

# List of issues (as at 28 April 2011)

## Background

1. This is the list of issues for the Royal Commission on the Pike River Coal Mine Tragedy. The aim of the list is to identify the main issues which the commission presently considers it will need to evaluate in order to address its Terms of Reference.
2. The list is provided for the assistance of parties, interested persons and potential witnesses and submitters. An inquiry is not a court case. The commission is not able to determine legal rights and liabilities. Its responsibility is to inquire into and report upon the tragedy, and make recommendations for the future. There are no pleadings by which issues are identified. The Terms of Reference broadly define the subject matter of the inquiry, but the commission must determine the issues which need to be assessed and answered to enable it to provide its final report.
3. The commission will review the list from time to time. A revised list (or lists) may be issued during the course of the inquiry. Accordingly, the list is not intended as a constraint upon the evidence or submissions which persons may wish to provide to the commission.
4. The commission intends to conduct the inquiry in four phases and the list of issues reflects this division. Generally, the issues are listed by reference to one term of reference. However, some issues may be relevant to more than one term of reference. Issues are not repeated on this account. The manner, and order, in which issues are listed does not reflect their relative importance or the weight they may be given. The drafting of the issues is intended to be neutral, so as to simply identify the relevant area of interest. They should be read in a broad, and non-limiting, manner.

## Interpretation of the List

The following terms have the meaning indicated unless otherwise stated:

‘the incident date’ means 19 November 2010;

‘mining’ means underground coal mining and related operations;

‘the mine’ means the Pike River Mine, both the underground and the above ground elements;

‘the company’ means Pike River Coal Limited;

‘DoL’ means the Department of Labour;

‘ToR’ means Term of Reference;

‘H&S’ means health and safety;

‘the selected countries’ means those countries selected as comparators for the purposes of ToR(h); and

‘mining law requirements’ means the legal requirements identified in ToR(e).

## Phase One – Context

The contextual phase comprising the New Zealand regulatory environment; the interaction of mining law and other law in New Zealand; the resourcing and implementation of mining law in New Zealand (ToR(e),(f) and (g)). The geography, conception, approval, design and development of the mine.

The regulatory requirements and recognised practices in New Zealand (ToR(e))

- 1.1 The background history of the New Zealand mining industry.
- 1.2 The history of mine explosions which have caused multiple fatalities in New Zealand and the details of any recommendations from inquiries into those events.
- 1.3 The legal requirements and recognised practices which governed mining in New Zealand pre-1992.
- 1.4 The policy considerations which prompted the enactment of the Health & Safety in Employment Act 1992 and the subsequent mining regulations in 1996 and 1999.
- 1.5 The legal requirements which governed mining as at the incident date.
- 1.6 The recognised practices (including codes of practice, guidelines, advisories, notices, and instructions issued by regulatory authorities and other organisations) which applied as at the incident date.

**How New Zealand mining requirements and practices interact with conservation, environmental and other legal requirements (ToR(f))**

- 1.7 The identification and description of any conservation, environmental and other legal requirements which:
  - (a) apply to the Pike River Coal Mine or the land on which it is situated; and
  - (b) interact with the mining law requirements and recognised practices identified in ToR(e).
- 1.8 The manner and extent to which those conservation, environmental and other legal requirements interact with the mining law requirements and recognised practices identified in ToR(e).

**Resourcing for, and the administration and implementation of, mining law and practices in New Zealand (ToR(g))**

- 1.9 The identification of the New Zealand regulatory agencies responsible for the administration and implementation of the laws and recognised practices that apply to mining and to mining land.
- 1.10 The nature and extent of the resources provided to these regulatory agencies.
- 1.11 The organisational structures of these regulatory agencies; including the lines of responsibility and accountability, delegations and the job descriptions and performance agreements of relevant personnel.
- 1.12 The operational methods of these regulatory agencies; including how they administer laws and practices, their strategies, priority setting, outcomes, outputs, performance measures, resource allocations, work programmes, risk management, internal audit and self review, internal reporting and external reporting systems.

**The conception, approval and development of the mine**

- 1.13 The conception of the development of the mine including any external reports obtained by the company.
- 1.14 The geography and geology of the area where the mine is situated.
- 1.15 The consent and approval process, including the terms and conditions sought by or imposed by external agencies.
- 1.16 The chronology of interactions between the external agencies and the company concerning the mine development.
- 1.17 The history of the design, development and construction of the mine and associated systems, including bore hole placement, drilling and the information yielded.
- 1.18 The state of development and layout of the mine as at the incident date, including all plans of the mine prepared to that time.

## Phase Two – Search and rescue

### **The cause of the loss of life. The search, rescue and recovery operations. (ToR(b) and (d))**

The cause of the loss of life

- 2.1 The likely injuries suffered by the men.
- 2.2 The cause(s) of the deaths of the men.
- 2.3 The likely timing of their deaths.

### **The search, rescue and recovery operations**

- 2.4 The chronology of events and actions from the time of the first explosion to the present time.
- 2.5 The opportunity (if any) for the men to have taken steps towards self-rescue, including:
  - (a) the company's rescue plan in the event of an explosion;
  - (b) the equipment and resources available to the men; and
  - (c) the training provided to them.
- 2.6 The content of any emergency response plans of the company, and of other organisations which were in place at the incident date.
- 2.7 The extent to which such response plans:
  - (a) were tested and remedial action taken;
  - (b) were able to be deployed when the tragedy occurred; and
  - (c) proved adequate in the course of the occurrence.
- 2.8 The extent of the information available to the company and the external entities involved in the search, rescue and recovery operation in the period following the first explosion; including information as to the atmosphere, the location of the men and their work activities in the mine before and around the time of the first explosion.
- 2.9 The respective roles played by the company and external entities in the search, rescue and recovery operations.
- 2.10 The reasons for the division of roles, including any relevant legislative provisions.
- 2.11 The liaison and decision making processes which were adopted in the course of the operations, including the expert advice received by the company and external entities.
- 2.12 The decisions reached and whether these were made in a clear and timely manner.
- 2.13 The human and physical resources available for the purposes of the search, rescue and recovery operations.
- 2.14 The qualifications, experience and training of the organisations and individuals involved in the search, rescue and recovery operations.
- 2.15 The measures taken in an endeavour to stabilise the atmosphere within the mine.
- 2.16 The extent, if any, to which the search, rescue and recovery operations were impacted by the:
  - (a) geography of the mine and its environment;
  - (b) design of the mine;
  - (c) systems in the mine; and
  - (d) information and equipment provided by the company.

- 2.17 The measures taken in an endeavour to regain full or partial access to the underground reaches of the mine.
- 2.18 The comparison between this search, rescue and recovery operation and:
- (a) previous similar operations in New Zealand;
  - (b) previous similar operations in other countries; and
  - (c) international best practice.
- 2.19 The nature of the search, rescue and recovery processes employed in other similar hazardous environments.
- 2.20 The communications with the families of the men during the search, rescue and recovery operations.

## Phase Three – What happened at Pike River?

The cause of the explosions. The company's operational and management practices. Regulatory oversight. (Terms of Reference (a) (c) and (g)).

### The immediate cause of the explosions

- 3.1 The hazards, flammable gas and coal dust present in the mine immediately prior to and at the time of the incident.
- 3.2 The locations of the men within the mine and their activities at the time of the incident.
- 3.3 The likely ignition source.
- 3.4 The cause of the subsequent explosions.

### The company's management and operational practices

#### Management

- 3.5 The company's general management structure and systems in relation to decision-making (including responsibilities, accountabilities and delegations).
- 3.6 The company's management systems for:
  - (a) identifying and managing risk; and
  - (b) ensuring compliance with mining law requirements and recognised practices.

#### Mine systems

- 3.7 The systems in place at the mine at the incident date for:
  - (a) achieving adequate ventilation;
  - (b) testing air quality and temperature;
  - (c) effecting methane drainage of the coal seam;
  - (d) preventing the ignition of combustible matter;
  - (e) preventing the occurrence of spontaneous combustion;
  - (f) controlling and testing for the presence of flammable gas;
  - (g) monitoring the safety of equipment and electrical systems; and
  - (h) maintaining communications between the men underground and those on the surface.
- 3.8 The systems in the mine and whether these:
  - (a) met legal requirements;

- (b) complied with recognised practices; and
- (c) were subject to periodic review.

3.9 The location, design and construction of the mine and whether these factors:

- (a) affected the level of operational risk; and
- (b) if so, the steps taken to manage that risk.

### **H&S Systems**

3.10 The methods adopted by the company:

- (a) to implement, monitor and review H&S practices in the mine;
- (b) to test the understanding, preparedness and ability of persons engaged at the mine to implement H&S systems and plans; and
- (c) to amend such practices, systems and plans as required.

3.11 The training, qualifications, experience and performance of the managers and certificated employees appointed by the company pursuant to the Health and Safety in Employment (Mining Administration) Regulations 1996.

3.12 The methods adopted by the company:

- (a) to ensure the reporting and recording of H&S events and concerns; and
- (b) to take action in relation to and record the response to such events and concerns.

3.13 The level of compliance achieved by the company, employees, contractors and others in relation to H&S requirements and recognised practices.

3.14 The company's record in relation to responding to any notice or direction received from a regulatory agency.

### **Employees/contractors**

3.15 The methods adopted by the company to ensure that employees and contractors:

- (a) were involved in the design, operation and review of the H&S systems and plans;
- (b) were provided with training in relation to H&S in the mine;
- (c) were competent in meeting H&S requirements; and
- (d) communicated H&S events or concerns to an appropriate officer.

3.16 The steps taken by the company to:

- (a) engender an appropriate organisational culture in relation to the reporting of H&S events and concerns; and
- (b) respond to such reports.

3.17 The experiences in relation to H&S of persons who worked or were engaged at the mine.

### **H&S impediments**

3.18 The effect (if any) upon the company's development, implementation and review of H&S initiatives arising from:

- (a) difficulties associated with the location and design of the mine;
- (b) financial problems;
- (c) production delays; and
- (d) other external factors.

3.19 The effect (if any) upon the achievement of H&S outcomes at the mine arising from:

- (a) issues relating to the recruitment of experienced personnel;
- (b) the terms and conditions of the employment of the men and the terms of engagement of contractors;
- (c) the work practices in the mine of the employees and contractors; and
- (d) incentives or disincentives (if any) to which employees and contractors were subject.

#### **External oversight of H&S at the mine**

3.20 The methods employed by the regulatory agencies to facilitate and enforce compliance by the company with legal requirements and recognised practices:

- (a) in the pre-production period; and
- (b) during production.

3.21 The content of instructions, and any other materials, provided by regulatory agencies to the company for its guidance in achieving regulatory compliance.

3.22 The content of any complaints made to the regulatory agencies concerning H&S issues at the mine.

3.23 The content of communications (formal and informal, including warnings, notices and directions) between the regulatory agencies and the company concerning H&S issues at the mine.

3.24 The response of the company to such communications or complaints.

3.25 The mechanisms (if any) including any memoranda of understanding, which existed between the regulatory agencies to ensure:

- (a) that relevant information pertaining to the mine was exchanged and shared; and
- (b) that any issues in relation to H&S at the mine were the subject of appropriate action.

3.26 The interactions and communications between the regulatory agencies and the company, and between the agencies, on and after the date of the incident.

3.27 The content of any performance reviews or external audits of regulatory agencies as a result of the tragedy.

3.28 The content and trend of H&S statistics in New Zealand since 1992, both in general and in relation to mining.

## **Phase Four – Policy aspects**

The comparison between New Zealand and the selected countries in relation to:

- (a) mining regulatory requirements and recognised practices;
- (b) their interaction with conservation, environmental and other legal requirements; and
- (c) the resourcing for, and the administration and implementation of mining law and practice (ToR(h))

*(Note: The New Zealand position was considered in Phase One – issues 1.1. to 1.12. The issues which follow are framed to identify the situation in the selected countries so that the comparative evaluation with NZ required under ToR(h) may be undertaken.)*

The regulatory requirements and recognised practices that govern mining in the selected countries; and the comparison to New Zealand.

**International**

- 4.1 The selection of other countries to be used as comparators – ‘the selected countries’.
- 4.2 The identification and description of the mining law requirements and recognised practices in the selected countries that govern:
  - (a) underground coal mining and related operations; and
  - (b) H&S in underground coal mining and related operations.
- 4.3 The historical background to the requirements and practices, and the policies underlying them.
- 4.4 The effect of any changes in the regulatory environments.
- 4.5 The proposals (if any) for change in the future direction of the regulatory requirements and recognised practices.

**Comparison**

- 4.6 The comparative evaluation of mining law requirements in New Zealand and in the selected countries. How mining requirements and practices interact with conservation, environmental and other legal requirements in the selected countries; and the comparison to New Zealand.

**International**

- 4.7 The identification of any conservation, environmental and other legal requirements which apply to mining or to land on which underground coal mining occurs in the selected countries.
- 4.8 The manner and the extent to which those conservation, environmental and other legal requirements interact with the mining law requirements and recognised practices (as identified in issue 4.2) in the selected countries.

**Comparison**

- 4.9 The comparative evaluation of the extent of interaction (if any) in New Zealand and in the selected countries. Resourcing for, and the administration and implementation of, mining law and practice in the selected countries; and the comparison to New Zealand.

**International**

- 4.10 The identification of the regulatory agencies responsible for the administration and implementation of the laws and recognised practices that apply to mining and to mining land in the selected countries.
- 4.11 The nature and extent of the resources provided to the agencies in the selected countries.
- 4.12 The organisational structures of the agencies in the selected countries, including the lines of responsibility and accountability, delegations and the job descriptions and performance agreements of relevant personnel.
- 4.13 The operational methods of the agencies in the selected countries, including how those agencies administer laws and practices, their strategies, priority setting, outcomes, outputs, performance measures, resource allocations, work programmes, risk management, internal audit and self review, internal reporting and external reporting systems.

**Comparison**

- 4.14 The comparative evaluation of the resourcing provided, and administration and implementation practices, in New Zealand and in the selected countries.