MEMORANDUM FOR THE FILE

To: Sago Mine Investigation File

From: Suzanne Weise & Patrick McGinley

CC: Davitt McAteer

RE: Thinking Out-Side-The Box: The Proposed Blended Duty of Care and Safety Case Model for Regulation in the Coal Mining Industry of Australia

I. INTRODUCTION

New regulatory and administrative measures have been proposed to address perceived shortcomings of the existing statutory and regulatory mine safety regime subsequent to the Sago Mine explosion. Some coal industry officials, regulators and other interested parties have been critical of these proposals on the ground that broad, generally applicable regulatory mandates, fail to take into account mine-specific circumstances and features. Such criticism asserts that regulatory mandates that fail to adequately address mine-specific issues are likely to involve excessive cost in relation to increase in miner safety and that they are likely to prove inefficient and or ineffective.

This assertion that mine site-specific issues should be an integral part of any response to the regulatory inadequacies identified in the wake of the Sago investigation is not necessarily in conflict with the regulatory proposals it criticizes. On the contrary, “outside-the-box” analysis might lead to new approaches blending the general regulatory mandate approach of recent proposals with critics’ demand for attention to site-specific mine characteristics. Below, this memorandum identifies an example of “outside-the-box” thinking which might provide the impetus for resolving concerns of critics of new mine safety regulatory proposals. The memo does not argue for the adoption of the blended duty of care/safety case regulatory model proposed for the coal industry in Australia. Rather, the approach of the Australian proposal provides and example of how creative outside-the-box thinking may help to resolve thorny regulatory issues which tend to be frozen by ossified conventional analysis.

This Memorandum describes the generally applicable “duty of care” standard of Australian law and a proposal to append to the existing coal mine safety regulatory regime a “safety case” approach found to be successful when applied occupational health and safety regulation of other industries in Australia. Relevant to the Post-Sago search for ways to improve mine safety is the active involvement of mine managers in developing mine site-specific approaches to reduction of health and safety hazards.

The following discussion describe in summary form a 2005 report and attendant working paper made to and for the West Australian government; the charge of Hopkins and Wilkinson, the reports’ authors, was to provide advice on best practice safety regulation for the mining industry in that State.  

II. DUTY OF CARE IN AUSTRALIA

Australia is a national federation of six States and two Territories. Under the Australian system of government, States and Territories have responsibility for enacting and enforcing laws relating to workplace health and safety.

Each State and Territory has a principal Occupational Health and Safety (OHS) Act which sets out requirements for ensuring workplace health and safety. These requirements spell out the duties of different groups of people who play a role in workplace health and safety. These requirements are known collectively as the “Duty of Care.” Duty of care legislation “is often described as outcome-based, performance based, or goal setting legislation because of its focus on outcomes.” This duty of care standard has roots in the common law tort of negligence recognized in Anglo-American jurisdictions.

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2 Id. at 3. The advice was provided in the first place to a Mine Safety Improvement Group and formed the basis of its report to government, delivered in April 2005. The full report is available at http://www.ministers.wa.gov.au/carpenter/docs/features/interim%20report%20stage%201%20w%20text.pdf. The Hopkins and Wilkinson working paper discussed herein “aims to extricate the advice outlined in that report from the particular Western Australian context and present it in a way that is of potential relevance to other Australian jurisdictions. The aim, then, is to present a model for best practice safety regulation in the mining industry generally.” Id. The report and working paper do not parallel traditional discussions of regulatory models that focus on regulatory requirements to be imposed on a regulated industry. Rather, Hopkins and Wilkinson go further --- considering both regulatory requirements and with the structure of the regulator.

3 Id. Wilkinson and Hopkins explain their report and work paper devote considerable attention to regulatory structure because of its importance for any government seeking to set up a best practice regulatory regime.

4 The following is a link to the State and Territory OHS authorities: http://www.nohsc.gov.au/OtherRelatedSites/australiansites/

5 The “duty of care” standard of the common law tort of negligence (in American Jurisdictions often referred to as the “reasonable person” standard) underpins the development of occupational health and safety regulation in Australia as well as in the United Kingdom.

jurisprudence. In Australia’s occupational health and safety law the duty of care is a component of statutory regime protecting workers.\(^7\)

Duty of care requires employers, employees and any others who may have an influence on hazards in a workplace to do everything ‘reasonably practicable’ to protect the health and safety of workers.\(^8\) Prior to the adoption of the duty of care approach, safety obligations were imposed only up to the level of the mine manager and no duty was imposed on mine owners.\(^9\)

The term ‘reasonably practicable’ under duty of care means that the requirements of the law vary with the degree of risk attendant a particular activity or work environment which must be weighed against the time, trouble and cost of taking measures to control the risk.\(^10\) It allows the duty holder to choose the most efficient means for controlling a particular risk from the range of feasible options preferably in accordance with the ‘hierarchy of control’.\(^11\)

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\(^8\) “Any others” includes contractors and those who design, manufacture, import, supply or install plant, equipment or materials used in the workplace.

\(^9\) Hopkins & Wilkinson, supra note 1 at 3.

\(^10\) The words "reasonably practicable" have been the subject of much judicial consideration. Three general propositions are to be discerned from the decided cases:

- the phrase “reasonably practicable" means something narrower than "physically possible" or "feasible";
- what is "reasonably practicable" is to be judged on the basis of what was known at the relevant time;
- to determine what is "reasonably practicable" it is necessary to balance the likelihood of the risk occurring against the cost, time and trouble necessary to avert that risk.

_Slivak v. Lurgi_, 205 CLR 304, 322 [2001] HCA 6 (citing cases in footnotes 36 through 39).

\(^11\) The ‘hierarchy of control’ refers to the range of feasible options for managing the risk to health and safety. The hierarchy normally ranges over the following controls: elimination of the hazard; its substitution with a less harmful version; its redesign; engineering controls; isolation of the hazard from people at the workplace; safe work practices; redesigning work systems; and the use of personal protective equipment by people at the workplace.
The range of options falling within the scope of ‘reasonably practicable’ allows employers to meet their duty of care at the lowest cost and require advances in technology and knowledge to be incorporated when efficient to do so.\textsuperscript{12} The duty holder must show that it was not reasonably practicable to do more than what was done or that it has have taken ‘reasonable precautions and exercised due diligence.’\textsuperscript{13}

Specific rights and duties flowing from the duty of care include:

- provision and maintenance of a safe plant and systems of work;
- safe systems of work in connection with a plant;
- a safe working environment and adequate welfare facilities;
- provision of information and instruction on workplace hazards and supervision of employees in safe work;
- monitoring the health of employees and related records keeping;
- employment of qualified persons to provide health and safety advice; and
- monitoring conditions at the workplace.

These rights and duties are representative of employer’s specific duties in all Australian States and Territories.

When workplace duty of care legislation was first adopted, there was some concern that “prescription” would be abandoned and there would be a move toward industry self-regulation.\textsuperscript{14} However, experience has shown that the duty of care approach to occupational health and safety in Australia works in conjunction with statutory prescription rather than as a replacement.\textsuperscript{15} The “broadly stated” duty of care approach is “now widely understood” as requiring a risk management approach including a process of hazard identification, risk assessment and risk control.\textsuperscript{16}

As noted above, Australia’s application of duty of care doctrine to occupational health and safety regulation involves companies in risk assessments regarding specific hazards and allows employers to make site-specific decisions as to measures needed to control identified risks. Discussed below in Section III is a proposal to incorporate much broader

\textsuperscript{12} http://www.nohsc.gov.au/OHSLegalObligations/DutyofCare/dutycare.htm
\textsuperscript{13} Id.
\textsuperscript{15} Id. at 4.
\textsuperscript{16} Id.
opportunities for coal operators to meld a mine safety regulatory regime to local conditions and considerations. In the Sago Mine context, such an approach or a derivation thereof might allow proponents and critics of new regulatory mandates to find common ground, especially as to the issue of consideration of mine-specific issues.

III PROPOSAL TO USE “SAFETY CASES” FOR REGULATION OF AUSTRALIA’S MINING INDUSTRY

Hopkins and Wilkinson provide an example of how “thinking outside-the-box” might resolve difficult and contentious issues relating to coal mine health and safety in their working paper, Safety Case Regulation for the Mining Industry, prepared for the Australian National Research Centre for Occupational Health and Safety Regulation.17 As discussed below, Hopkins and Wilkinson’s paper draws from the Australian experience with successful “safety case” regimes applied to major hazardous waste facilities in the State of Victoria and the National Offshore Petroleum Safety Authority (NOPSA).18 Most relevant to Post-Sago efforts to improve mine safety in West Virginia and other coal producing jurisdictions is the safety case emphasis on careful site specific analysis of safety and health hazards. The suggestion that regulation and site specific health and safety issues are inimical is clearly debunked by the safety case approach.

Before discussing their proposal to blend the existing mine safety regime including its’ broad duty of care requirements, they begin their discussion with the proposition that safety management systems need to focus on the most serious hazards while not neglecting other health and safety risks.19 They opine that major accidents are usually

17 The National Research Centre for Occupational Health and Safety Regulation is a research within the regulatory institutions network, in the Research School of Social Sciences, at the Australian National University. The Center is funded by the National Occupational Health and Safety Commission (“NOHSC”). http://ohs.anu.edu.au
18 Hopkins & Wilkinson supra, note 1 at 7. The Victorian regime covers about 50 major hazard sites in that state. The legislation draws on the national standard for the regulation of major hazards, but is informed by major hazard regimes in Europe and goes beyond the national standard in various respects. The Victorian regulator is relatively well-resourced. It has scrutinized and commented on safety cases in great detail. Like the Victorian regime, the offshore petroleum safety case regime, largely administered by NOPSA, has detailed regulations and an extensive set of guidelines about how these regulatory requirements can be met. Moreover, NOPSA states in its Strategic Plan that safety cases will be checked to ensure that they are consistent with “good oil field practice.”

19 They base their discussion on the Queensland Coal Mining Safety and Health Act of 1999, which defines a principal hazard as one with the potential to cause multiple fatalities and requires mine operators to develop individual principle hazard management plans for each such hazard.
preceded by indications of trouble and that safety plans must therefore identify these indications and specify appropriate action to be taken when they occur. They explain:

[Pl]ans must identify trigger levels, or events, and action response plans, actions to be taken in response to trigger events. For each hazard, there are normally several trigger levels of increasing seriousness, with corresponding action plans, ranging up to withdrawal of all personnel from the mine. Mines have therefore developed schedules of triggers and corresponding actions and these have become known as TARPs (Trigger Action Response Plans).

According to Hopkins and Wilkinson, “TARPs are the heart and soul of . . . principal hazard management plans.”

The working paper notes that “in other industries the need to focus on the most serious hazards and the apparent failure of previous, (mainly prescriptive), regulatory systems . . . led to the development of safety case regimes.” These regimes require operators to:

- provide a detailed description of the hazardous facility
- identify all potential major hazards and major accident events
- carry out a systematic assessment of the nature of such events and their consequences
- put in place control systems to safeguard against such events
- monitor the controls to ensure that they are working
- embed this control system in a comprehensive safety management system.

Hopkins & Wilkinson explain how safety cases differ from duty of care responsibilities:

Arguably, all this is already required by the general duty of care. 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.

20 Hopkins & Wilkinson supra, note 1, at 5.
21 Id.
22 Id.
23 Id. at 5-6.
24 Id. at 6.
25 Id.
They observe that the evaluation of safety cases may be quite time consuming and that complex safety cases require considerable expertise because of the amount of detail in complex safety cases.26 Further, Hopkins and Wilkinson point out that “once accepted by the regulator, all the detail in the case is enforceable.”27 Safety case regimes, they emphasize, “are . . . not a retreat from prescription; it is simply that what is prescribed is set out in the safety case rather than in legislation or regulations.”28 The amount of detail in a safety case is proportionate to the complexity of the operations at the site and smaller mines are likely to require a much more simplified safety case than large mines.29

A safety case regime can be resource intensive especially where mines require complex safety cases. The authors emphasize that a safety regime must be well resourced or it would likely offer no advantages over and above non-safety case regimes.30 They also address the risk assessment component of safety cases and respond to criticism that such assessment is problematic.31 Hopkins and Wilkinson concede that some criticism of how risk assessment is applied may be accurate but not criticism of the safety case concept itself.32

For complex facilities with complicated processes, they argue, there is no alternative to the use of systematic hazard and risk assessment methodologies. Moreover, they minimize the complexity of safety cases observing that:

26 Id.

27 Id.

28 Id.

29 Id.

30 The authors find evidence for this observation in the British rail system’s safety case regime. The U.K government’s administration of the rail safety case regime sought to minimize the role of the inspectors’ approval of safety cases and catastrophic train accidents followed. They assert that this result is “a graphic example of what can happen if such a regime is introduced without the other requisite features of good safety case regimes, namely a regulator with the capacity to professionally challenge safety cases, a workforce which is sufficiently empowered to play an active part in the process and finally, a belief at the working level in both the regulated and regulator that the safety case is a beneficial approach.”

31 Id. Such criticism includes the accusation that complex risk assessment methodologies (particularly where quantification is involved) can be difficult to understand and therefore unreliable and that the results of quantitative risk assessments can be “massaged” to reduce risk to an acceptable level.

32 Id.
for many risks, especially for general occupational health and safety risks, appropriate precautions are well known. For example the law generally requires certain dangerous machines to have suitable guarding, power takeoff shafts on tractors to be covered, ladders on construction sites to be secured, heavy vehicles to have efficient brakes and so on. In other words, the risk assessment part of the process of managing health and safety has already been done, and the standards are well known and documented. . . . In these circumstances, it is neither necessary nor desirable to carry out a risk assessment from scratch. The assessment process is generally a narrower one of checking that the standard precautions are appropriate in this particular case.33

Hopkins and Wilkinson also examine activities of inspector carries in a safety case regime and the implications these have for staffing.34 They identify the most important duty is to judge if the company has the leadership, staff, systems and procedures to safely operate the facility.35 “Where there are deficiencies,” the authors observe, “the regulator must have the capability to recognize these and develop appropriate strategies to persuade senior staff to make appropriate changes.”36 As far as enforcement in the safety case setting, resort is rarely made to legal options but Hopkins and Wilkinson confirm that regulators are expected to take formal enforcement action when appropriate.37

Hopkins and Wilkinson recognize the difference between safety case situations and the traditional role of safety inspectors to check for compliance with specific requirements in the legislation and regulations. They confirm that this type of compliance monitoring continues to have a place in a safety case regime has its place, “especially if the information obtained is used to build a picture of how the organization health and safety systems are operating.”38 They caution that inspectors must be cautious to “avoid concentrating on minutiae and missing the bigger picture.”39

The working paper also emphasizes that regulatory staff must have personal credibility with senior company staff to have their views taken seriously, so the regulatory staff must possess knowledge and first hand experience of the industry to be regulated.40

33 Id. at 30.
34 Id. at 8-9.
35 Id. at 8.
36 Id.
37 Id. The authors stress that “best practice auditing by inspectors is not just passive compliance monitoring; it involves challenge. . . Best practice inspectors are engaged not only in compliance monitoring; they are also investigators. We are talking here of proactive investigation, not just reactive investigation which follows an accident or so called ‘near miss.’”
38 Id.
39 Id.
40 Id.
Following these observations, the working paper proposes specific principles of best practices regulation of which the safety case is an integral part.

IV. A BEST PRACTICES SAFETY CASE REGIME PROPOSAL FOR THE AUSTRALIAN COAL INDUSTRY

Hopkins and Wilkinson recommend consideration of the 33 principles\(^{41}\) in developing a safety case regime for the mining industry. These principles are briefly summarized below; the full statement of principles appearing in the working paper is attached as Appendix”

(1) Safety case regimes should be introduced in the mining industry, not as a replacement of duty of care but as an addition to it by requiring operators to demonstrate how they intend to fulfill their duty of care.\(^{42}\)

(2) Safety case requirements should apply to all mines, regardless of size, with the understanding that the smaller and less complex the mine, the simpler the safety case.\(^{43}\)

(3) Safety cases should emphasize the idea of triggers to action and incorporate trigger action response plans where appropriate.\(^{44}\)

(4) Safety cases in the mining industry should address all risks including those to occupation health.\(^{45}\)

(5) Safety cases should include a detailed consideration of fatigue management.\(^{46}\)

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\(^{41}\) Id. at 9-24. Although there are 33 principles set forth in the paper, only those that are relevant to our inquiry here are included in the text.

\(^{42}\) Id. at 10.

\(^{43}\) Id.

\(^{44}\) Id.

\(^{45}\) Id. at 11.
(6) Mining safety cases should not normally be required to carry out quantitative risk analysis.47

(7) The workforce and their representatives should have the right to be consulted in the development of a safety case and to raise concerns about a safety case after it has been accepted.48

(8) The safety case regime should specify guidelines for employee participation.49

(9) Safety cases should include provision for adequate training for workforce and management.50

(10) The development of safety case regimes within particular jurisdictions should be coordinated and aligned where possible.51

(11) OHS should be amalgamated into a single Act, with industry specific regulations and codes of practice where necessary.52

46 Id. at 11-12.
47 Id. at 11-12. Safety case regimes in process industries in Australia often make use of quantitative risk assessment, but the authors did not think this may not be appropriate in mineral extraction operations but did not elaborate as to why.
48 Id. at 12. The authors suggest that employees should have the right to raise problems about a safety case which become apparent after it has been accepted and to call inspectors to examine issues which arise if necessary.
49 Id.
50 Id. at 12-13. The authors suggest that tier-training will be necessary, with the level of training determined by job requirements. Workers will also need intensive training in risk-management principles and the safety case should include a provision for such training. Finally, training will also be required for managers.
51 Id. at 13.
(12) Prosecution can be of companies and individuals. The repertoire of enforcement options available to inspectorates should be as broad as possible, and the workforce, in particular health and safety representatives, should have the right to request the regulator to initiate an investigation with a view to enforcement action, including prosecution.\textsuperscript{53}

(13) Inspectors must carry out both announced and unannounced inspections.\textsuperscript{54}

(14) Separate statutory authorities should be established to manage safe case regimes in the mining industry.\textsuperscript{55}

(15) Regulatory staff must be paid competitive salaries in order to recruit and retain staff of the requisite quality.\textsuperscript{56}

(16) There should be a single point of contact for a site within the inspectorate (i.e., one person should have overall responsibility for the site and visits it regularly).\textsuperscript{57}

\textsuperscript{52} Id. at 13-14. The authors notes that the UK has adopted a single safety Act covering all UK industry.
\textsuperscript{53} Id. at 14. The authors recognize that “the importance of persona liability is that it directly affects the motivations of decision makers who are responsible for creating the risks, in a way that holding companies responsible fails to do.” Hopkins & Wilkinson, supra. note 1 at 14. The authors also recognize that some jurisdictions provide third parties with a right to prosecute when the regulatory agency does not. This appears to be similar to our citizen suit provisions under SMCRA.
\textsuperscript{54} Id. at 14-15.
\textsuperscript{55} Id. at 15-16.
\textsuperscript{56} Id. at 16.
\textsuperscript{57} Id. at 16-18.
(17) The competency and accountability of all staff required for the Authority should be defined. 58

(18) Recruitment of staff to an Authority will need to be by open advertisement. 59

(19) A comprehensive training program will need to be developed and implemented as part of developing an enhanced inspectorate, including training in the techniques of root cause analysis (designed to identify the systemic causes of accidents) and evidence gathering as a prelude to prosecution. 60

(20) Inspectors should be trained both in systemic accident analysis and in evidence gathering, particularly concerning neglect by senior company officers. 61

(21) Inspectorates should publish reports on all significant accidents, using the Australian Transport Safety Bureau reports as a model. 62

(22) The size and cost of a safety Authority should not be determined by any historical method but should be worked out from first principles. The assumptions upon which size is determined should be transparent. 63

58 Id. at 18.
59 Id. at 18.
60 Id. at 18-19.
61 Id. at 19.
63 Id. at 20-21.
(23) Government should be aware that any proposed Authority would cost substantially more than the present regulator and should seriously consider the possibility of external funding options such as imposing an industry levy. 64

(24) One-off start up costs should be paid by the government. 65

(25) If the decision is to fund an Authority in part or in whole from industry sources, the funding arrangement should not be set up on a fee for service basis. 66

(26) A proposed Authority should have an expertise based advisory board which should include representatives of industry, the workforce, unions and government. 67

(27) The Authority should report to parliament, through a Minister to be decided by government. 68

(28) The Authority’s ways of working, systems, procedures and activities should be as transparent as possible. 69

The authors, in concluding that the safety case system should be the basis for the regulation of health and safety in the Australian mining industry, recognize that “best practice regulation requires the ability to effectively monitor and audit companies safety cases as well as the provision of high quality advice, encouragement and stimulation to the industry to improve its own performance as well as effective enforcement and prosecution of the (revised) law, where appropriate.” 70

64 Id. at 21.
65 Id. at 22.
66 Id. at 21-22.
67 Id. at 22.
68 Id. at 22-23.
69 Id. at 23.
70 Id. at 24.
V. CONCLUSION

As noted in the introduction to this memorandum does not argue for the adoption of the blended duty of care/safety case regulatory model proposed for the coal industry in Australia. Rather, the approach of the Australian proposal provides an example of how creative outside-the-box thinking may help to resolve thorny regulatory issues which tend to be frozen by ossified conventional analysis.

In light of the criticism of Post-Sago regulatory and administrative proposals addressing perceived shortcomings of the existing statutory and regulatory mine safety regime critics and regulatory change proponents should welcome the opportunity to review and critique out-side-the-box approaches identified by those outside the current MSHA regulatory framework. The Australian duty of care/safety case regime has been successfully utilized in Australia to address workplace health and safety issues relating to hazardous waste and off-shore petroleum industries. Australian authorities are examining the safety case approach to determine its’ potential applicability to that nations’ coal mines. The safety case approach is one way that site-specific considerations may be given appropriate attention as critics of Post-Sago remedial proposals demand. At the very least, those critics and other interested parties should begin to explore new approaches to protect the health and safety of the nation’s coal miners.