

## Terms of Reference

### Ministerial Advisory Panel "Best Practice Safety Regulation"

#### Objective

The objective is to deliver:

- a best practice safety regulatory regime for the Western Australian resources sector, based on practical risk management, and taking due account of current reforms in occupational health and safety regulation which are part of the Council of Australian Governments (COAG) Business Regulation and Competition reforms.
- a new best practice Business model, based on cost recovery and ensuring efficient service delivery strategies.

#### Background

In August 2009, the Government announced its intention to introduce a framework of "best practice, risk management" safety regulation for Western Australia's resources sector.

The Minister for Mines and Petroleum announced the formation of a Ministerial Advisory Panel for the implementation of best practice safety regulation. The focus of this cost recovery model will be to reduce the likelihood of serious accidents occurring in the State's resource industries.

The Resources Safety Division of the Department of Mines and Petroleum has responsibility for administering safety legislation across three diverse industry sectors:

- Mining and mineral processing.
- Manufacture, storage, distribution and use of dangerous goods.
- Onshore petroleum and pipelines.

#### Terms of Reference

The Advisory Panel will provide advice to the Director General of DMP and the project implementation team on:

- legislative reform and the development of guidance material to support these changes;
- strategies which will increase the safety capabilities of both industry and the regulator;
- performance reporting criteria and appropriate governance arrangements;
- communication and implementation of safety reforms, to ensure a common understanding.

The Advisory Panel will be provided with a progress report from the project team as a standing agenda item.

If no consensus is reached or there is dissent by the Advisory Panel, this will be recorded in the minutes.

The Advisory Panel will be chaired by the Director General of the Department of Mines and Petroleum and will report regularly to the Minister for Mines and Petroleum on the progress of implementing the risk based safety regime.

## CHAPTER 6 – A RISK MANAGEMENT APPROACH FOR THE WESTERN AUSTRALIAN MINING INDUSTRY

### Hicks Feasibility Study

277. My terms of Reference require me as part of the Review of the MSI Act to take account of this study.
278. The Final Report of the Hicks Feasibility Study has yet to be released publicly and is still subject to State Cabinet deliberative processes. Thus I am not able to comment on its content.
279. Further consideration should to be given to the adoption of the model suggested by the Hicks Feasibility Study, once it is released into the public domain. This will enable full consultation within the mining and minerals processing industry and amongst the key stakeholders.

### MSIG

280. The Hicks Feasibility Study follows the MSIG Report recommendation for the adoption of a safety case regime in the minerals industry in Western Australia.<sup>195</sup> The particular features of a safety case regime for the minerals industry as recommended by the MSIG include:
- safety case requirements should apply to all mines, regardless of size, on the understanding that the smaller and less complex the mine, the simpler the safety case;
  - safety cases should incorporate trigger action response plans where appropriate;
  - safety cases in the mining industry should address all risks including those to occupational health, and risks which can cause single fatalities;
  - safety cases should include a detailed consideration of fatigue management;
  - mining industry safety cases should not normally be required to carry out quantitative risk analysis;
  - the work force and their representatives should have a right to be consulted in the development of a safety case and to raise concerns about a safety case after it has been accepted;
  - the safety case regime should specify guidelines for participation of the workforce and their representatives;
  - safety cases should include provision for adequate training for the workforce and management; and
  - the development of the three safety case regimes (minerals, dangerous goods and onshore petroleum) should be coordinated and aligned where possible

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<sup>195</sup> MSIG Interim Report Stage 1 pp7 and 41

### **Origins of the Safety Case**

281. Safety case regimes have been applied in the offshore oil and gas, petrochemical and nuclear industries for many years. The principal focus of safety case regimes has been on low probability/high consequence events in the control of major hazards.
282. Such regimes have tended to follow catastrophic failures involving multiple fatalities. These include the 1974 Flixborough chemical explosion in the UK that claimed 28 lives and caused many more casualties; the environmental disaster in Seveso in Italy in 1976; the Piper Alpha platform fire in offshore oil and gas and Australia's chemical plant tragedy at Esso Longford in Melbourne in 1998. The latter event led to the Victorian major hazard facility regime following the Royal Commission of Inquiry.

### ***Offshore Petroleum***

283. Prior to 2005, the offshore oil and gas industry safety case regime was regulated by State law. From January 2005, on the establishment of the National Offshore Petroleum Safety Authority (NOPSA) the administration of Commonwealth and State legislation in relation to offshore oil and gas facilities was transferred to that body. NOPSA was established under the Petroleum Submerged Lands Act 1967 (Cth) and continues under the new Offshore Petroleum Act 2006 (Cth), which I refer to below. NOPSA is funded by way of levies on operators in the industry under this legislation and the Offshore Petroleum (Safety Levies) Act 2003 (Cth).

### ***Major Hazard Facilities***

284. Additionally in this State, major hazard facilities have been regulated under the National Standard for the Control of Major Hazard Facilities [NOHSC; 101 4 (2002)] ("the National Standard") which deals with the control of sites storing and handling large quantities of hazardous materials. These materials are designated major hazard facilities ("MHF"), based on a predetermined percentage of specified materials as set out in schedule 1 to the National Standard. Importantly, the National Standard extends only to the handling of the prescribed materials and its focus is on the prevention of major accident events.
285. As of March 2008, the regulation of major hazards in Western Australia falls under the Dangerous Goods Act 2004 ("the DG Act") and the Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007 ("the DG Regulations")

### *Definition and Components*

286. Whilst definitions of safety cases vary, it is generally accepted that there are three elements involved in a safety case they being;

- a facility description
- a formal safety assessment; and
- a safety management system

287. The facility description provides an outline of the location and nature of the operation, along with a summary of the equipment utilised and its operation.

288. The formal safety assessment comprises a formal and systematic identification and assessment of all hazards and the methods by which the risks associated with those identified hazards may be controlled.

289. The safety management system is the integrated system for the control and management of all safety and health issues within the enterprise. It is this element that binds the safety case into an integrated whole. A summary of these principles and how the various components of a traditional safety case model may apply to a typical mining operation appears at annexure 6.

290. There is no one single definition of a safety case. Heiler approaches the issue this way:

*"One of the first challenges is that there appears to be no single, all-encompassing definition of a SCR. Rather, "safety case" appears to be a "concept" underpinned by a set of criteria, principles, components, not all of which are identical across either industry, jurisdiction or commentator. There also appears to be differences in emphasis and detail around a number of the key components. These include: the role of "prescription", the function of the regulator, the nature of the licensing arrangements, the definition of principles such as "ALARP", the role of associated safety and other legislation and funding arrangements."*<sup>196</sup>

291. In dealing with differential approaches to what is a safety case, Heiler further notes:

*"As the above example demonstrates, while there are common elements associated with a safety case regime, there are differences in emphasis. For example the level of detail required in the particular safety case will differ depending on the level of risk and complexity of the operations; similarly, the methods used and the standards to which a facility must aim in order to demonstrate that risk has been managed (and or improved) appear to vary. For example some commentators advocate the use of a quantitative risk assessment (eg Pitblado and Smith (2001); whilst others*

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<sup>196</sup> K Heiler *Is the Australian Mining Industry Ready for a Safety Case Regime?* Working Paper 45 ANU National Research Centre for OHS regulation March 2006 at 6

*criticise the use of QRA and in the case of the WA task force recommendation, do not mandate its use for the mining industry.*<sup>197</sup>

### *A Licensing Regime*

292. Whilst it may be said that a safety case is in principle, a relatively advanced form of risk management, the vital difference to other forms of risk management, is the role of the regulator. Where permissioning is a feature, the acceptance or rejection of a safety “case” operates as a formal licensing regime. As the expert report for the MSIG observed:

*“But the crucial additional feature of a safety case regime is that it is a licensing regime. Operators are required to make a case to the regulator indicating how they intend to comply with these requirements (hence the term “safety case”). Regulators must ultimately accept or reject the safety case. Evaluating safety cases is a time consuming business and, for complex safety cases, it requires considerable expertise. This is, at least in part, because of the amount of detail in complex safety cases. Indeed, once accepted by the regulator, all the detail in the case is enforceable. Safety case regimes are, therefore, not a retreat from prescription; it is simply what is prescribed as set out in the safety case rather than in legislation or regulation. However, it should be noted that the amount of detail in a safety case regime is resource intensive. This is especially true where the facilities require complex safety cases. Any Government which wishes to embark on safety case regulation must recognise this crucial fact. Unless the regime is well resourced it is likely to fall, in the sense that it will offer no advantages over and above non-safety case regimes.”*<sup>198</sup> (My emphasis)

293. There are presently no safety case regimes in operation in the mining and mineral processing industries in Australia. Whilst in Western Australia, it may be said that a limited form of “safety case” regime already exists through the requirement in reg 3.13 of the Regulations for a project management plan to be provided to the State Mining Engineer prior to commencement of mining operations, as currently drafted, such a requirement is not ongoing and only requires a “broad assessment” of major risks, without the detail that would be expected in a safety case.<sup>199</sup>
294. Additionally by reg 4.30 a Principal Employer or manager of a mine must ensure that there is an emergency plan in place that identifies hazards that may cause an emergency; assesses the risk of such and consider control mechanisms to prevent or deal with such an emergency.

### *Mining Risk Management*

295. As outlined earlier, the mining safety and health legislation in Queensland and New South Wales, adopts a risk management approach through the utilisation

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<sup>197</sup> Heiler at 8

<sup>198</sup> MSIG op cit at 34

<sup>199</sup> Regulation 3.13 Regulations

of safety and health management systems and mine safety management plans, variously described, respectively.

296. In addition to a requirement on an employer to prepare a safety and health management plan, in New South Wales coal mines, requirements are imposed by the legislation for the preparation of major hazard management plans.<sup>200</sup> Such major hazards include for surface operations slope stability and mobile equipment. In the case of underground they include transport systems, strata control, inrush, fire and explosion and ventilation. Similarly in the case of Queensland coalmines, principal hazard management plans identifying, analysing and assessing risks that may lead to multiple fatalities are mandated.<sup>201</sup>
297. Whilst in this regard such a focus on low frequency/high consequence events may be said to be features in common with a traditional safety case regime, the distinguishing feature of these arrangements is the absence of any requirement for regulator approval, or "acceptance", as a condition of the commencement or continuation of operations.
298. An exception to this is under the Queensland metalliferous legislation. Where an operator has on site hazardous substances in excess of that prescribed under the major hazard facilities standard, the site senior executive is required to develop and lodge with the Chief Inspector a safety report within 16 months.<sup>202</sup> Save that in Queensland, this requirement is incorporated under the mining regulations this is in essence, no different to the position in Western Australia presently. In cases where a mine satisfies the requirements of the DG Act and Regulations as a major hazard facility, it is also required to prepare and lodge a safety report with the Chief Executive, in accordance with the legislative requirements, as noted below.

#### Western Australian Safety Case Experience

299. As noted, the safety case concept is not new. In Western Australia, safety case principles have applied to the on shore and off shore oil and gas industries for many years. This extended to all phases of the industry including exploration, production and supply. Prior to the formation of NOPSA in January 2005, the regulator in Western Australia applied safety case methodologies to the regulation of the oil and gas sector.
300. Following the establishment of NOPSA, the RSD maintains its role in regulating major hazard facilities under the DG Act and Regulations. This new legislation, noted above, follows the National Standard and focuses on the control of hazards arising from the use and storage of hazardous substances as prescribed.

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<sup>200</sup> See CMHS Act 2002 (NSW) s 32

<sup>201</sup> Sections 62 and 63 CSMH Act 1999 (Qld)

<sup>202</sup> See Part 7 Division 1 Mining and Quarrying Safety and Health Regulation 2001

301. Once classified as a major hazard facility, the operator is required under the DG Act to embark upon a systematic process of risk assessment and prepare and submit to the RSD, a safety report for its approval. The safety report must meet a number of prescribed requirements and the RSD may only approve the safety report and grant a licence to operate if it is satisfied that an operation has met the following requirements:
- (a) there exists an appropriate safety management system;
  - (b) all major events that could occur have been appropriately identified and documented;
  - (c) all hazards that could cause such major events are identified and control measures are in place to either eliminate or reduce the risks of those hazards;
  - (d) a suitable emergency plan for the facility has been prepared;
  - (e) that there has been employee consultation and employees are to receive appropriate induction, training and education; and
  - (f) there has been appropriate consultation with the local community regarding safety matters relevant to the particular facility.

#### **Effectiveness of a Safety Case Regime**

302. The available research material in relation to the performance of safety case regimes in the industries to which they have been most closely aligned, is somewhat mixed.
303. In referring to published research conducted between about 1995 and most recently in 2003, for the Health and Safety Executive in the United Kingdom, Gunningham observes:

*"The conventional wisdom is the safety case model has achieved considerable success. This is not only the view of senior and experienced regulators closely associated with this approach (Wilkinson 2002), but also of a number of independent studies, (for example, Saksvik & Nytro 1995a; Saksvic & Nytro 1995b; Pitblado & Smith 2001) which draw from research commissioned by UK Health and Safety Executive which states that:*

*"Overall a cost-benefit analysis is positive. It is certainly true that whilst there were two major accidents in a seven year period there have been none in the thirteen year period since then. In that time major efforts have been carried out in the industry to analyse risks and having found them to design those out. Safety case was a key tool in this process."*

*Similarly positive assessments have been made by Australian studies including the Longford Royal Commission which viewed a safety report as "for some time recognised as one of the most effective means of risk management where reliance is placed on self-regulation" (Dawson & Brooks 1999, [14.30]). Another report goes so far as to suggest that the introduction of the safety case regime in the offshore oil industry has resulted in a reduction in individual risk of up to 70% (ISR md).*

*However not all the evidence is in one direction (Woolfson, Foster & Beck 1997, 385-402). Heiler (2006), in an important review, concludes that:*

*[O]bjective evidence about the effectiveness of a [safety case regime] is difficult to locate... there are more assertions about the effectiveness of a SCR than hard evidence. This may not detract from the actual effectiveness of a SCR...but it is clear that claims about the demonstrable effects must be treated carefully.”<sup>203</sup>*

304. Both Gunningham and Heiler refer to a “meta-analysis” undertaken by the VECTRA Group Ltd for the United Kingdom Health and Safety Executive in relation to the perceived benefits and disadvantages of safety case regimes in the United Kingdom.<sup>204</sup> As noted by Heiler,<sup>205</sup> the VECTRA literature search concluded that there had been very few objective research papers published in relation to benefits of a safety case regime. Of the 156 papers reviewed, only about six involved original analysis and research.<sup>206</sup>
305. In particular, the following extract from the VECTRA report executive summary is of note where it was said:

*“There is good support for SCR’s acting to improve overall hazard identification and control. This is largely due to the need to systematically review and assess systems and processes. In some instances this assessment was the first time the organisation had thought about their operations in such a structured and vigorous way. However, there is some evidence that after the initial identification of improvements (that can lead to a step change in risk reduction), there is less potential over time for identifying improvements. This raises important questions regarding how the regime should be managed and led as it matures, and raises the potential need to shift the focus on to softer issues to ensure that the maximum value is realised over time.*

*There are mixed views about whether the SCR improves overall safety culture and safety communications within a company. Generally there is a positive view on this with improved workforce understanding of major hazards. The impact in this area, however, appears to be variable and depends very much on the management approach of the company and to some extent the “spirit” in which the regulations are implemented.”<sup>207</sup>*

306. There therefore seems to be a need for some caution as to the evaluation of the effectiveness of safety case regimes in terms of enhanced safety and health performance. There also seems to be an appreciable risk of a fall off in both enthusiasm and results from safety case regimes, requiring a “kick start” to reinvigorate the process. This is illustrated in the offshore oil and gas industry

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<sup>203</sup> Gunningham 2007 op cit at 71

<sup>204</sup> *Literature Review on the Perceived Benefits and Disadvantages of UK Safety Case Regimes* VECTRA Group Limited August 2003

<sup>205</sup> Heiler op cit at 9

<sup>206</sup> VECTRA op cit at 17-18

<sup>207</sup> *Ibid* at 3

in the United Kingdom, with the launching of the "Step Change in Safety" initiative in September 1997.<sup>208</sup>

## **A Safety Case for the Western Australian Mining Industry**

### ***Initial Impressions***

307. Given the absence of any established safety case regime in the mining industry in Australia or elsewhere in the world, consideration of its application to the Western Australian mining and minerals processing industry is entering uncharted waters. Whilst risk management based systems approaches have been adopted in New South Wales and Queensland, as identified earlier, no jurisdiction has yet progressed to the next level of regulation by way of a safety case or a derivative thereof.
308. This issue in the course of my initial consultations, with those in or involved with the industry, has been somewhat controversial. Strong opinions have been expressed both for and against the concept of a safety case.
309. Some who I have spoken with in the industry, including some within the Mines Inspectorate, consider that the existing general duties regime under the MSI Act, is both comprehensive and enables operators to adapt safety and health management approaches consistent with the nature of the operations in terms of size, complexity, resources and sophistication.
310. In particular, it has been put to me from some quarters that in relation to small and medium sized mines, a safety case regime or some derivative thereof, could not possibly succeed. It is said that they are too complex, too resource intensive and in the case of such mines, many operators have neither the commitment nor resource capacity to engage in such a process.
311. Of course, there are contrary views. Some senior managers in some large mining operators with whom I spoke, were supportive of the introduction of any new approach that has the potential to improve health and safety outcomes in the industry. Several other large operators expressed the view to me, that they were interested in the concept of a safety case for the mining industry, but wished to learn more as to how it may impact on their operations and the "fit" with their existing procedures and systems. The distinct impression I gained from these particular organisations was that they were keen to learn more, but would proceed cautiously.
312. Consideration of a safety case regime in the context of the mining and minerals processing industry appears in some published research literature to date.

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<sup>208</sup> *Step Change in Safety* [www.stepchangeinsafety.net](http://www.stepchangeinsafety.net)

## *Some Research Commentary*

### *Characteristics of Mining*

313. Rasche notes that while it may be desirable to introduce a safety case approach to the mining industry, in particular gaining a better understanding of safety processes and their maintenance and improvement during the life of an operation, there are restraints. He posits the following matters for consideration in implementing a safety case regime in the mining industry including:

- (a) the inherent complexity of a safety case and the resource requirements involved given the amount of information involved;
- (b) the specialised and expensive resources required and the difficulty in describing and modelling major accident events realistically;
- (c) the possible divergence between “what is written” into a safety case and the actual understanding of risk and the utility of the safety case itself at the workplace level; and
- (d) concerns raised in relation to outside assistance and the lack of ownership in the outcome by the operation concerned<sup>209</sup>.

314. Whilst recognising there were a number of similarities between mining operations and other high risk industries that have adopted a safety case regime, Rasche also referred to differences between the mining and other industries and in particular noted that:

*“The main differences between the mining and other industries are in the dynamic mining and beneficiation processes of ore and waste materials, either in an open cut or underground mining operation. A key point there is that the mining process must deal with the inhomogeneity of the ore body and the uncertainties arising from geological and geomechanical properties of the ground, which often are key contributing factors of many mining incidents and accidents (e.g. rock falls).*

*A further main difference is that many industries (eg nuclear and offshore) are highly control-system intensive and are able to operate their process remotely (thereby minimising the operators exposure to hazards). The mining industry on the other hand is characterised by the reliance on people intensive “manual” activities (by necessity) with mine workers often having to deal with hazards directly as part of their day-to-day work (eg barring down loose rocks)<sup>210</sup>*

315. Heiler, after considering the application of safety case regimes to a variety of industries and lessons that may be learnt, gave consideration to its application to the mining industry. After noting the differences cited by Rasche, Heiler notes further factors of distinction in the mining industry from other industries, that would need to be considered in the introduction of a safety case regime including:

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<sup>209</sup> T Rasche *Development of a Safety Case Methodology for the Minerals Industry – a Discussion Paper*  
The University of Queensland Minerals Industry Safety and Health Centre, October 2001

<sup>210</sup> Rasche op cit at 7

- "• *mining is a technologically heterogeneous industry- it combines complex and simple systems and processes within and between operations;*
- *mining is a dynamic environment – the product and factory “ move together” and there are daily and hourly uncertainties, and decisions which have to be made;*
- *mining is made up of small and very large operations – some complex and other “truck and shovel” operations;*
- *mining is geographically dispersed especially in Western Australia, and the tyranny of distance will impact on regulatory resources;*
- *mining is differentially located in isolated, LDC commute and in settled communities;*
- *mining is still very labour intensive, especially underground and so the management of hazards associated with human factors is critical;*
- *skills and training levels in the mining industry are inadequate and this would need to be addressed as a matter of urgency;*
- *levels of labour turnover are very high (over 30% in some operations) and this will continue to impact on skill levels and training and;*
- *large parts of metalliferous mining industry are unionised. This is combined with very high levels of unionisation in other sectors, such as coal and the construction areas of mining. Consideration must be given to a SCR which accommodates both.”*

#### *A Differential Approach*

316. Given that safety case regimes have their origins in, and have applied traditionally to, generally static major hazard facilities with a view to identifying those low probability/high consequence events that may lead to multiple fatalities, how can such a concept be adapted to the requirements of the mining and minerals processing industry? Can such a regime be implemented universally across the industry or is a differential approach required to take account of the variations in size, complexity, sophistication, resourcing and commitment of the mine operator?
317. These and other issues have been addressed by Gunningham when, in considering the various challenges confronting the adoption of a safety case regime in the mining industry, he observed as follows;

*“Nor is a safety case approach well suited to a number of other characteristics of the mining industry. Even large sophisticated companies may own a substantial number of mines which themselves are not large and sophisticated (as well as a number that are). For example, mines owned by large companies may range in size from over one thousand employees to less than two hundred, and in some cases, less than one hundred (NSW 2006 Coal Industry Profile). Irrespective of individual mine size, such companies face the challenge of ensuring that objectives and priorities established by senior management at Head*

*Office are successfully communicated to and implemented by it's 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 managers, supervisors and workers at individual sites is a substantial problem confronting large organisations (Wran & McClelland 2005, 7)".<sup>211</sup>*

318. In focusing specifically on small and medium sized mining operations, Gunningham further notes:

*"The challenges are even greater for medium sized companies – those who own less than 10 mines, and whose appreciation of the complexity of implementing OHS systems and other management tools is limited. And for small and medium sized companies (SME's), whose grasp of such issues is rudimentary at best (and non-existent at worst), the challenge is likely to prove overwhelming. Although Hopkins and Wilkinson (2005) have suggested that a suitably simplified and slimmed down version could be applied to SME's, it seems doubtful whether this is practicable or appropriate. It is particularly hard to imagine applying a safety case to these circumstances of SME's in the metalliferous sector, such as the many very small Lightning Ridge opal mines, or for many quarries. These types of enterprise are extremely unsophisticated in their management approaches, lack the capacity to apply basic safety concepts and would find the costs of doing so prohibitive. The task of an inspectorate in approving multiple safety cases would be overwhelming and a misuse of scarce regulatory resources, given that there are some 2800 mines in Australia of which over 2500 are classified as "small". Or taking New South Wales as an example there are 1258 "non-employing" (very small) mines, 491 with less than 20 employees, 88 with 20-199 employees and 23 with over 200 employees (ABS 2004).*

*Similarly while a safety case might arguably be suited to some types of mines it is manifestly unsuited to others. For example, underground mines present different and greater OHS challenges to open cut mines. As the Productivity Commission has pointed out it would be inappropriate to regulate open cut coal mining under the same safety regime as underground mining because "while open cut coal mining involves the management of serious hazards...it does not face the unique catastrophic hazards of underground coal mining...the open cut coal sector also has a substantially better safety record than the underground sector" (Productivity Commission 1998, 261). Again some mines particularly those relying heavily on contractors and without a permanent workforce, are likely to lack one crucial ingredient of a successful safety case; active workforce involvement, without which OHS outcomes are likely to be suboptimal. In the spirit of responsive regulation, regulatory design must take account of these differences."<sup>212</sup>*

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<sup>211</sup> Gunningham 2007 op cit at 72

<sup>212</sup> Gunningham 2007 op cit at 72-73

## Contentions

319. A number of those making submissions to the Review referred to the proposal for a safety case regime. As noted above, the CME adopts the in principle position that there is support for the adoption of a risk based regulatory regime in the mining industry in Western Australia, aligned to a safety case regime. It is emphasised however, that the adoption of a safety case approach to regulation in the Western Australian mining industry, needs to have regard to the particular characteristics of the resources industry, and not be based upon any assumptions that regimes in operation in for example the offshore petroleum and major hazard facility schemes, would have direct application.
320. In particular, the CME raise a number of issues that would require consideration in adopting a safety case regime or something like it, in this State including:
- The potential for the imposition of bureaucratic and unrealistic process;
  - A lack of practical examples of application of safety case methodologies in the mining and mineral processing sector;
  - The lack of competency and experience in the current regulator to develop and implement a safety case regime; and
  - A lack of competency and experience in industry to develop and implement safety cases and undertake robust risk management.
321. In recognition in particular of these issues, the CME has embarked upon an experimental process involving a number of “Exemplars”, comprising volunteer member companies of the CME, to trial a safety case approach to safety management within their organisation. These processes commenced in late 2007 and are continuing. The objective of the Exemplar program is to:
- Inform stakeholders and advance the discussion in relation to a proposed safety case framework;
  - To gather industry specific information regarding a safety case regime including development of legislation, guidance material and competency requirements; and
  - To “front end load” the safety case development rather than trying to resolve issues within the existing regulatory scheme.
322. To further aid in the achievement of these objectives, the CME is identifying required competencies within the resources industry to undertake risk management procedures. According to the CME, this has the twin objective of identifying gaps in existing competencies and then matching, as may be required, existing and future training needs.
323. Emphasised from the perspective of the CME, is the need for the State Government to commit sufficient resources to enhance the capacity of the Mines Inspectorate, in addition to a commitment by the industry.

324. In terms of the mode of legislative delivery, from the perspective of the industry submission, no substantial amendment to the MSI Act is considered necessary. It is suggested however, that substantial amendment would be required to the Regulations to give effect to such a regime.
325. As previously noted dealing with other issues in the arising on the Review, the AMMA generally supports the position adopted by the CME, in favouring a move to a risk management based regulatory regime. It is accepted that the MSI Act and the Regulations do not currently provide for risk management or performance based standards and they should do so. A legislative move towards a safety case model would be consistent with this broad theme.
326. The issue of resource intensity is a theme pursued by the CCIWA in its submission to the Review. Whilst not opposed to the concept of a safety case regime, it is noted that the resource implications, both in terms of the establishment and the maintenance of a safety case, are significant. Furthermore, a matter of serious concern identified by the CCIWA is the potential impact of a safety case regime on contractors.
327. In particular, the view is advanced that the direct impact of any such regulatory regime upon the contracting sector of the industry has not been explored. It is suggested that it is essential that the contracting sector be involved in any consideration of a safety case model, either through the current "Exemplar" program being conducted by the CME, or any alternative approach. In my view this is a substantial issue. Contractors now employ a large percentage of employed persons in the mining industry. The impact on the contracting sector of the industry of a safety case approach to regulation is an issue that must be explored.
328. Consistent with its earlier expressed views as to the impact of regulation on business generally, the CCIWA also recommends that before consideration is given to the implementation of a safety case regime in the mining industry, that the State Government undertake a regulatory impact statement, outlining its effect on mining and contracting companies in the industry.
329. The adoption of goal setting regimes in the form of a safety case approach to risk management, are noted in the submission by the AusIMM. In particular reference is made to developments in the offshore petroleum industry and the MHF regime in Victoria.
330. Whilst noting these developments, the AusIMM has concerns regarding the applicability of a safety case regime, given the inherent characteristics of the mining industry, including its dynamic nature; the significant technical challenges facing the industry; the high level of employee turnover, in particular in the present demand cycle, and the high reliance on contractors. Concern is expressed in particular, as to the capacity of small and medium sized mining operations to accommodate a safety case approach to regulation.
331. Reservations are also expressed as to the benefits to be derived from a permissioning regime, based on available research material. In particular,

given the absence of any data as to the application of safety cases in the mining and minerals processing industry, it is suggested that the present Exemplar programme may provide a useful source of information as to the development of an appropriate model.

332. Finally, in terms of national harmonisation through the NMSF, the AusIMM expresses reservations about the adoption of a safety case regime, independently of other jurisdictions, and suggests that such a course would be inconsistent with the NMSF Legislative Framework.
333. Reservations about a safety case based approach are also evident from the perspective of the union movement. The CFMEU notes that the Hicks Feasibility Report has yet to be publically released, thus precluding consultation within the mining industry. Of particular importance to the union, in its consideration of this issue, is the terms of the NMSF Legislative Framework, in particular Principle 16, dealing with a requirement for a risk based safety and health management system, the terms of which have been set out above.
334. To achieve harmonisation, as the overarching principles of the NMSF have as their objective, the CFMEU refers to the safety management systems in force under the regulatory frameworks applying to the New South Wales and Queensland coal mining industries. It is noted that under the Queensland coal mining legislation, safety management systems and principal hazard management plans, developed in consultation with employees, are required. Similarly, the terms of the New South Wales legislation also require a systems approach to safety management, along with the adoption of major hazard management plans for particular identified risks in both open cut and underground operations.
335. From this perspective, the adoption of a formalised safety management system approach to safety and health regulation in Western Australia is timely. In the union's view, the approach undertaken in the coal mining industry in Queensland and New South Wales provides an appropriate model to adopt in this State. It is also suggested that this approach would be entirely consistent with the NMSF Legislative Framework, and reflects that called for by the Regulator, for some years.<sup>213</sup>
336. As with the CME, the CFMEU in its submission does not see a need to amend the MSI Act, to introduce a risk management approach.
337. MARCSTA expresses concern as to any proposal to extend a safety case regime across the entire mining industry in this State. It outlines the origins of safety case regimes, noting their commencement in the nuclear industry and gaining currency across the offshore oil and gas and major hazard facility sectors. In particular, it is emphasized that such regimes have had a traditional focus on catastrophic risk and complex plant and processes with high risk profiles.

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<sup>213</sup> See CFMEU submission at 16 referring to submissions by the DIOR to the Ritter Inquiry at 344.

338. These regimes have in the past focussed on major asset damage and loss of productivity (Longford); the potential for significant loss of life and danger to the public (Piper Alpha); and large scale environmental damage (Chernobyl).
339. From this perspective, MARCSTA suggests that if these features are present in any mining operation, then it may be appropriate to make provision for appropriate regulatory capacity under the MSI Act. This could also be accommodated by a separate piece of legislation.
340. In an overall sense, it is submitted that whilst the proposal for a safety case regime in the mining industry in Western Australia appears to have originated from the Ritter Inquiry, subsequently significantly widened by the MSIG, concern is expressed that little attention has been paid to the full consequences of such a recommendation. Furthermore, it is said that *"No credible justification for dispensing with the existing regulatory structure has ever been put forward. The current safety and health performance of the mining industry, by any measure, provides no basis for such a recommendation."*<sup>214</sup>
341. Also noted, are the reservations expressed by researchers in the field, in particular Rasche, outlined above, and that a requirement for an industry wide safety case regime would be inappropriate in particular, for small mining operations.
342. Professor Joy observes that any progression to a safety case regime will have significant implications for mine manager and regulator competencies. In particular, the implications for the regulator will depend entirely on the nature of the process and regulatory requirements imposed.
343. As an example, Professor Joy outlined the requirements of the NOPSA safety case regime, and the significant demands that this imposes on the regulator, compared to the traditional role played by a mining inspectorate. One issue identified in particular by Professor Joy in his submission, is the requirement for risk management competencies both within the regulator and the industry. In this respect, he referred to the risk management programs being conducted in Queensland, as outlined later in Chapter 10.
344. Many of the themes taken up by Professor Gunningham in his submission to the Review are reflected in references already made to his published work above. In reiterating those reservations and expressing concern in relation to a safety case or safety case type of approach in particular for small and medium size mines, Professor Gunningham advances for consideration a phased or differential approach to safety regulation. In particular, he notes that:

*"For all these reasons, it would be inappropriate to apply a safety case regime to all mines regardless of size, complexity, capacity or motivation, at least initially. To do so would be to ignore the considerable heterogeneity of the mining industry, the inappropriateness of a safety*

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<sup>214</sup> See MARCSTA submission at 18

*case regime for some types of organisation, and the challenge of convincing unsophisticated and reluctant organisations to engage in the spirit of meta- regulation under such a regime. Accordingly, it would be wise to introduce a safety case regime on a phased and experimental basis, mindful of the edict of adaptive management that 'social policies are experiments – learn from them'. Such a phased approach would have the benefits of "testing by results" and of applying the safety case regime to the groups most likely to respond well to it, before extending it to others who might be reticent to adopt it, or less equipped to do so. It would also give time for an inspectorate that is currently wholly unsuited to this approach to change direction and accommodate to what would be a radical change of direction, requiring very different skills and background."*

345. Consistent with this broad theme, Professor Gunningham proposes a three phased approach to the adoption of a safety case regime.
346. The first phase would involve a voluntary option for "OHS leaders", they being most likely, large sophisticated organisations who have a desire to *"go beyond compliance and could be entrusted with much greater autonomy (albeit still subject to regulatory and third party oversight) as to how they achieve that goal."*<sup>215</sup>
347. Consistent with this approach, it is those organisations that are seeking to enhance their "social licence to operate" that may be attracted to such an option. Additionally, such a voluntary option would enable, by essentially an experimental process, the system to be "de-bugged" and to enable the Mines Inspectorate to become more familiar with a significantly different mode of safety and health regulation.
348. A second phase would involve a mandatory step to extend a safety case regime to a further substratum of mining operations, perhaps determined by criteria including size, complexity and risk. Professor Gunningham suggests that for the purposes of this phase, given that other than "OHS leaders" may be involved, sufficient incentives may be required for such a sub group, along with effective employee involvement and an enhanced capacity of the regulator.
349. A final phase suggested, is the extension of any safety case regime to a broader range of enterprises, dependant upon the success of the first two phases.
350. The issue of small and unsophisticated operators is also the subject of consideration in Professor Gunningham's submission. For this group, he suggests that a systems-based approach may be suboptimal, and may well be beyond the capability of such operations. Instead, a more fruitful mode of regulation at this level may include the existing general duties, supplemented by codes of practice and other guidance material.

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<sup>215</sup> See submission Professor Gunningham at 19-20

351. The views of the RSD as to this issue were expressed as requiring consideration of a range of matters including the type of mine to be regulated by a safety case in terms of size and complexity of operations etc. Furthermore, consideration will need to be given to the role of safety and health committees and representatives, in terms of their degree of involvement in the development of any safety case. Also referred to by the RSD is the possibility of using existing mechanisms, such as the project management plan requirement of the Regulations, suitably amended, to enable the introduction of a safety case regime in a timely fashion.

352. The State Mining Engineer made extensive submissions in relation to this issue. He considers the traditional features of a safety case approach, and the major differences of these approaches as applied to a mining environment. Some of the academic research and commentary referred to above is noted in this regard. In particular, the State Mining Engineer observes, in my view entirely appositely, that in the absence of any safety case regimes applicable in the mining industry, comparison with existing schemes in other industries is of limited value. In particular, reference is made to a number of matters that would need to be considered some of which include:

- To what extent any regime would extend to all mining operations including exploration;
- The fact that a safety case is a staged and “living” process that will evolve with the development of a mine;
- To what extent the regulator could or should have the power to and would revoke a licence to operate a mine and any appeal process from such a decision;
- Any liability imposed on the regulator arising from the process of “acceptance” or “approval” of a safety case given there may be little practical difference between the two;
- Who will meet the substantial funding costs of such an approach, including training and development of both the industry and the regulator and any demonstrated cost/benefit analysis;
- Related to the above, what improvement if any, in safety performance is expected from the adoption of such an approach in the absence of any demonstrated thus far;
- The absence of any objectively verifiable data, both quantitative and qualitative, as to what safety risks can be managed under such an approach in the mining industry;
- The role of consultation, in particular the role of a safety and health committee, given they are not mandatory anywhere in Australasia and the competency and skills of the members to extensively participate in the safety case development process may be open to question; and
- The assignment of the appropriate levels of responsibility between the mine operator and the regulator, noting the primary responsibility should be with the operator.

353. The State Mining Engineer in his submission proposes two options to give effect to a safety case form of regulatory regime in the mining industry in Western Australia, a “minimalist” and a “selectivist” model.

### *Minimalist Option*

354. A minimalist option to adopt a form of safety case model, would involve the use of the project management plan requirement in reg 3.13 and the emergency management plan requirement in reg 4.30 of the Regulations. Both of these provisions apply to a new operation. A new mining operation is unable to commence without the agreement of the State Mining Engineer as required in s 42 of the MSI Act. An appropriate project management plan is a necessary precondition to the State Mining Engineer's agreement to commence operations.
355. For new mining operations, it is suggested there would only be a need to modify the project management plan requirements to make the evaluation more vigorous and if necessary, to slightly amend the terms of reg 3.13 to incorporate traditional safety case elements. The emergency management plan required under reg 4.30, would, according to the State Mining Engineer, form a part of a safety management system within a safety case methodology.
356. This plan is required to be revised and updated in response to changes in mining operations, equipment, systems or mine procedures. It is noted by the State Mining Engineer in his submission, that a failure to comply with these regulations constitutes an offence, which could lead to the imposition of not insignificant fines.
357. In the case of an existing operation, a somewhat different approach would be required. As the project management plan only applies to a new mining operation, it is suggested that the powers conferred on the State Mining Engineer under s 45 of the MSI Act, requiring the provision of an engineering report, may be used.
358. This provision empowers the State Mining Engineer to request a Principal Employer or manager of a mine, to provide an independent engineering study concerning safety and health at the mine either in general terms or in a particular respect. The engineering report is to be prepared by a professionally qualified engineer or other qualified professional person, approved by the State Mining Engineer. A reason for requesting such a report must be provided. Failure to provide such a requested report constitutes an offence and the offender is liable to a level one penalty under the MSI Act.
359. In terms of sanctions under such a model, the State Mining Engineer suggests that upon receipt and evaluation of the engineering report, it would be open to the Mines Inspectorate, to utilise Improvement and Prohibition Notices as might be required to ensure compliance. In terms of the requirement for a reason for such a report as specified in s 45(2), it is suggested that this could simply be:

*"To establish whether (or confirm that) operations at the mine are being conducted in accordance with the provisions of s 9 of the MSLA, in that, in so far as is practicable, operations are conducted so as to avoid the exposure of employees to hazards".*

### *Selectivist Model*

360. The State Mining Engineer has proposed an alternative model to that outlined above for the adoption of a safety case regime. This model is premised upon the principle that it must be recognised that there is a large disparity between the motivation, resourcing and ability to participate, between on the one hand, large mining companies and small mining enterprises.
361. It is submitted that in terms of organisational sophistication, small to medium sized enterprises would lack the necessary resources, understanding and ability to negotiate a safety case regime. On the other hand, it is likely that large multinational mining operators, which already have well developed and sophisticated safety management systems, would be more capable of implementing a more autonomous approach to safety and health management, characterised in the safety case approach.
362. These larger operators, may well have already in place, most of the systems required and may be more receptive to embracing a safety case regime, as being consistent with their overall corporate goals and aspirations. In relation to this selectivist model, the State Mining Engineer proposes that there be an approach that has the following elements:
- (a) a staged implementation of a safety case regime;
  - (b) that it initially be based on "self selection" by invitation to those operators who would consider themselves to be appropriately equipped and motivated to enter such a regime;
  - (c) that this approach would provide an interim period to "bed down" the safety case regime and deal with problems that might arise and also provide an opportunity for education and training programs for the industry;
  - (d) other mines could be brought on to the system over time; and
  - (e) the existing regime in the MSI Act and Regulations could be retained for those operators in the industry remaining who did not wish to or were not able to participate in the new regime.
363. The implementation of such a selectivist model for change could be achieved by:
- (a) the enactment of a new Act and Regulations for a safety case regime with the existing legislation remaining for others;
  - (b) a mechanism be developed to enable mines to pass between both systems such as "instruments of declaration" presently utilised in s 6A of the MSI Act; or
  - (c) the maintenance of a single Act with a separate part for safety case provisions, utilising the statutory instrument of declaration approach as above.

364. Furthermore it is suggested by the State Mining Engineer, that the minimalist and selectivist models, are not mutually exclusive, and both could be combined to produce a hybrid approach, which could achieve the required outcomes at relatively small cost and with minimal disruption to the existing mining industry regime.
365. Both of these approaches as suggested, have commendable features. The obvious attraction of the first suggested model is an ability to utilise the existing legislative framework to implement, perhaps on at least a trial basis, a form of safety case regime to enable it to be tested in the mining and minerals processing industry in this State.
366. Subject to the outcome of such a process, there would be nothing preventing movement to the second selectivist model suggested, based upon new legislation or an amendment to the existing MSI Act, as the concept gains acceptance in the industry. An advantage of these approaches, is, as the State Mining Engineer has suggested, a relatively low cost methodology which could be delivered within the existing broad legislative framework and administrative structure, with relatively minimal change.
367. It will still require, however, in my view, necessary further substantial resources being allocated to the Mines Inspectorate in order to assess and either "accept" or "approve" the safety cases prepared and submitted by mines operators under either model.

### Conclusions

368. In light of the submissions and research material, I have substantial reservations as to the suitability of a safety case or safety case type of regime for small and medium sized mines, in particular having regard to the heterogeneous nature of mining operations. On the other hand, larger, more sophisticated and well resourced operations may obtain considerable benefit from the implementation of a risk management approach based on safety case principles. I concur with the observations of Professor Gunningham in his submissions to the Review in this regard. I consider there is much to be said for an incremental approach to the adoption of a regime incorporating safety case principles.
369. Any proposal to adopt a safety case approach will need to recognise its essentially experimental nature in relation to mining. It will be a first as far as the mining and minerals processing industry is concerned. That being so as with all experimental processes a cautious approach would be prudent in my opinion. The mandatory application of a safety case model should not be considered at this early stage of development. Given their untested nature in the mining industry, there will have to be developed over time, a body of data as to what constitutes a mining industry safety case. Additionally, the establishment of the necessary competencies, both within the industry, and the regulator, will take considerable time to develop. There also needs to be

identified and developed the necessary training to accommodate the required competencies. This will entail a significant learning process for all relevant participants. The Exemplar programme commenced by the CME with some of its members is certainly a step in this direction. The role of contractors, given their prominence in modern mining operations, will need consideration.

370. In light of these matters, and considering the submissions and research available, I consider that it would be prudent to provide for a differential approach to safety and health regulation in the mining industry in Western Australia. Such an approach should accommodate the differing size, complexity, motivation, level of sophistication and resourcing of mine operations across the State. There is no reason in principle why a mix of regulatory regimes cannot be made available. This would enable over time, as an interim measure, a staged approach.

### **A Further Alternative**

#### *A Differential Approach*

371. In recognition of the differing size, complexity and sophistication of mine operations in the State, an alternative approach can involve a mix of regulatory models. This alternative, responsive, regulatory approach could comprise three tiers.
372. The first tier would be the safety case option, available on an "opt-in" basis, essentially for those mine operators who "self select", and who wish to take part in this regulatory regime on a voluntary basis. Those participating at this level would be more than likely to be high performance organisations that wish to push their safety and health performance "above and beyond" any existing level of regulation. As a condition of entering the safety case option, and acceptance of their safety case, these mines should be exempted from compliance with the Regulations, by way of a general exemption or some other mechanism, in recognition that their safety and health obligations will be self contained in the "case" put to and accepted by the regulator. An exemption from the second tier below would also be required.
373. The second tier, and one that could extend to the majority of the industry, could comprise a safety management system and principal/major hazard management plan approach, modelled on the Queensland and New South Wales metalliferous and coal mining legislation. The system should incorporate a trigger action response plan ("TARP") for critical hazards. The principal/major hazard plans would embrace the most safety critical aspects of both underground and surface operations such as in-rush, strata control, ventilation, fire and explosion, mine wall stability, mobile plant any other relevant high risk activities. As to the latter, the New South Wales coal mining major hazard management plans, contained in the coal regulations, could provide a useful guide. There should be a focus on implementation of the system and appropriate demonstration of adequacy.

374. The third tier comprising the existing general duties could extend to small open cut and quarry operations employing ten or less employees. This would recognise that a different approach should be applied to the small mine sector. This would include sand pits and small quarries. Whilst the exemption from a management systems approach would apply to this sector, in my view it should not extend to underground operations, given the well known risks associated with underground mines. These risks are present regardless of the number of employees engaged. A similar exemption exists in the Queensland metalliferous legislation, but it extends to both underground and surface operations. Some consideration would need to be given to whether this exemption is defined in terms of those working under contracts of service, or more broadly, other working arrangements such as labour only contracting, to ensure there is no evasion of obligations. An approach that could be considered is a broader definition of "worker", to include those engaged on a variety of contractual arrangements.
375. Depending upon the success of the optional tier for a safety case approach, consideration could be given in the longer term to extending it across a broader sector of the industry by mandatory application, according to predetermined criteria such as size, complexity, underground, etc, depending upon the model adopted.

#### *Benefits of Approach*

376. Such a differential approach to regulation has a number of advantages in my view. Firstly, those wishing to self-select into the safety case tier would not only receive the benefit of exemption from the existing Regulations, but their involvement would enable a degree of "debugging" of the safety case approach as applying to the mining industry. A body of knowledge as to what should comprise a safety case for a mining operation would be accumulated over time.
377. Secondly, the required competencies for both the industry and the regulator could be progressively developed in an environment where the resourcing demands of any such transition would be more manageable than a mandated scheme across the industry, at least initially.
378. Thirdly, the remainder of the industry operating under safety management systems and principal/major hazard management plans, will have the opportunity over time, to become accustomed to operating under such a regulatory regime, incorporating risk management principles. It will also enable the Mines Inspectorate to adjust to a new approach, regulating on a systems based model. This could provide a solid foundation for the ultimate progression to a safety case approach more widely, if considered desirable, and the refinement of any model as proposed.

#### *Mode of Delivery*

379. In terms of the mode of legislative delivery for such a differential approach, it could be achieved with very little or no amendment to the MSI Act. I see no

reason in principle why the opt-in safety case and safety management system principal/major hazard management plans, could not be achieved by separate regulations, or separate Parts to the existing Regulations. However, as is the case in Queensland and New South Wales, the safety management system principal/major hazard management plan obligations would perhaps be better contained in the statute itself, with the detailed requirements the subject of regulations. This would promote a measure of consistency with the other principal mining jurisdictions and moreover, be consistent with the goals of the NMSF in terms of legislative content. The form of the safety case regulations could be modelled on those applicable for MHF in Western Australia, as contained in the relatively simple design of the DG Act and DG Regulations and those applicable in the offshore oil and gas industry, suitably modified, as a guide. In my view, it would be preferable for there to be as much alignment with the existing State regimes as is practicable.

380. The existing general duties regime will underpin the risk management approaches adopted in the amended MSI Act and regulations. Any decent safety case and safety management plan would satisfy the general duties requirements.
381. The appropriate exemptions as suggested above could be incorporated into the regulations and the MSI Act as the case may be.
382. Additionally, the matters identified at par 352 above, as expressed in the submission of the State Mining Engineer, need to be taken into account.
383. As an interim measure consideration could be given to the use of a suitably modified version of a project management plan, in conjunction with s 45 of the MSI Act, to enable, at a relatively early stage, the trialling of a safety case, consistent with the views expressed by the State Mining Engineer based on the "minimalist model". I see no reason in principle why this approach could not be utilised and many reasons why it should. No substantive legislative amendments are necessary; it can be implemented relatively expeditiously; it involves minimal cost and could enable those wanting to "opt in" to a safety case approach to do so to test their approach. Some amendments would be necessary to regs 3.13 and 4.30 to enable this to occur. There is also a recommended amendment to reg 4.30 in Chapter 14.

#### *Transitional Arrangements*

384. There will need to be appropriate transitional arrangements concerning the transition to any new system. This will include the drafting of new regulations, the recruitment and training of staff of the regulator, and information and awareness-raising in the industry to prepare for the system implementation. A sufficient period of time would be needed.
385. Any transition to a new system would allow for:
  - the drafting and promulgation of new Regulations
  - a "root and branch" review of the existing Regulations

- the establishment of education and training programmes by the regulator and industry groups; and
  - the identification of the required competencies for a risk management approach, within both the regulator and the industry.
386. This alternative approach involves the retention of the existing but amended legislative framework in the MSI Act, with the adoption of new and separate sets of regulations to give effect to a safety management systems/principal hazard management plan approach and the “opt in” safety case regime. Such an approach has a number of other advantages including:
- (a) the significant delay involved in the enactment of a new Act of Parliament can be avoided;
  - (b) it avoids an additional layer of legislation;
  - (c) the existing and familiar legislative framework under the MSI Act can be retained; and
  - (d) such an approach is consistent with the approach taken to the delivery of risk management regimes in the other principal mining jurisdictions.
387. As to the latter point, it is pertinent to note that the safety case regime having application to offshore oil and gas industry administered by NOPSA, is implemented by separate regulations, the Petroleum Submerged Land (Management of Safety on Offshore Facilities) Regulations 1996 enacted under the then PSL Act (Cth). The offshore oil and gas safety case regime, as set out these regulations, *gave effect* to the general duties provisions set out Schedule 7 of the PSL Act, which are in similar terms to the general duties provisions found in most safety and health legislation, including the MSI Act and the OSH Act. This legislation was replaced by the Offshore Petroleum Act 2006 (Cth) effective from 1 July 2008. The new legislation, whilst largely replicating the PSL Act (Cth), modernises the drafting of the former law. The new Schedule 3 of this legislation, replaces the former Schedule 7 of the PSL Act (Cth), and contains some minor amendments in relation to the general duty of care provisions.
388. That is, the legislative regime for the offshore oil and gas industry comprises general duties which general duties are given effect by the requirement upon an operator to prepare and submit a safety case to NOPSA, under the Regulations. Schedule 3 of the Offshore Petroleum Act 2006 (Cth) contains provisions not dissimilar to the requirements presently imposed by the MSI Act, in relation to consultation with employees, workplace arrangements including health and safety representatives and committees, emergency procedures and an inspection regime for Inspectors, and other miscellaneous provisions.
389. Whether or not such regulations could be promulgated, is a specific issue posed in my Terms of Reference, that being whether “*specifically what amendment to the MSI Act (if any) is required to allow the development of safety case regulations:*” Given the proposal for a safety management system/principal hazard management plan approach to also apply,

consideration needs to be given to an appropriate head of power for such regulations, as may be required to supplement the amendments to the MSI Act

## Head of Power

### *General Power*

390. To support regulations providing for a risk management model in the mining and minerals processing industries in this State, the MSI Act must have a sufficient head of power. The power to make regulations is prescribed by s 104 of the MSI Act. By s104(1) it is provided:

*"The governor may make regulations prescribing all matters that are required or permitted by this Act to be prescribed or are necessary or convenient to be prescribed, for achieving the objects and giving effect to the purposes of this Act, and in particular - "*

391. This general regulation making power is expressed in familiar terms to that contained in many statutes and is described as the "necessary or convenient" clause, variations of which represent common statutory formula.<sup>216</sup> Such a general regulation making power, commonly found in statutes, does not extend to everything that the Governor General or Governors respectively consider "necessary or convenient".<sup>217</sup> It does not enable regulations to extend the scope or general operation of a statute, but is strictly ancillary. It authorises a subsidiary means to give effect to what is enacted in the principal statute.<sup>218</sup>
392. The scope and purpose of the MSI Act is to be found in s 3 dealing with the objects of the legislation. In particular, those parts of the objects in s3(1)(a); (b); and (c) in relation to securing the health and safety of persons engaged in mining operations; identifying and reducing hazards and protecting employees against risks and eliminating or minimising such risks are apposite for present purposes. The manner in which such objects and purposes of the MSI Act principally find expression, are contained in Part 2 dealing with general duties in relation to occupational safety and health which imposes various obligations on the prescribed duty holders.
393. For present purposes, those broad duties of care in relation to employers, employees, and self-employed persons, principal employers and managers and those subject to so called "contingent" employment arrangements, are specified in ss 9, 10, 12, 13, 15A, 15B, 15C of the MSI Act. These provisions taken in their totality, in particular those for example set out in s 9 imposing duties on employer's generally, are all encompassing and require "so far as is practicable" an employer to provide and maintain in a mine a working environment in which the employer's employees are not exposed to hazards.

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<sup>216</sup> See generally S D Hotop *Principles of Australian Administrative Law* 6th Ed at 114-115

<sup>217</sup> *Commonwealth and PMG Progress v Progress Advertising Agency Co Ltd* (1910) 10 CLR 457

<sup>218</sup> *Shannahan v Scott* (1957) 96 CLR 245 at 250; *Utah Construction & Engineering Pty Ltd v Pataky* [1966] AC 629

Without limiting that general obligation, the particular obligations are then set out in s 9(1)(a) to (e) respectively.

394. Taking these general duties provisions, which are *enacted and specified* in the statute, in the context of the scope and purpose of the legislation as a whole, it may well be said that regulations providing for risk management approaches to safety and health regulation, are “necessary and convenient for achieving the objects and giving effect to the purposes of” the MSI Act, within the context of the authorities referred to above.

### *Specific Power*

395. Other specific heads of power set out in s 104(1) of the MSI Act include regulations in particular:

- “(c) dealing with and imposing duties on employers, managers, supervisors, superintendents, deputies, foreman and employees under this Act;*
- (ca) without limiting paragraph (c), imposing duties on persons in relation to –*
  - (i) the identification of hazards at mines;*
  - (ii) the assessment of risks resulting from such hazards; and*
  - (iii) the taking of remedial or other action; ...*
- (f) providing for the safety and health standards and procedures to be complied with -*
  - (i) at any mine;*
  - (ii) in the performance of any work in connection with a mine;*
  - (iii) in the use, cleaning, maintenance, disposal or transportation of any plant in connection with a mine;*
  - (iv) in the use, handling, treatment, removal, processing, storing, transport or disposal of any substance in connection with a mine; ...*
- (g) prescribing measures or precautions to avoid any accident or dangerous occurrence in a mine; ...”*

396. As I have already noted, the amendment to insert s 104(1)(ca) into the MSI Act,<sup>219</sup> was made for the express purpose, following the Laing Review, of empowering regulations to be made to enable comprehensive risk management in mines, by way of hazard identification, assessment of risk and control of risk processes.<sup>220</sup> This head of power, despite Mr Laing’s recommendations, has yet to be acted upon.

397. In my view, regardless therefore, as to whether the general regulation making power will support regulations prescribing a safety case and regulations to support safety management systems, for the reasons outlined, the specific heads of regulation making power arguably provide sufficient scope for the

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<sup>219</sup> See Amending Act 68 of 2004 s13, 39, 72 and 92

<sup>220</sup> See Mines Safety Inspection Amendment Bill 2004 clause 92 and Explanatory Memorandum pars 137-140

enactment of new regulations for these purposes. However, in an abundance of caution, an additional head of power could be inserted into s 104(1) along the following lines:

*“(cb) without limiting paragraphs (c) and (ca) imposing duties on persons in relation to safety and health management systems and critical controls for major hazards at mines”*

#### **Recommendation 8**

**That a risk management model of safety and health regulation be implemented in the Western Australian mining and minerals processing industry.**

#### **Recommendation 9**

**That implementation of a risk management model to safety and health regulation be implemented by a combination of amendments to the MSI Act and the enactment of new regulations. The form and content of those amendments and regulations should be consistent with Recommendations 10-13.**

#### **Recommendation 10**

**That a differential approach to safety regulation be adopted in the mining and minerals processing industry in Western Australia as set out in Recommendations 11-13.**

#### **Recommendation 11**

**That a safety case approach to regulation be available on an “opt-in” basis for those mining operations that wish to select this option voluntarily by new regulations or an amendment to the Regulations. On “opting in” and acceptance /approval by the Regulator the mine should be exempted from compliance with the Regulations by way of a general exemption and with the requirements specified in Recommendation 12. Additionally, and as an interim or alternative approach, use be made of s 45 of the MSI Act and suitably modified regs 3.13 and 4.30 of the Regulations.**

#### **Recommendation 12**

**That for all other mining operations, subject to Recommendation 13 below, the MSI Act be amended to incorporate a safety management system and principal/major hazard management plan approach using as a guide the CSMH Act (Qld) and Regulations and the CMHS Act (NSW) and Regulations consistent with Principle 16 of the NMSF Legislative Framework, incorporating a Trigger Action Response Plan (TARP). The focus should be on implementation and demonstration of adequacy.**

**Recommendation 13**

**That small open cut mines and quarries employing 10 employees or less be exempt from the requirement to prepare a safety management system and principal/major hazard management plan.**



## Government of Western Australia Ministerial Advisory Panel

"Advising on Best Practica Safety Regulation"

### Mines Safety and Inspection Levy

The levy model has been further refined and simplified prior to finalisation, to satisfy both industry and Government requirements. Details are as follows:

1. All mining operations, including exploration, within Western Australia that are regulated by the *Mines Safety and Inspection Act 1994* and employ more than 10 workers (i.e. more than 5,000 hours per quarter or 166 hours per month) will be required to pay the levy.
2. Levy calculations will include all "workers" as defined in the regulations:  
*worker* means an individual who for remuneration carries out work at a mine in the course of mining operations (whether under a contract of employment, a contract for services or other arrangement) but does not include a student gaining work experience.
3. The levy model has been simplified to use a rate of *dollars per hour worked*. The formula for each levy assessment notice per mine site is the levy rate (\$ per hour) multiplied by the total number of hours worked in a period. The principal employer is liable to pay the levy assessment notice for a mine site.
4. The initial levy will use hours data from a one-month period multiplied by a levy rate of \$0.75 per hour. This is to cover costs accrued during the period since the Act was amended, and equates to the previously announced rate of \$125 per FTE.
5. Subsequent levies will use quarterly hours data for quarterly assessment. Quarterly assessment helps spread the cost burden for industry.
6. During 2010/11, the levy rate will be \$0.125 per hour, which equates to \$250 per FTE.
7. For 2011/12 onwards, the levy rate per hour will be calculated in September, to commence from 1 July in the *following* financial year. This timing is necessary to align with the Government budget cycle and allow time for Executive Council approval and publishing of the levy in the WA Government Gazette.
8. The levy rate will be determined using :
  - An estimate of the operating costs of the Mines Safety regulatory services for the following financial year, *minus* an allowance for Community Service Obligations (which will still be funded by Government revenue), *plus or minus* any levy account surplus or deficit carried over from previous financial years.
  - This resulting cost is then divided by an estimate of the number of hours worked by mining industry workers for the following financial year.
9. The revenue to be generated will be about \$8 million for the initial levy and about \$18 million for the 2010/11 financial year. Over time, it is expected that the actual balance of the levy account at June of each year will not be significant.
10. The administrative, IT and financial infrastructure associated with the levy will be independently audited.
11. The Monthly Status Form currently submitted by industry for accident statistics reporting will be amended to allow collection of the same data under the new levy regulations.
12. Principal employers will be required to submit employee hours worked data by the 15th day after the end of each month. Principal employers may be prosecuted if employee information is submitted late or if it is materially incorrect.



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"Advising on Best Practice Safety Regulation"

### Progress Update

#### LEGISLATION

- The Mines Safety and Inspection Levy Regulations 2010 have been drafted, and should be gazetted by the end of April 2010.
- The Department continues to provide input into COAG reforms under the National Mines Safety Framework and National Occupational Health and Safety Legislation Harmonisation.

#### CAPACITY

##### Recruitment of additional staff for Resources Safety

- *Resources Safety Recruitment is on the DMP website:* <http://www.dmp.wa.gov.au/10203.aspx>
- *New appointments:* Scientific Officer (Uranium) - starting 10 May 2010; Senior Human Resources Consultant (dedicated to Resources Safety) - starting 19 April 2010.
- *Interviews completed and selection in progress:* Project Director, Project Manager and Project/Policy Officer – selection being finalised and commencement dates negotiated.
- *Upcoming job advertising* - Advertising campaign in newspapers and regional radio on Saturday, 24 May 2010 for the following positions:
  - Perth: Occupational Hygienist; Mining Engineer; Electrical Engineer
  - Kalgoorlie: Process Engineer; Mining Engineer; Geotechnical Engineer; Mechanical Engineer

##### Attraction and retention initiatives

- A meeting was held on 24 March 2010 with the Public Sector Commission and Labour Relations (Dept of Commerce) representatives to discuss a proposed Agency Specific Agreement, new attraction and retention benefit agreement and the development of other benefits, including a job package that would be competitive with external comparative positions.
- Both the Public Sector Commission and Department of Commerce (Labour Relations) have indicated support for these proposals for critical RSD positions.
- A four-year media and advertising campaign is being developed with assistance from the Government Media office and a professional consulting agency to ensure maximum and effective exposure for advertised positions linked to the resources sector.
- The above strategies have been supported by the Minister.

#### COMPETENCY

- Requests for Quotation have been finalised to appoint service providers for formal recognition of inspector competencies to national standards.
- Development has started on the Safety Regulation System, which will replace the disparate and outdated compliance and licensing systems currently used for mines safety, petroleum safety and dangerous goods safety. When commissioned, it will significantly improve the level of service provided to industry.



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## **National Reforms**

### ***National Harmonisation of Occupational Health and Safety Laws***

Safe Work Australia ([www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au)) is authorised to make further technical and drafting amendments to the *Work Health and Safety Act* (WHS Act) prior to final approval on 29 April 2010.

### ***National Mine Safety Framework***

Mining-specific issues are being addressed by the National Mines Safety Framework (NMSF) under the seven strategies of legislation, competency, compliance support, enforcement, data, consultation and research.

Significant work has been completed on four of the seven strategies:

- *Strategy 1 'Nationally Consistent Legislation'*: Current work relates to the production of drafting instructions for mining-specific regulations for submission to Work Safe Australia by early June 2010.
- *Strategy 2 'Competency Support'*: Competency mapping and Inspectorate capability analysis have been conducted.
- *Strategy 4 'Enforcement'*: An enforcement guideline has been drafted.
- *Strategy 5 'National Mine Safety Data Base'*: A national dataset has been determined and a request for tender to develop the selected a technical solution has been let.