated incidents, is a matter of major concern even in a high risk industry like mining. Perhaps unsurprisingly, it prompted a Ministerial Inquiry (to which the writer was OHS advisor¹²) whose ensuing report provides considerable insights regarding the difficulties of aligning corporate social goals with those of managers, supervisors and workers at individual sites, and regarding the limitations of internal and management based regulation.

That report suggested that the three deaths were symptomatic of wider failings and that BHP's sophisticated management system and its various other initiatives at Corporate level identified above, had manifestly not ensured adequate levels of OHS at particular work sites in the Pilbara. Indeed, when the Inquiry took evidence from a variety of workers and others in the Pilbara, it became apparent that there were serious matters of concern at site level that this elaborate corporate OHS apparatus had done little to address. Some of these matters will be examined in detail later in this article, but a flavour can be gleaned from the following examples, taken from the Inquiry Report:

- Allegations of minimal employee involvement in preparation of Job Safety Analyses (JSAs), with employees just being told to look at and sign these documents (Ritter 2004:148) and a perception amongst witnesses: "that management consider they lost too much production time if employees discuss and prepare JSAs together."¹³ There were also reports of amendments being

made to JSA procedures within the production area to exempt certain tasks from the requirement to do a JSA if a JSA takes too long to complete (Ritter 2004:148).

- Allegations that “although pre-start checks are required by safety policy, if an employee finds a fault and subsequently raises it as an issue they are called a ‘whinger’” (Ritter 2004:149) and a perception amongst witnesses “that management want employees to perform pre-start checks but in practice there is an inadequate amount of time given to do the checks, sending an inconsistent message to employees” (Ritter 2004:149).
- A 21 day shutdown initiative in which “somewhere along the line people got lost in the translation” from the initial, relatively rigorous, planning stage, to implementation. The Inquiry received “reliable information that the ideal of reaching the 21 day shutdown created tension between at least some of the engineers and shutdown personnel on-site”, (Ritter 2004:258) that some of those in the shutdown group did not fully comprehend the dangers involved, and that a Director of a major contractor told his employees not to speak to a particular member of the BHPBIO safety staff because if safety concerns were raised, they may slow things down (Ritter 2004:259).
- Problems with the local safety culture. According to the minutes of a 2003 workshop, participants suggested: accountability is not driven; shortcuts taken; strong element of not feeling things can be reported including incidents; not being able to raise issues or be able to be heard and the interpretation of Key Performance Indicators - “being challenged to do, but interpretation, do what it takes”; a can-do culture with a high tolerance for risks; and cultural factors involving contractors such as number of contractors, contractor turnover and treating contractors as second class citizens (Ritter 2004:271).

In trying to explain this gap between corporate intentions on the one hand, and on-site outcomes on the other, the Inquiry invoked the metaphor of a cascade. It suggested that:

the corporate visions, policies and standards of BHPBIO can be imagined to be a body of water which cascades down a waterfall and, for successful implementation, needs to carry people and information with them and reach and be ‘lapped up’ by BHPBIO sites further down the body of water. If the health and safety systems are not ‘lapped up’ by the sites, there is an element of ‘spillage’. The ‘spillage’ which occurs will have an impact upon the extent to which the body of visions, policies and standards is successfully implemented at site level. If there is a large amount of ‘spillage’ it will substantially undermine the effectiveness of the systems (Ritter 2004:97).

But while this may be a colorful way of describing what happened, it falls far short of an adequate explanation. Developing such an explanation, based on the evidence provided to the Ministerial Inquiry, is the concern of the following sections.

3. What Went Wrong: Tensions Between Competing Agendas

From the detailed evidence provided to the Inquiry by a variety of witnesses at the various BHP operations, it became apparent that, at site level at least, BHP's commitment to OHS was not unqualified, and that corporate claims that there is an "overriding commitment" to safety at all levels were not substantiated in practice. On the contrary, when OHS clashed with other implicit corporate priorities, beliefs, goals and ideologies, then it often came off second best. The following section examines how tensions between a commitment to achieve high standards of OHS on the one hand, and (i) production imperatives, (ii) contractor related issues, and (iii) the company's industrial relations agenda, on the other, served to substantially derail the OHS agenda at site level.

Tension between safety and production: The alleged tension between safety and production – or more crudely, between safety and profit - is at the heart of debates about the appropriate roles of law and regulation in OHS policy. Numerous academics, trade union officials and others have pointed to evidence demonstrating that, at least in the short term, there is frequently a conflict between maximising production and maximising safety, and that in these circumstances, the latter is usually sacrificed to the former¹⁴. For example, when a large group of Chief Executive Officers in the United States were asked some years ago what prevents their companies from doing a better job on health, safety and environmental issues,

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over 50 percent cited the pressure to achieve short-term profits as the main reason (Rappaport and Flaherty 1991). Because corporations are judged by markets, investors and others principally on short-term financial performance, they have difficulty justifying investments in OHS improvement with primarily long term pay offs.

However, many companies, particularly in reputation sensitive industries such as mining, would argue that the above is an outdated analysis, and that whatever might have been the case in past decades, today there are compelling reasons of enlightened self-interest (risks of disruption of the production process, escalating workers compensation costs, and threats to the company's "social license" described above), not only for taking a proactive approach to OHS, but also for giving it priority, even when to do so conflicts with production pressures.

Certainly various BHP corporate documents suggest that safety takes a high priority in all the Company's policies, with an "overriding commitment" to health, safety, environmental responsibility and sustainability listed first in the company's values defined by the BHP Billiton Charter. Various procedures and policies described earlier have been introduced in pursuit of the goal of "zero harm", and the responsibility of senior management for driving strategy under this approach is made clear by the BHP Billiton Guide to Business Conduct. Crucially, this provides that "managers are held accountable for BHP Billiton's policies and standards, *even if compliance costs the Company business in the short term*" (emphasis added) (BHP Billiton Iron Ore 2004:22).

However, notwithstanding the setting of ambitious corporate targets, a strategy based "on the development and maintenance of a safe workplace with good systems, leadership and workforce commitment" (BHP Billiton Iron Ore 2004:6) and the introduction of a series of demanding corporate OHS standards, there is considerable evidence that the corporate 'safety comes first' message has not permeated to site level in the Pilbara. For example, following a serious incident in 2001, the QEST Consulting Group was commissioned to undertake an engineering report under s 45 of

the *Mines Safety and Inspection Act*. This report noted that the BHP Boodaree Plant has had ‘severe difficulties in meeting its production specifications and operational parameters since construction leading to a reduction in management focus on safety within the operations. *This led to a production first culture throughout the operations*’ (emphasis added).

While there may have been a “renewed focus on safety” following that incident, any such focus was not apparent to the Ministerial Inquiry in 2004, and a variety of sources gave evidence to the contrary. Thus according to one long-term employee: “The behaviour of our senior staff has left few people in doubt that production at all costs is the real agenda here...” (Ritter 2004:189). There were numerous reports that reductions in staff numbers (in the interests of greater productivity) increased OHS risks, “as when a worker may have conflicting duties to both get on with their own work and supervise that of an apprentice” (Ritter 2004:140), and of some supervisors “push[ing] production ahead of safety, involving safety shortcuts. There are operational issues which affect this attitude, including production requirements and lack of staffing levels” (Ritter 2004:291).¹⁵ A safety survey conducted by BHPBIO in mid 2004 (following a series of presentations on ‘zero harm’ which in themselves may have skewed the results) also suggested cause for concern. In response to a question as to whether respondents believed “the business puts safety before production” it appears (based on the Inquiry’s mode of analysis) that “30% of the recipients believed that the business does not put safety before production. This is of a total of about 800 respondents. It is a significant figure, in the opinion of the Inquiry both in absolute terms and proportionally” (Ritter 2004:90).

Perhaps the most graphic illustration of the continuing nature of the problem was the series of large posters which were produced and put up at one operation, with the slogan, “Aim high, Move fast” and an exhortation to achieve a specified production outcome.. As the Inquiry pointed out; “it is noteworthy that nowhere on this poster is contained any message about safety, unless the small reference to Operating Excellence implicitly includes a subtle safety message” (Ritter 2004:92). Employees

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themselves also reported to the Inquiry that production came first, in a myriad of different ways. For example, “supervisors in various areas were pushing production, even where it was not at all times safe to do so” (Ritter 2004:291). Following the May 2004 fatalities, the use of the posters was discontinued.

Relationships with contractors: BHP made substantial use of contractors in its Pilbara operations, and some of the most dangerous operations were sub-contracted in preference to taking direct responsibility for them using its own workforce. Since contractors traditionally have an exceptionally high incidence of work related injury and disease, the relationship between BHP and its contractors could have considerable implications for the safety of the broader workforce engaged in the Pilbara.

At corporate level, considerable efforts were made to ensure high OHS standards amongst contractors. These included a requirement for contractors to demonstrate commitment to and compliance with the BHP HSEC Management Standards, the development of tender documentation incorporating various OHS requirements, including the submission of a safety management plan (SMP), which meets 14 occupational health and safety processes and objectives. Once a contractor has been engaged, a risk assessment or audit is undertaken to ensure that appropriate controls are in place prior to operations commencing, and a detailed SMP must be submitted shortly after operations begin. Each contract mine has an appointed BHPBIO Site Representative who is responsible for ensuring that the contractor complies with the contract conditions including managing contractor compliance with the SMP. As part of the SMP, the contractor is required to implement an effective inspection, audit and review process to determine compliance, assess relevance of the information contained in the SMP and promote continuous improvement. Various reporting requirements are also included, including any incident or potentially significant incident.

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However, once again the evidence given to the Inquiry suggested that there was a substantial disconnect between the requirements established at corporate level and actual practices at individual sites. For example, witnesses suggested that BHP did not allow sufficient time for contractors to do work safely and meet contractual conditions. Concern was expressed that key performance indicators are time based, and that this could create an economic disincentive to perform a job steadily and safely. Indeed, “some contractors commented that key performance safety indicators are seen as being a numbers and economic exercise rather than being used to assist in achieving positive safety behaviour and culture” (Ritter 2004:224). This led the Inquiry to conclude that exhortations to contractors to work safely are “hollow if the economic and supervisory relationship between [BHP] and contractors is counter productive to the effective resolution of OHS issues” (Ritter 2004:229).

Similarly, obstacles were put in the way of effective OHS reporting (especially incident reporting) by contractors, thereby seriously reducing available information concerning potential OHS hazards. The central problem was that contractors were not willing to disclose OHS issues to BHP safety management for fear that it would slow down the job and put them in breach of their contractual commitments. However there was also evidence that contractors were singled out for minor safety breaches, an attitude that “discourages the reporting of near miss accidents or injuries. Incidents are not being reported because of the reactions of these managerial staff” (Ritter 2004:224). Beyond this, there was considerable evidence provided to the Inquiry that the OHS performance of some contractors left much to be desired (Ritter 2004:176,190), notwithstanding BHP’s concern to ensure that “contractors have the same type of systems that mesh with our systems” (Goodyear cited in Ritter 2004:222-223).

Tension between safety and industrial relations: Almost all analyses of OHS best practice conclude that genuine worker participation is absolutely essential (Walters 2005), but such participation at site level was made very difficult, and perhaps impossible, by a simmering and long term battle between BHP and the relevant trade

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unions over the use of non-union labour. Approximately 80% of BHP's workforce in the Pilbara is engaged under individual contracts (workplace agreements) with the remaining 20% currently employed under union collective arrangements. The unions are strongly opposed to the introduction of workplace agreements and have campaigned against them. BHP in turn, is strongly opposed to the trade union awards and prefers to negotiate individual workplace agreements. And all this takes place against the backdrop of a long history of industrial conflict and antagonism between the company and the workforce in the Pilbara.

As a result, consultation and communication procedures for OHS were fraught with difficulty. It was alleged that BHP: failed to effectively communicate and consult with Award employees, or with their elected representatives on OHS; failed to involve appropriate people in accident investigation processes; failed to allow elected OHS representatives the opportunity to accompany the Employee Inspector on inspections; and that there was a lack of consultation on safety policy prior to its introduction (Ritter 2004 Appendix 4:12-13). Indeed, the key trade union involved, the CFMEU, maintained that "BHP's anti-unionist and anti-collectivist industrial relations agenda is driving and shaping its approach to safety" (Ritter 2004 Appendix 4:13) The Company in turn rejected this view, asserting, amongst other things, its commitment to flexibility as distinct from an opposition to collectivism.

While it is difficult to make a judgment on the merits of the various conflicting views expressed by BHP and the CFMEU, what *is* clear is that there are important and unresolved industrial relations issues at BHP sites in the Pilbara, which have the potential to seriously undermine the integrity of BHP's approach to safety management¹⁶. Moreover, BHP provided very little evidence that it had made efforts to overcome these antagonisms, or to find ways of quarantining OHS from the broader and adversarial industrial relations context. Thus the Inquiry pointed out not only that "strikingly absent from the [BHP submission to the Inquiry] is any serious examination of the role of trade unions, or the impact of industrial relations issues on employee involvement" (Ritter 2004:Appendix 4:12) but also that "there does not

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appear to be any indication of a clear plan to steer the way towards the successful implementation of health and safety systems and practices with a workforce of whom a significant number had strong opposition to a key management strategy” (Ritter 2004:125). Finally, and related to the above, the Inquiry found that there was “a real issue about fear of recriminations if occupational health and safety issues are raised. The recriminations may not be demonstrative, but there is a concern at the very least about subtle repercussions - possibly affecting future employment or payments made under contracts of employment” (Ritter 2004:290).

The depth of these industrial relations problems and their cultural underpinnings may be gauged from the fact that even some four years later, and notwithstanding everything the government inquiry had said and BHP’s internal investigations, it was reported that 200 non-unionised workers on Australian Workplace Agreements at one of the Pilbara mines, had signed a petition claiming that AWAs promote a culture of compromised safety. The Australian Broadcasting Corporation’s 7.30 Report said workers at Mount Whalebank site had complained of an atmosphere of “intimidation and victimization” and warned “a serious safety incident is inevitable unless the culture changes” (OHS News 2007).

4. Discussion

The above account suggests that BHP had in place a set of formal structures for addressing issues of internal compliance which, for the most part, approximated best management practice. Yet what is most strikingly revealed by the Ministerial Inquiry is that those formal structures were manifestly inadequate to achieve adequate levels of OHS at its Pilbara operations, or to prevent three deaths within the space of a single month. The substantial cause, so it would appear, was a ‘disconnect’ – or rather a series of disconnects - between Head Office edicts and aspirations, and behavior “at the coalface”.

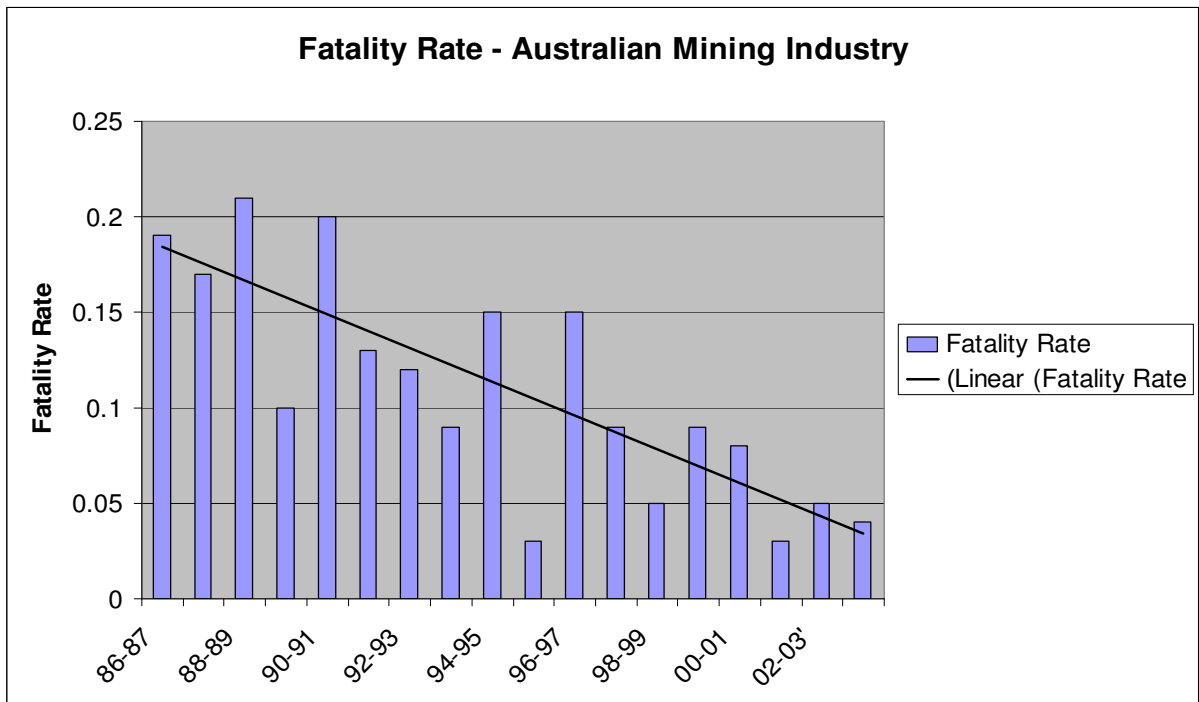
(i) *The Corporate- Mine Site Disconnect*: The most obvious disconnect revealed by the Ritter Report was between corporate and mine site management. Whereas corporate management appeared to have a strong commitment to high standards of OHS – mine management self-evidently did not. At mine site level, production came first, safety an extremely poor second. The Inquiry Report documents a variety of ways in which mine management’s failure to “walk the talk” and their single minded commitment to production, served to relegate OHS to the periphery, a number of which were described earlier.

How can this disconnect between corporate aspirations and mine site behaviour be explained? One possibility is that there simply was no disconnect. It is, after all, hardly unknown for corporations to develop impressive looking policy statements and websites for public relations purposes rather than because of any genuine commitment to improving their social performance. Some companies make the calculated decision that it will be possible to protect their social licence by cosmetic means rather than by investing in the often expensive mechanisms necessary to bring about substantial and genuine change on the ground. On this view, mine management was simply following corporate management’s real agenda in relentlessly pursuing production and profit at the cost of OHS.

While researchers (or government inquiries) can rarely penetrate the corporate boardroom, or be sure beyond doubt of corporate motivations in particular circumstances, nevertheless there is considerable evidence that for the most part, the larger, reputation-sensitive mining companies that dominate the market, have a substantial corporate commitment (driven by ‘the business case’ described earlier) not only to meet, but also to go substantially beyond, the minimum OHS standards prescribed by legislation. This is not to suggest any new found altruism on the part of senior management in the private sector. Rather, in reputation-sensitive industries with a high public profile, there may be compelling reasons of corporate self interest for aiming high and going “beyond compliance” with what the law requires¹⁷.

In the case of the mining industry majors, including BHP, there is substantive evidence to confirm that a genuine and not merely a cosmetic change in their approach to OHS has taken place over the last decade. The downward trend in injuries and fatalities over that period is an impressive one and (as Galvin (2005) demonstrates), far more impressive than in other industry sectors, although it has subsequently plateaued. And while lost time injury and workers compensation figures are certainly capable of manipulation this is not the case with fatalities, which show a similar downward trend (Gunningham, 2007, pp1-2). Overall, in the last two decades there has been "around a 90% reduction in lost-time injuries and fatalities in the Australian minerals industry" (Galvin 2005:A251) (see Figure 1 below) and BHP's performance has improved broadly in line with the industry trend.¹⁸

Figure 1



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While the Ritter Inquiry was not privy to BHP's internal decision-making processes or to Boardroom discussions, the documents that it did obtain and its own investigations, suggested that BHP's corporate commitment to ambitious OHS targets was a genuine one. It has powerful reasons of corporate self-interest to protect its social license and had articulated a compelling "business case" for placing a high priority on OHS. Its range of OHS management tools approximated international best practice¹⁹ and in some respects (as in its development of fatal risk protocols) it had established international leadership.

So what went wrong? Why in particular were the elaborate and sophisticated mechanisms of internal regulation that the company put in place to ensure that OHS was adequately addressed at site level not sufficient? In part, it may be that BHP's internal regulation mechanisms, while extensive and sophisticated, nevertheless did not pay sufficient attention to the need to explicitly align site level management with corporate objectives. This is apparent in two respects. First, it is doubtful whether BHP provided OHS incentives to mine management of sufficient specificity and strength as to counter the traditional emphasis that line management places on production. Certainly the Company provided incentive payments based on a range of business performance metrics including OHS (which is also included within the BHPBIO 'Road Map' Performance Score Card). However, it is not clear how influential the OHS criteria are in practice, as compared to traditional production-based incentives.²⁰ The latter were both quantifiable and substantial (emphasising ends not means in terms of dollars per ton of production) as contrasted with only broad and qualitative OHS incentives). It may well be that one unfortunate result was to send both a direct financial message and a subliminal broader message about the relative priorities of the company.

Second, and closely related, there was arguably insufficient emphasis on accountability mechanisms at mine site level, such as would make it difficult for managers (wherever they sit in the chain of command) to avoid their OHS responsibility. Examples of which might have been done include the allocation of

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safety action items to individual managers via a central database that can only be “completed and removed” when approved by a more senior manager, in conjunction with an overview and assessment of outstanding action items at management meetings.

But such forms of architectural internal regulation, while important, may also have their limits. Bardach and Kagan (1982:321) pointed out many years ago:²¹

The risk of [pushing] accountability requirements into the farthest reaches and deeper recesses of social life is that, in the long run, everyone will be accountable for everything, but no one will take responsibility for anything.

The challenge as Bardach and Kagan recognized, was for regulators (whether internal or external) not simply to impose controls (or we might add, management systems) “*but to activate and draw upon the conscience and the talents of those they seek to regulate*” (Bardach and Kagan 1982, 31), emphasis added). Without such commitment, then the problem will remain of managers and workers who lack commitment to safety and undertake safety precautions only in circumstances where they are being watched and their performance measured. But such oversight and control will not in itself eradicate unsafe acts or corner cutting to increase production, in the many circumstances where oversight is not practicable. Conventionally, what is required to achieve such commitment is the nurturing of a ‘safety culture’.

According to James Reason’s classic analysis (1997) an organisation with an effective safety culture: has a safety information system that collects, analyses and disseminates information from incidents and near misses, as well as from regular proactive checks on the system; has a reporting culture where people are prepared to report their errors, mistakes and violations ;has a culture of trust where people are encouraged and even rewarded to provide essential safety-related information, but also in which it is clear where the line between acceptable and unacceptable behaviour is drawn; is flexible, in

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terms of the ability to reconfigure the organisational structure in the face of a dynamic and demanding task environment; and has the willingness and competence to draw the right conclusions from its safety system, and is willing to implement reform when it is required.

Now is not the place for an extended discussion of the safety culture literature (Parker, Lawrie & Hudson 2005), but in essence, it suggests, particularly in high risk industry, that an important role is played “by social forces within an organisation that act upon its members with respect to safety” (Parker, Lawrie and Hudson 2005) but that an improvement in safety culture will be far more effective than increased accountability, sophisticated management based regulation or (more controversially) behaviour based safety (Reason, 1998). Reason (2000) argues that an organisation’s safety culture takes on a profound significance at the point where accident rates reach a “plateau”, i.e. at the very point the mining industry has now reached. It is argued that “In order to go beyond this “low but (seemingly) unassailable” plateau and to continue improvement in safety performance, it is necessary to address the hearts and minds of the management and workers (,(Parker, Lawrie and Hudson 2006, Lee 1998). It may well be that this plateau is often reached after requirements for safety “hardware and software”(i.e. barriers and management based requirements) have been met (Reason 1997)..

(ii) The Worker – Management Disconnect: In terms of shaping the OHS behaviour of their workforce, BHP’s internal regulatory focus relied heavily on the management based tools described earlier. In particular, although workers were not expected to have close acquaintance with the OHS management system as a whole they were expected to comply with the specific parts of it that apply ‘at the coal-face’. These include job safety analyses and specific controls relating to issues such as personal protective equipment, fall protection/safe working from heights, hazardous substances, housekeeping, lifting gear, machine guards, confined space entry, permit to work and a variety of other identified safety concerns.

To a lesser extent, BHP also relied upon a controversial approach known as behavioral based safety, which assumes workers’ unsafe behavior is the cause of most

work-related injuries and illnesses. Most commonly, it seeks to achieve behavioral change by ‘[requiring] front line staff to carry out behavioral safety observations on their colleagues’ (HSE 2002). These observations are then fed back to the relevant workers in an effort to both draw attention to and change the undesirable behavior (Geller 2004). BHP’s particular version relied heavily on the Du Pont STOP program, a central tenet of which is that if you can change behavior then values will follow after. For example, BHP had experimented with techniques such as ‘Safe Act Observation’ and emphasized the ‘critical importance of positive safety behaviors, which involved focus on the people factors of workplace safety’.²² Trade unions perceive this approach to be underpinned by a ‘blame the worker’ philosophy which they see as obfuscating the true cause of work related injury and disease, the relentless pursuit of profit.

In any event, neither of these strategies was markedly successful in preventing a disconnect between the BHP’s workforce on the one hand and corporate and mine site management on the other (with mine managers being the ‘human face’ with whom workers interacted from day to day). There were a number of reasons for this, probably the most important of which was that neither internal management based regulation nor Behaviour Based Safety can be effective without worker cooperation and buy in.

The literature overwhelmingly suggests that genuine workplace participation and involvement in OHS issues will be crucial to improved OHS performance, especially “empowerment of workers and encouraging their contribution to innovation, and a sense of control and autonomy by workers” (Bluff 2003). In the absence of such cooperation workers pay lip service to OHS requirements, but their impact on behaviour is very limited. For example the independent engineering report undertaken by QEST Consulting in 2002 identified:

the lack of discipline in the maintenance workgroups whereby personnel do not always follow the WIN, JSA or standard work practice. As a result, incidents have occurred where the hazard had been previously identified and

where control measures had been put in place. This was more to do with the culture in some work groups and less to do with training and education (emphasis added) (Quest 2002:15).

Such a culture may be a product, at least in part, of past management behavior. Workers take their cue from senior management and co-workers with the result that where management tolerates certain traits (cutting corners on safety to increase profitability) then they are likely to become reinforced and over time, entrenched. According to Pitzer *et al.* (2000:1) “Employees develop a perception of what is expected and ‘permissible’ – in the way they see others (peers, supervisors and managers) behave around them. This is the ‘work environment’ of employees and it has a powerful influence on risk-taking in the organisation”. In the Pilbara, the Inquiry documented numerous examples of mine management demonstrably failing to ‘walk the talk’ when it came to safety and failing to put safety before production. (Ritter, 2004, pp148, 149, 159).

A fundamental cause of lack of cooperation and of an adversarial workplace culture, so a number of official reports have demonstrated, is lack of trust between workers and management. The 2005 New South Wales Mine Safety Review identified a “debilitating mistrust between the members of the tripartite process” (Wran & McClelland 2005:7) as a principal obstacle to improved OHS in the mining industry. Consistent with the broader literature on workplace safety, the role of mine management in creating trust (or mistrust) is particularly important (Whitener et al 1998). Management sets the priorities, establishes the values, and provides the resources that substantially shape mine management and workforce responses. Messages conveyed by senior management, particularly as to whether and how much they value safety and the wellbeing of the workforce, are part of the composite picture that workers develop as to the company’s motivations and behaviour. As Conchie, Donald and Taylor (2006: 1152) point out in their overview of the trust literature, “a good organisational safety culture typically relies on good safety leadership [that] promotes shared values and commitment to an organization’s safety policies”. For the

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workforce, the critical level of management is not at Head Office (who often they have only the vaguest awareness of) but senior management at site level with whom they interact.

At BHP in the Pilbara a lack of trust was both deep seated and long standing. For example, the QUEST Consulting Report of 2002 pointed out that “the workforce had the perception that decisions made at management level are purely for the benefit of the management group and to placate the regulator or public opinion and not to seriously address site issues and hazards’ (QUEST 2002:19) At some operations (both with regard to BHP and its contractors) the evidence suggests that management behaviour bred particular cynicism and mistrust. One worker told the Ritter Inquiry: ‘you only have to look at the minutes of the safety committee to see the same things repeated over the years...we have no way of enforcing anything without the drastic step of informing the Department and nobody wants to be responsible for that, the fallout would not be worth it. ... the minutes of our Safety Committee meetings are too brief and ‘sanitised’ so they appear better in print. When pursued it is hard to know what happened’ (Ritter 189). Worker cynicism was encapsulated in a common response to management ‘safety before production’ notices: ‘safety is only an option if it is convenient’. A number of witnesses gave evidence in a similar vein.(Ritter 2004, 148, 149, 258, 271).

Relations between management and trade union members were particularly poisoned as a result of BHP’s adversarial industrial relations policy described earlier. BHP’s ideological commitment to eradicate collective bargaining and trade unions led, at mine site level to a range of behaviours that served to further undermine trust between workers and management. Moreover, even those who had (often under pressure) taken up individual contracts of employment commonly perceived themselves vulnerable to exploitation and especially (and as the more recent incident at Mount Whalebank illustrates) to “intimidation and victimisation” (OHS News 2007:1). The result was that BHP’s internal management based regulation and BBS initiatives barely touched the surface of worksite culture at individual work sites.

There is evidence to suggest that these experiences are not confined to BHP but are pervasive within the Australian mining industry. One of the most important findings of Pitzer's cultural survey of the industry was that, although:

most organisations and the industry as a whole have been very successful in communicating the "safety message". Despite this powerful message the "value" of "Care about employees" that underpins the achievement of a positive safety culture seems lacking in the industry ... the pervasive message employees connect with is that management does not "value" employees... also suggested by trends on linked factors: high levels of job insecurity; low credibility of senior management; high levels of dissatisfaction with safety management systems; and diminishing value of the traditional safety committee" (MCA 1999, 36).

Again, what is needed is not so much to refine the tools of management based regulation or greater emphasis on behaviour based safety, but to change the mindset of the workforce. And this brings us back to the importance not of systems but of nurturing a positive safety culture, which in turn will be almost impossible in the face of mine site management with a blatant disregard for safety and an adversarial industrial relations policy of kind being rolled out in the Pilbara.

(iii) *BHP and Contractors*: A third disconnect arose between BHP management (primarily at corporate level) and contract workers, as a result of the pressure the company placed on contractors to meet production deadlines and quota. This increased their tendency to "cut corners" and to avoid raising safety issues for fear of slowing or stopping production. In cases where responsibility for an entire mining operation was contracted out, corporate management additionally specified production targets (including tonnages and dates). Although BHP also required compliance with

their OHS standards, there remained considerable pressures on contractors to focus on meeting these production targets (and timeframe targets), which often trumped OHS considerations. While these pressures were exacerbated by the strong production orientation of mine management and their failure to embrace a strong OHS commitment, the greatest pressure on contractors was a direct product of the pressures imposed upon them as a consequence of BHP corporate level policies.

Earlier it was argued that BHP, like a number of other mining majors, believed that there was a compelling business case for reducing levels of work related injury and disease *within* the company – driven in substantial part by the need to protect corporate reputation. However, unless fatalities and injuries of contractors in some indirect way serve to damage BHP's own reputation (of which there is little evidence) then the business case for improving the OHS performance of its contractors is considerably weaker.

It was about the same time as the Australian mining industry began to focus on improving its own levels of OHS that it also substantially increased its use of contractors. Not coincidentally, those contractors have been disproportionately used to address many of the most dangerous mining operations (Johnstone, Mayhew & Quinlan 2001). In the case of BHP, the net effect of corporate policy was that, through the use of contractors, not only was BHP management able to outsource production, it was, in effect, also able to outsource OHS responsibility as well, substantially avoiding the reputational damage that might follow from a high incidence of work related injury, disease and death but without adversely impacting on profitability.

Consistent with this approach, in its relationship with contractors, BHP's priority was very clearly production, as evidenced by the extent to which production objectives were clearly specified in contracts with contractors in a way that OHS was not. For example, although BHP quantified specific production targets, any contractual obligation in respect of OHS process and/or outcomes was far less sharply defined

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(e.g. a general exhortation/requirement to abide by BHP OHS standards), and importantly, there was often no comparable financial incentive/penalty for failing to meet OHS expectations²³. While this might plausibly have been an oversight (identifying quantitative OHS performance indicators as discussed earlier, is not easy) it was coupled with a policy that effectively precluded contractors from attending to OHS issues and delivering on production objectives within relentlessly tight timelines. It is hardly surprising, therefore, that contractors respond in kind by making OHS subservient to production. In this respect BHP at corporate level clearly did not place safety first and corporate rhetoric was not matched by OHS practice. Here, the skeptics view that, notwithstanding appearances, there was in fact, no disconnect between corporate policy and OHS outcomes, has considerable substance.

Are these findings representative? Of course, a single case study cannot provide a definitive answer to any of the questions addressed above. But at the very least, there is reason to believe that the sorts of tensions experienced by BHP in the Pilbara and the broader regulatory and policy issues it raised may not be atypical. In a number of other well documented cases the implementation of comprehensive mechanisms of internal management based regulation have also failed to achieve their intended goals and in some cases have failed to prevent disaster.

In the Australian context, the major explosion at the Longford gas plant which killed two workers, injured eight others and left the state of Victoria without gas for two days is one graphic example. There, even what was perceived to be a model OHS management system - the Operational Integrity Management System (OIMS) – manifestly failed. The Royal Commission set up to investigate the disaster concluded that this was because the system had:

taken on a life of its own, divorced from operations in the field. Indeed it seemed in some respects, concentration on the development and maintenance

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of the system diverted attention from what was actually happening in the practical functioning of the plants at Longford (cited in Hopkins 2000)

And at Longford there were other implementation failures that also resonate with the findings of the present study. There, “auditing processes were ineffective, critical hazards had not been identified and assessed, management took a ‘hands off’ approach to safety, procedures for dealing with hazards and incidents were inadequate, training was ineffective and information flows were poor” (Workcover Victoria 2004:145).

Similarly, a variety of submissions made to the Western Australian Government when it conducted a wide-ranging inquiry into OHS issues in 2003, also suggested that the sort of behaviour documented in the present case study may be widespread. The Laing Report (2003:69) noted substantial evidence of:

neglect of safety and health rules and processes because it suited both workers and supervisors or because workers were fearful of retaliation if they complained. Many spoke of job insecurity, dismissal and the possibility of not getting further employment in the industry if seen to be a troublemaker. In one case an employee observed that the company encouraged active safety and health reporting but that site supervisors discouraged and dismissed employees who did so. It was alleged that the performance appraisals of supervisors include production performance outcomes. Safety issues can of course, intrude into performance results and supervisors are left in a no win situation. Some therefore decide that performance is more important than safety. It is suggested that some of the worst examples, though by no means always, come from sites without a long-term permanent workforce, especially those operated under subcontract conditions.

Finally, an ongoing study by [reference removed] involving a number of other mining companies in Australia (with access to very considerable internal information on safety management and performance), also suggests that the above findings are not atypical. By studying a number of individual firms each of which imposed a single form of internal management based regulation, and by accessing a wide range of OHS performance indicators, both internal and external to the firm concerned, this study was able to demonstrate very considerable variation in OHS performance between individual facilities. Its findings confirmed that even where there was a high level of OHS commitment at Head Office there were nevertheless substantial variations in site level OHS culture and it was these that were largely responsible for OHS outcomes (ref removed).

5. Conclusion

Many large companies have placed faith in management based internal regulation, as the principal means of ensuring that their social objectives are achieved at facility level. In the case of work related injury and disease, particular reliance has been placed on the capacities of OHS management systems, audits and standards to perform these functions.

But as evidenced by BHP Billiton's performance in the Pilbara, the existence of a formal OHS management system and the other manifestations of management based regulation tells one very little about whether or to what extent production targets took precedence over safety, production pressures led to risk taking, or workers are constrained from reporting their OHS concerns. And depending on the auditing process²⁴, it may not reveal how often safety meetings actually took place, or if they did, whether they engaged with serious safety issues or were tokenistic in nature, or whether worker representatives were constrained from bringing certain safety issues

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before them. Similarly, the fact that BHP required its contractors to adopt a system comparable to its own, tells us very little about how that system operated in practice.

In both cases, one needs to know much more about the extent of the gap between how the system purported to operate, and how it operated in practice when confronted with a variety of implementation challenges.²⁵ At BHP's operations in the Pilbara, those challenges related to unresolved tensions involving production pressures, adversarial industrial relations, and the time and production requirements BHP imposed upon its contractors. BHP's and its contractors' internal regulation mechanisms proved manifestly inadequate to meet these challenges or to achieve their OHS objectives.

In substantial part, culture lay at the heart of many of these implementation failures. The unwillingness of mine site management to put safety first made corporate commitments sound like empty rhetoric and bred cynicism and mistrust within the workforce. This was compounded by an adversarial approach to industrial relations which also bred acrimony and led workers to doubt that management had any genuine commitment to workplace safety. BHP were not entirely unaware of the importance of shaping the behaviour of the workforce and had experimented with various Behavior Based Safety initiatives. But these did not even touch upon the underlying causes of a mistrustful workplace culture nor did they go to the roots of risk taking behaviour.

One lesson of this case study is that even the existence of advanced and sophisticated tools of internal management regulation cannot guarantee improved OHS outcomes. Formal systems of internal control need to be complemented by informal structures that serve, in Joe Rees' terms, to "institutionalize a fragile value like safety, particularly where it may conflict with a much more powerful value such as meeting production objectives" (Rees 1994:4, see also Selznick 1992). What is needed, so the literature suggests, is to inculcate a state of 'mindfulness', a willingness and capacity to question safety failures (Weick cited in WorkCover Victoria 2004:148), and a state of trust between workers and management that enables blame free reporting of incidents and near misses (Reason 1997). All of these are manifestations of safety

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culture (or safety climate) are barely touched upon by either management based internal regulation or behavior based safety initiatives.

A second lesson is that major blockages to cultural change may lie with the management of individual facilities rather than (as mainstream management literature implies) with corporate leadership. While the latter is undoubtedly important, at BHBP it was the absence of leadership at site level that largely rendered management based regulation ineffective “on the ground”. Workers took their lead from site management, and accepted the subliminal message that production came first. A range of unsafe practices documented by the Ritter Inquiry and described above, followed inexorably. This suggests that a crucial ingredient of the complex process of changing workplace safety culture is mine site management’s willingness to ‘walk the talk’. They must, for example, be ready, willing and able to halt production if safety is seriously compromised. Without such commitment, little progress can be made. But it will be equally important for mine site management to develop mechanisms that serve to break down mistrust, to build a cooperative relationship with the workforce and to obtain worker buy-in to management based initiatives (see [further ref removed] forthcoming).

However, while culture and ideology plays a very large part in this story, other factors also played their part. In particular, the performance indicators and benchmarks that BHP used to assess production performance, were much clearer and quantifiable than those used to assess OHS performance. The result, intended or unintended, was to send an economic signal that the former were more important than the latter. The lesson here is that where management or contractors lack the incentives to engage seriously in systematic OHS management, the outcomes are likely to be disappointing.²⁶

In terms of BHP’s own workforce and management, there incentives were only one of a number of influences impacting on behavior and there is no evidence to suggest that

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their role was a critical one. Nevertheless, the provision of more sharply focused incentives for improved OHS performance at site level, coupled with other mechanisms intended to ensure greater accountability and transparency, would have supported initiatives to change the safety culture itself.²⁷ But ultimately, in terms of the disconnects both between workers and management and between corporate and mine site management, it was the absence of a safety culture at site level that thwarted the implementation of management based internal regulation. The principal lesson of this case study is that the tools and techniques of internal management based regulation are only as good as the culture into which they are received.

However, in the case of contractors, the performance indicators and incentives that BHP specified were fundamentally important. A failure to meet those indicators would, as all sides were well aware, have profound economic implications, and might result in breach of contract and economic penalties. Both contractors and BHP were well aware that those incentives were such that any trade off between safety and production would inevitably be settled in favor of the latter. BHP stood to benefit economically from such an outcome and there was no “business case” built around reputation risk or social license pressures, for changing their present practices. This analysis suggests that government regulation will continue to be the principal and perhaps the only source of regulation capable of protecting the OHS of contract workers and other forms of contingent employment. That regulation moreover, should not rely primarily upon the adoption by contractors of safety management systems and other “process based” mechanisms for these are likely to be more honored in the breach. Rather, various forms of prescriptive or performance based regulation imposing quantifiable obligations on contractors, coupled with broader based general duties on those who engage them, will be essential.

In terms of internal regulation, the findings have application across a range of other social issues where large companies must protect their reputation and demonstrate their corporate social responsibility to external audiences. These areas include food safety, environmental protection, rail regulation, sustainable forestry, toxic chemical

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reduction and trades practices (Coglianese and Lazer 2003, Coglianese and Nash 2006). In all of these areas, there is heavy reliance on tools of internal management based regulation such as management systems, audits and standards. At least where human factors play an important role, then the findings of this study suggest that a heavy reliance on the tools of management based regulation, to the detriment or exclusion of cultural considerations, is likely to render those initiatives much less effective.

Finally, the findings also have implications for various forms of external regulation. To return to Coglianese and Nash's (2006) classification of management based strategies, not just companies but also government regulators have placed increasing faith in management based regulation and incentives over the last decade. A growing and substantial number of laws (Box 1, quadrant, top left) and incentive based mechanisms (bottom left) are based on very much the same principles: if one can make (or incentivize) large corporations to put in place sophisticated management based tools and strategies, then improved social performance should follow. But our findings suggest that such expectations may be overoptimistic and that management based regulation ('regulating from the inside') may be insufficient to solve these problems, unless it is used in conjunction with operations specific cultural initiatives. In short both corporate management and government policy makers are in danger of putting too many of their eggs into what may turn out to be a very flawed basket.

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ENDNOTES

¹While some have framed these issues in terms of the principal-agent framework (where the challenge is to align the behaviour of self seeking agents with corporate goals) this is of doubtful value because the conduct of the agents at site level may be undertaken at least in part to benefit the organization (for example, by maximizing production even if this compromises social goals such as safety, health or environmental protection). See for example, Krawiec (2005).

² See King & Shaver (2001:1070). Their finding was that “managing more establishments across more regulatory environments within the United States imposes difficulties for all firms”.

³ Regulation, following Black’s definition, is “a process involving the sustained and focused attempt to alter the behaviour of others according to identified purposes with the intention of producing a broadly identified outcome or outcomes which may involve mechanisms of standard-setting, information-gathering and behaviour modification” (Black 2002:170). As such it need not involve state actors or legal mechanisms.

⁴ See, for example, Coglianese and Nash’s edited collection on *Regulating from the Inside* (2001), which examines the role and effectiveness of Environmental Management Systems, their more recent *Leveraging the Private Sector* (2006), and Christine Parker’s work on internal compliance systems (Parker 2002).

⁵ For an overview see [ref removed] (forthcoming).

⁶While there is a considerable management literature which seeks to identify the mechanisms through which companies seem to implement corporate directives (policy/vision statements, executive committees, reporting mechanisms, site visits, audits, systems etc) this literature is largely descriptive.

⁷ Not least because quantitative research cannot probe general responses for concrete details, and because even where correlations can be established, it is not possible to do more than speculate at the causes that lie behind them.

⁸ For a series of case studies of firms that achieved improved profitability and reputation benefits from improved health and safety performance see <<http://www.hse.gov.uk/press/2005/e05024.htm>> (accessed 2 May 2005).

⁹ For example, a fatality can result in closure until a full investigation is conducted. In the case of BHP's Boodarie processing plant in Western Australia, the plant was never reopened, following a fatality in 2004.

¹⁰ Ritter 2004, 45; DOCEP 2006, 8, 10.

¹¹ On the license to operate more broadly see Gunningham, Kagan & Thornton (2004).

¹² It must be emphasized that all the material upon which the present article relies is drawn from various aspects of the Ministerial Inquiry report (Ritter 2004), or material otherwise in the public domain, and in no way relies upon any confidential information to which the author was privy.

¹³ Whether with a foundation in fact the Inquiry could not determine.

¹⁴ See for example, Glenn (1993), Nichols and Armstrong, Gunningham (1984) ch 11.

¹⁵ While this is not accepted by BHPBIO, the Inquiry accepted the information of people with direct knowledge of the issue (Ritter 2004:292).

¹⁶ See for example, Ritter (2004:57).

¹⁷ Kagan, Gunningham and Thornton (2003).

¹⁸ BHP and Billiton merged in 2001. The principal metric with regards to work related injury is lost time from injuries. These have broadly declined. However, BHP Billiton has used different metrics to measure lost time from injuries over the last decade so it is hard to attain a consistent trend prior to 2001/02. Between 2001/02 and 2006/07 the Classified Injury Frequency Rate (CIFR), which represents the number of classified injuries per million hours of work, decreased by almost a third, from 6.8 (approx) to 4.3 (BHP Billiton 2007:175). Although *Fatalities* have varied considerably over the last decade or so, they too have broadly declined (BHP Billiton 2001:20, BHP Billiton 2007:174).

¹⁹ When evaluated against a set of ten criteria widely recognized as being central to systematic and effective OHS management, the BHP approach scores very well. Indeed, there is evidence that BHP's broad based and sophisticated OHS system incorporates the key characteristics necessary to enable positive OHS performance (Ritter 2004 Appendix 4:33).

²⁰ BHP states "non-financial performance indicators such as health and safety are measured against pre-determined individual goals. These goals are established annually as part of the performance assessment process. Performance against these goals together with other non financial and financial goals are aggregated to produce a performance rating which is directly linked to annual salary reviews."

²¹ Bardach and Kagan (1982) were referring to government regulation, but the point is equally applicable to internal regulation within companies.

²² BHPBIO submit that effective safety management depends on two essential elements—first safe procedures and processes and second safe workplace behaviour (Ritter 2004:82).

²³ A clear response required by corporate management to overcome such a “contractor disconnect” is either to reverse the outsourcing of OHS responsibility, or to impose much sharper OHS accountability. By this we mean that just as corporate imposes specific and clearly identifiable production targets, so to should impose specific and clearly identifiable OHS process and performance targets. Further, that these OHS targets should be reinforced by a series of financial incentives/penalties built into contractual obligations. Only then will contractors be willing to suffer short-term production pain in the interests of improving OHS outcomes (and arguably, longer term production gain).

²⁴ In principle, any major failings in the OHS management system will be identified in the course of regular internal and external audits, which provide the key oversight mechanism intended to keep the management system ‘on track’. However, there is now a strong body of evidence to suggest that audits, across a diversity of areas of social and economic concern, have such serious limitations that they are unlikely to fulfil this oversight role effectively. See the special issue of *Law and Policy*, Vol 25, No. 3, 2003.

²⁵ For a review of the evidence see Saksvik & Quinlan (2003). Paper compliance, insufficient inspectoral oversight, over-reliance on management and inadequate worker input are identified as particular problems. See also Nytrø, Saksvik & Torvatn (1998) and Saksvik, Torvatn & Nytrø (2003).

²⁶ See generally Coglianese & Nash (2001).

²⁷ On the potential importance of other factors such as managerial incentives, organizational identity and organizational self-monitoring. See Howard-Grenville, Nash & Coglianese (2008).