CHAPTER 15

Regulator oversight at Pike River

Introduction

1. This chapter considers the oversight of the mine by the Department of Labour (DOL) inspectorate. The commission has received good co-operation from DOL in providing both historical information concerning the mining inspectorate and direct evidence and records relevant to the inspections conducted at Pike River.

2. Both inspectors gave candid evidence, Michael Firmin at two separate hearings and Kevin Poynter at one for which he returned from Australia. DOL also commissioned an internal operational review of its inspectors' interactions with Pike River Coal Ltd.[1] Conclusions from the Gunningham and Neal review are sometimes referred to in the chapter. In assessing these, and any different views expressed by the commission, it should be borne in mind that the review was based on departmental files (excluding health and safety investigations) and written without access to Pike managers or any post-tragedy documents.[2]

The statutory background

The functions of inspectors

3. The Health and Safety in Employment Act 1992 defines the functions and powers of the inspectorate with reference to all health and safety inspectors, not just mines inspectors. The inspectors have three functions:

    - to provide information and education to promote workplace health and safety;
    - to ascertain whether the act has been, and is likely to be complied with; and
    - to take all reasonable steps to ensure that compliance is being achieved.[3]

    Other functions may be conferred on inspectors in the act, or by other enactments.

The powers of inspectors

4. Inspectors enjoy extensive powers of entry and inspection at any workplace, and may require an employer to provide assistance, preserve a scene for examination, produce and allow examination of records and provide witness statements. An inspector may take photographs or other forms of enduring records and may also seize anything of evidential value.

5. There is a hierarchy of compliance and enforcement options: an improvement notice, a prohibition notice, an infringement notice and, lastly, an inspector may charge an employer with an offence.[4]

6. An improvement notice identifies a non-compliance, which must then be addressed. The notice may also specify the steps to be taken. A prohibition notice, reserved for failures likely to cause serious personal harm, prohibits an activity until measures to eliminate or minimise the hazard are put in place.

7. Enforcement using an infringement notice is restricted to lesser offences, while an information may be laid in relation to serious harm offences, which carry a maximum penalty of two years' imprisonment, a fine of up to $500,000, or both.[5]

Duties owed to inspectors

8. The HSE act imposes duties on everyone in a workplace to assist the inspectorate and not to obstruct an inspector in the course of their duties. Anyone in charge of a workplace must maintain a register of accidents that caused

personal harm or might have done so, and an incident register of events that caused serious harm. Serious harm includes significant injuries and illnesses, and conditions that result in hospitalisation for 48 hours or more.[6]

Duties specific to mining

9. The Health and Safety in Employment (Mining – Underground) Regulations 1999 impose specific duties in relation to coal mines. An inspector must be notified of the commencement and cessation of a mining operation and of the installation of a shaft.[7] Details of the time, place and management of the operation, and contact details, must be notified. Different notification time limits apply, according to the nature of the operation.[8]

10. Regulation 10 defines accidents that must be notified to DOL. They are accidents involving an explosion or ignition, a fire or spontaneous heating, an outburst of gas or water, contact with harmful chemicals, a winding plant event, loss of control of a vehicle, the trapping of an employee, a structural failure, an unplanned fall of ground, a major collapse, an uncontrolled gas accumulation, a main fan failure for more than 30 minutes or an electric shock requiring medical treatment.

11. Regulation 11 requires that mine plans are kept for every operation, are updated at least once every six months and are 'copied to an inspector' at regular intervals. Mine owners must also keep certain other records onsite, which an inspector may inspect as necessary.

The mining inspectorate personnel

12. From May 2005 to November 2010 two inspectors, Michael Firmin and Kevin Poynter, separately had responsibility for the Pike River mine.

13. Mr Firmin obtained a bachelor of science degree in mineral technology from the Otago School of Mines in 1977. After graduating, he joined the Mines Department and over the next 15 years held various office, surface and underground positions. In 1984 Mr Firmin obtained a first class coal mine manager's certificate and subsequently held statutory positions, including about three months as an underground mine manager at Moody Creek near Greymouth. In 1995 Mr Firmin joined the Ministry of Commerce as a health and safety inspector with responsibility for inspecting mines and quarries. In 1998 he transferred to DOL, where he has since worked as a mines inspector.[9]

14. Mr Poynter worked in the coal mining industry from 1977 for about 30 years, from time at the coal face through to management positions in Australia. In 1985 he obtained a first class mine manager's certificate and subsequently held the position of mine manager in three New Zealand mines. He became a trainee health and safety inspector in April 2008 and obtained a certificate of appointment (warrant) in June 2009.

15. The commission considers that both inspectors were adequately qualified and sufficiently experienced. Mr Firmin had limited experience as a mine manager, but this would not have been a difficulty if the inspectorate worked in a supportive environment, was properly resourced and had been able to access specialist advice from other experts. Unfortunately, Messrs Firmin and Poynter faced fundamental difficulties in performing their role, as discussed in Chapter 22, 'The decline of the mining inspectorate'.

The operational methods of the mines inspectors

16. The inspectors' workload was formidable. They were required to inspect all coal mines, metalliferous mines, quarries and tunnels in New Zealand.[10] In early 2010, for example, there were eight underground coal mines, 21 open cast coal mines, 11 metalliferous mines, 925 quarries and four tunnels under construction.[11]

17. The South Island was divided by the Rakaia River, with Mr Firmin living in Dunedin and responsible for the south, and Mr Poynter based in Westport with responsibility for the north. They shared responsibility for the North Island,

and conducted inspections as time permitted. Quarries were viewed as the last priority, and many North Island quarries were not inspected at all.[12]

18. An 'inherent risk' assessment form was used to set the frequency of inspections to the various workplaces.[13] However, underground coal mines were automatically classified as high risk, to be inspected every three months.[14] Inspections were either proactive, initiated by DOL, or reactive, in response to an event notified from a particular workplace. Proactive visits (hereafter called inspections) were arranged with the mine operator, not unannounced.[15] Responding to requests for technical information and advice was a further significant aspect of the inspector's role. The Pike managers often raised concerns and sought input from the inspectorate. These contacts were conducted electronically, through meetings or a combination of the two.

19. From June 2009 until the time of the explosion Mr Poynter conducted five proactive inspections at Pike River. He made a similar number of reactive visits to the mine in relation to accidents or other mining incidents. In addition there were numerous attendances concerning technical mining issues raised by the company.[16] A record of interactions was maintained in an information database named INSITE.

Three representative interactions

Introduction

20. An assessment follows of three interactions between the inspectorate and Pike River mine personnel between February 2007 and November 2010. These cover important aspects of the mine's development and provide an insight into the inspectorate's relationship with the company. The commission accepts the assessment that the nature of these interactions was consistent with DOL policy.[17]

Location of the main fan underground

21. The first contact with Pike was in May 2005. Peter Whittall phoned Mr Firmin, introduced himself and explained that he wished to develop the access tunnel into the mine without using flameproof machinery, given that the development would be in rock, not coal. After conferring with an Auckland-based colleague, Mr Firmin advised Mr Whittall that designation of the drift as a hard rock tunnel was acceptable, at least until the approach to the Hawera Fault, at which point a coal mine designation might be required.[18]

22. The first mine inspection took place on 13 February 2007. Mr Firmin, accompanied by Richard Davenport, a senior technical officer with the energy safety service of the Ministry of Economic Development, visited the mine. Mr Whittall first provided a PowerPoint presentation at the company's Greymouth office. He outlined progress to that time: construction of the access road, establishment of an electrical supply to the mine and development of the drift to 320m. Mr Whittall also explained that the main ventilation fan was to be located underground, with a back-up diesel fan situated at the top of the ventilation shaft. At this point the shaft was to be located in stone to the east of the Hawera Fault. He said this would provide ease of maintenance, whereas there was no space and it was too steep for the fan to be located on the hillside above the shaft.[19]

23. Following the presentation, Messrs Firmin and Davenport went to the mine. Mr Firmin inspected the tunnel, focusing on the gradient, roof stability and the adequacy of strata control. Mr Davenport audited the safety of the electricity supply to the mine, which at that stage was an 11kV supply, to be upgraded to a 33kV supply later. He approved the existing installation in a written report that included a request for the ministry to be kept informed about the installation of the upgraded supply.[20]

24. Mr Firmin prepared handwritten notes of his inspection. These included a simple diagram depicting the intended configuration of the main fan, with the motor located in the intake in fresh air, and the fan separated in the ventilation return and expelling exhaust up the vent shaft.[21] This proposal concerned Mr Firmin. He had experience of main fans located underground in hard rock tunnels, but never in an underground coal mine. He noted that

the regulations required employers to take all practicable steps to ensure the provision of fresh air in every place in a mine where employees could go.[22] The location of the main fan underground was not expressly prohibited. Still not convinced, Mr Firmin said he checked regulations in other countries, but found none that prohibited an underground location. He concluded that 'fans were put outside for ease of maintenance'.[23]

25. On 28 February 2007 Mr Firmin wrote to the company about the inspection. He recorded matters relevant to roof support in the drift and also enclosed a copy of Mr Davenport's audit report. The letter made no reference to placement of the main fan underground.[24] Mr Firmin neither spoke to anyone about his unease nor considered seeking expert advice.[25] On 6 November 2007 Mr Firmin inspected the mine, was told that the fan would now be located to the west of the Hawera Fault and asked for further operational details.[26] These were not available.[27]

26. Mr Poynter became responsible for the Pike River mine in 2008. He, and occasionally Johan Booyse, the high hazards adviser, visited the Pike mine but DOL took no action in relation to the location of the main fan underground. Mr Poynter said that he did not inspect the fan after its installation, or obtain information about its performance.[28]

Assessment

27. In the commission's view, DOL's actions in relation to this issue were inadequate. Although not expressly prohibited in New Zealand, location of a main ventilation fan underground was at odds with established practice throughout the mining world. Mr Firmin needed to confront the issue in 2007, particularly in November, when he was told that the fan was to be located west of the fault. Failure to question the proposal at that point made it more difficult for Mr Poynter to do so later. Even so, given the delay until mid-2010 when the fan was installed, there was ample time to have dealt with the matter.

28. Nor does the commission accept that the regulatory position in other countries is obscure. An International Labour Organisation (ILO) code treats the location of ventilation fans on the surface as a given: stating the 'surface ventilating fan' is to be 'offset from the nearest side of the mine opening at least 5 metres' in order to avoid explosion forces.[29] In addition, regulations in the United States, Canada, Queensland and New South Wales expressly provide,[30] or take it for granted, that main fans (as opposed to auxiliary and booster fans) must be installed above ground.

29. This failure not only allowed a highly questionable ventilation system at Pike River, but also set the tone for subsequent interactions between the company and the inspectorate.

Frictional ignitions

30. By October 2008 the drift was developed to a point close to the Hawera Fault. Pit bottom in stone was completed and it was expected that methane levels would increase as the drive towards the fault continued. Because control of the mine had passed from McConnell Dowell to the company, Pike deputies managed the McConnell Dowell crews.[31]

31. On 11 November several methane ignitions occurred in a stub under development off the main drift. A roadheader was cutting when methane was released, which was ignited when the cutter head struck the hard rock floor. Pike's production manager, Kobus Louw, investigated the ignitions and prepared a memorandum containing preventative actions that were to be communicated to crews at tool box talks. The actions included the use of an air mover at the face to assist ventilation, the application of extra water on the cutter head to prevent ignitions and increased methane monitoring at the face before cutting started.[32]

32. On 13 November Mr Louw notified Mr Poynter of the ignitions by telephone.[33] The next day Mr Louw emailed a copy of the investigation memorandum to Mr Poynter and they discussed the ignitions and agreed that use of the roadheader would cease, with development to continue using a drill and blast method. Workers would withdraw from underground when blasting occurred. Mr Poynter sent an email to Mr Louw seeking further information and recording that 'the mine should [now] be deemed to be a Gassy Mine'.[34] Mr Louw also confirmed by email that an explosive which could not ignite methane would be used for blasting.

33. Mr Poynter discussed the ignitions with Mr Firmin. They agreed the hazard was 'a significant one', but agreed that the steps implemented by the company were adequate.[35] Sometime over the next few days Mr Poynter was rung by Harry Bell, a former chief inspector of coal mines, who had assisted McConnell Dowell as a tunnel supervisor in the early development of the drift. Mr Bell had been told of the ignitions by a senior McConnell Dowell employee, who referred to '10 ignitions in the past fortnight'.[36] Mr Bell considered the essential problem was the inadequate ventilation from a forcing fan near the portal.[37] He told Mr Poynter that work in the drift should be prohibited until the ventilation was improved. He added that he did not mind if the company was told that he was 'the whistle blower', since to his mind the matter was extremely serious.[38]

34. Mr Poynter considered the matter, but concluded that he could not intervene because 'there is no legislative requirement that determines the method of ventilating coal mines' and 'forcing ventilation when using explosives or developing in stone is an acceptable method'.[39] Mr Poynter consulted Mr Booyse, and on 19 November emailed Mr Louw requesting the supervisors' reports for each ignition, weekly ventilation recordings and a ventilation plan to show recording positions. The email continued: 'Have you considered the adequacy of the ventilation. Given that the mine is now in coal and that the amount of gas emissions will only increase as you advance it is my opinion that the ignitions are probably caused by insufficient ventilation at the face.' The situation was termed a matter of extreme concern to be dealt with 'urgently'.[40]

35. On 20 November Mr Poynter again phoned Mr Firmin and discussed whether work should be stopped while an assessment was obtained from a ventilation engineer but they decided to wait for a new risk assessment.[41] Nothing happened for several days until 28 November, when Mr Poynter received an email from Mr Louw to which was attached a McConnell Dowell procedure for the use of explosives in a gassy mine, together with deputies' reports for 24 and 25 November and a ventilation plan.[42] Mr Poynter responded immediately by email: 'I am still waiting on the shift reports of each of the ignitions and any investigations undertaken.'[43]

36. On 3 December Mr Louw replied by email, attaching incident/accident and accident investigation reports, both of which related to another methane ignition on 15 November.[44] Nothing more occurred for three weeks when, on 24 December 2008, Mr Poynter sent a further email to Mr Louw: 'I have been working on this file and noted that I have only received advice of two ignitions. I have been told by a number of people now that there were at least 10.' He requested information on the other incidents.[45]

37. Mr Louw replied the same day: 'Don't know who feed [sic] you information but there was a few ignitions on 4 shifts that I know of and that you should have the information, (including the one at hawera fault [sic]). If there is more then supervisors chose not to report them hence I don't know of them and is not been investigated.'[46]

38. Finally, on 13 February 2009 Mr Poynter recorded in an INSITE entry that the matter was closed.[47] By then the focus of attention was west of the Hawera Fault, where mine development was under way.

Assessment

39. The commission notes that the Gunningham and Neal review includes an analysis of the inspectors' actions in relation to this aspect.[48] The authors said that Pike voluntarily provided a detailed flow of safety information, which Mr Poynter cross-checked for completeness. This, they concluded, 'was a sound approach and provides a good basis for concluding that the inspectors discharged their duty to satisfy themselves about the level of compliance by the mine'.[49]

40. In the commission's view, the inspectorate's performance in relation to this aspect was positive in some respects, but not in others. Mr Poynter was decisive when the methane ignitions were first drawn to his attention: he required Pike River to be deemed a gassy mine and secured an agreement not to use the roadheader. He took a consultative approach by discussing matters with Mr Firmin on two occasions and with the high hazards adviser on at least one. This was probably to be expected, given that Mr Poynter had still not obtained a certificate of appointment. He also persisted in contacting Mr Louw when requested information had not been provided.

41. On the other hand, his approach to the interpretation of the regulations was odd. Mr Bell said the underlying

problem was the use of forcing ventilation and said work must stop. Mr Poynter decided he could not act because the regulations did not require the use of exhausting, as opposed to forcing, ventilation. Regulation 28 requires an employer to take all practicable steps to ensure a supply of fresh air in every workplace.[50] No one ventilation method is prescribed over another. Instead a standard is imposed, leaving it to the mine operator to select an appropriate work method. It should have been obvious to an inspector that he had to decide whether the company had taken all practicable steps to supply fresh air to the face and, if not, what response was appropriate. To decide there was no breach because the regulation did not prevent the use of forcing ventilation was to misunderstand the regulation.

42. The commission does not regard the actions of the company as those of a motivated and compliant employer. The initial report to Mr Poynter came two days after the event. Thereafter, information was sometimes provided only after a follow-up request. The production manager's final response to Mr Poynter bordered on being truculent. There were clear indications that Pike was not properly investigating and reporting notifiable incidents. A reappraisal of the company's compliance status was needed, but did not occur. Instead DOL persevered with a low-level compliance strategy based on negotiated agreements.

Second means of egress

43. The background to this aspect is discussed in Chapter 16, 'Search, rescue and recovery', paragraphs 134–45.

44. In brief, in the mid-1990s Pike planned to have two stone drives into the mine. By 2000 a vertical ventilation shaft was planned, serviced by an electric hoist. In 2005, when the final mine plan was approved, a ventilation shaft remained the proposed second means of egress, but with a ladder system rather than an electric hoist. This was to be a short-term solution until a walkout egress could be developed to exit in the valley of the Pike River stream.

45. The inspectorate first considered a second egress during an inspection on 27 May 2008. This was Mr Poynter's first visit to the mine; he accompanied Mr Firmin. Mr Louw took them underground. The drift was about 20m from the Hawera Fault. Work had begun at the surface to sink the vent shaft. This prompted discussion in which Mr Louw said that a ladderway was to be installed in the shaft to be used for about seven months.[51] His reference to this period was consistent with the longstanding plan to establish a second egress during the early development of the mine.

46. Development of the mine proved slower than predicted. By January 2009 boring of the ventilation shaft was completed, and installation of a construction hoist required to finish development of the shaft was under way. But on 2 February the bottom 30m of the ventilation shaft collapsed and blocked the connection between the shaft and the mine, also causing a loss of ventilation.[52]

47. On 12 February 2009 Mr Poynter visited the mine, was flown to the surface and lowered down the shaft in the construction hoist. He wanted to understand the issues relevant to recovering the shaft.[53] Mr Poynter conducted a further inspection on 8 April, by which time the company had decided to bypass the collapsed portion of the shaft and install the Alimak raise, which took several months to construct.

48. Mr Poynter did not consider the second egress during inspections he made on 9 October 2009 and 22 January 2010. During his next inspection, on 8 April 2010, Douglas White accompanied Mr Poynter underground and the latter raised the matter of a second means of egress. He was told that the workforce had also asked about it. Mr Poynter viewed the shaft, saw a climbing wire and was told that wires extended to the top of the shaft. There was also reference to safety harnesses for use in an escape up the ladder system. Mr Poynter said that although somebody could technically climb up the shaft, and it therefore constituted an egress, in his view it was not a suitable emergency escapeway.[54] He asked the company to provide a plan and timeline for developing the additional walkout egress and associated elements.[55]

49. Mr Poynter subsequently considered whether enforcement action was required. He decided that 'a prohibition or improvement notice had the possibility of failing if Pike challenged it in the court because technically a person could climb up the shaft and exit the mine', so he favoured a voluntary compliance approach.[56]

50. On 12 April 2010 Neville Rockhouse emailed an action plan to Mr Poynter. The document recorded a risk assessment

meeting conducted by the company on 5 March 2010, at which various actions were agreed about use of the ventilation shaft as an escapeway. One was that the shaft should not be deemed a second egress 'unless another full risk assessment is completed'.[57] The document did not refer to development of a second walkout egress.

51. Mr Poynter made a further inspection on 12 August 2010. While underground with Mr White he again raised the second egress and recorded the discussion on INSITE: 'The existing second egress is through the shaft. This allows the evacuation of employees one at a time up the ladderway and while this meets the minimum requirement it is agreed that a new egress should be established as soon as possible.'[58] On 31 August Mr Poynter wrote to Mr White and stated that, given the plan to start coal extraction and the increased underground population, another egress was required 'as soon as possible. Please provide a plan and time line for this work.'[59]

52. Again, nothing occurred until Mr Poynter's next inspection on 2 November 2010. By then, hydro mining had begun and Mr Poynter inspected the hydro panel with Stephen Ellis. At the mine Mr Poynter was given a memorandum prepared by the technical services co-ordinator, Gregory Borichevsky, which outlined a second egress development plan. There was no time to read and consider the memorandum onsite.[60] The memorandum, addressed to Mr White, proposed a walkout second egress, which would double as a second air intake for the mine, 250m north-west of the existing workings. However, access to the site required building 1400m of roadway, which was estimated to take over 50 weeks, subject to obtaining conservation approvals and resolving any geological problems. Yet it was thought the egress could be completed 'by June to September 2011.'[61]

53. Mr Poynter read the memorandum and understood that there would be no development of the second egress/intake until after full hydro coal extraction (as opposed to trial extraction) had begun. He regarded this as unsatisfactory, wanted further details and resolved to discuss the matter with the company, but the explosion occurred before he could do so.[62]

Assessment

54. The attention given to this issue was clearly inadequate. Providing a second egress from an underground mine is a matter of fundamental importance. The workers recognised this and communicated their concern to senior management. Yet the company took no decisive action to ensure that it met its legal obligation.

55. Decisive action was also required from DOL. Construction of the ventilation shaft and the installation of a ladder system was completed in mid-2009. Pike should have been required to provide its plan for a proper second egress then. When, in 2010, the focus turned to starting hydro extraction the issue of a prohibition notice was the only appropriate response.

56. This was put to Mr Poynter in cross-examination. He referred to the difficulty in interpreting Regulation 23, the need for a decision from someone more senior in DOL if a prohibition notice was issued, and his perception that Pike's management viewed this matter as 'a priority', meaning that a negotiated agreement remained a preferable approach.[63] The commission cannot accept this.

Use of the inspectorate's powers at Pike River

The Department of Labour policy

57. As in many countries DOL used a risk-based regulatory approach. Inspectors were to assess the compliance risk posed by individual employers, and tailor a suitable compliance response. If an employer was co-operative and compliant, then informal methods or lesser powers would ordinarily be used rather than intervention.

58. DOL used three broad approaches regarding intervention. The first involved 'negotiated agreements', where inspectors discussed a required improvement with the employer and sought an agreement by negotiation. Next was 'directed compliance', where an improvement notice or a prohibition notice was used to secure compliance. These were appropriate where an employer had a history of non-compliance or where prompt intervention was

needed to prevent immediate serious harm.

59. The third approach involved enforcement action via an infringement notice or a prosecution. These options were appropriate where a workplace failure warranted a deterrent approach.[64] Enforcement action often had to be preceded by a written warning.

60. Procedure required that negotiated agreements had to be recorded in writing and include a completion date for the agreed actions. If the agreement was not honoured, ordinarily the inspector would need to move on to directed compliance.[65]

61. Improvement notices identified a regulatory breach and, if obvious, the required remedial steps, together with a compliance date.[66] Prohibition notices had to both identify a breach and why it was likely to cause serious harm. Inspectors were advised to consult if in doubt.[67] Written warnings were to be given where a non-compliance was found during an inspection, but was immediately remedied. The warning meant an infringement notice for a similar non-compliance could be issued without further warning.[68]

Gunningham and Neal review

62. The authors of the external review considered whether the inspectorate's enforcement approach at Pike River was appropriate. They thought it 'striking' that the inspectors only ever used negotiated agreements in their dealings with the company. This, they noted, could raise the concern that the 'inspectors had been captured' and had acted with undue sympathy towards the company's interests.[69] But the authors concluded that 'over the period of the Pike River mine's operation, there was no single occasion where the inspectors had needed to take a … robust stance because they never met resistance in any form'.[70]

The compliance approach adopted at Pike River

63. Because Mr Firmin and Mr Poynter regarded the company as a responsible and compliant operator, their preferred approach was to conclude negotiated agreements with Pike, but they did not include a deadline for the performance of agreed actions. Indeed Mr Firmin said that 'just about all my letters don't have a timeframe and they should have really but as soon as you stick down a time often, you know, they might be a week later or something and it presents its own problems'.[71]

64. The frictional ignitions in November–December 2008 raised a number of concerns, particularly in relation to Mr Poynter's interpretation of the regulations and to the company's attitude towards compliance. The interactions regarding a second egress demonstrate even more clearly the potential pitfalls of negotiated arrangements. Initially there was no written agreement, then an agreement with no date for completion. There was no sense of authority or urgency.

65. In the view of the commission, and contrary to the conclusion reached in the external review, DOL did meet with resistance from the company and should have taken a much stronger stance. Pike may have expressed good intentions, but its actions were another matter. There was no option but to issue a prohibition notice in relation to the second egress and, generally, firmer compliance methods should have been used at Pike, as shown in the next example.

The roadheader investigation

66. At 4:30am on Sunday 14 February 2010 a miner sustained a serious injury to his foot, which was crushed, causing a bone fracture, some 'degloving' and lacerations. He was flown by helicopter to Greymouth hospital. Mr Poynter arrived at the mine at 9:30am, went underground and inspected the roadheader involved in the accident. Subsequently, he prepared an investigation report.[72]

67. A roadheader bores mine roadways and is equipped to install roof bolts as it moves forward. Holes are drilled into the roof, bolts are inserted and glued in position and tightened to provide strata support. A bolting rig is part of the roadheader and is hydraulically operated. The miner climbed onto the rig to provide manual assistance when the

automatic bolter encountered difficulties owing to excessive roof height. The bolter auto-retracted, crushing the miner's foot between it and the surface of the rig on which he was standing.

68. Mr Poynter's investigation report was detailed and reached a number of key conclusions. These included the victim's actions being contrary to the mine rules, a mine deputy observing a similar action earlier in the shift and doing nothing to prevent a recurrence, the faulty bolter rig not being withdrawn from service and an apprentice fitter operating the machine without authorisation at the time of the accident. The mine deputy was subsequently dismissed. Mr Poynter concluded that the company, the victim and the mine deputy had committed 'a number of possible breaches', but he recommended against prosecutions. He reasoned that the dismissal of the deputy, the serious injuries suffered by the victim and the company's corrective actions justified 'that no further action will be taken'.[73]

69. This recommendation was approved by Mr Poynter's manager and on 22 September 2010 the matter was closed by an INSITE entry that included this comment: 'further inspection found that the Deadman lever on the opposite bolter had been tied down with an electrical cable tie. Although this had no impact on the incident'.[74] In cross-examination Mr Poynter accepted that tying down the deadman lever disabled the bolting rig safety device and that this was of itself a serious matter. There was no investigation into this aspect, although Mr Poynter said he had a number of contacts with Mr White concerning workforce briefings about the risk of overriding safety devices.[75]

Assessment

70. The Gunningham and Neal review included discussion of this investigation.[76] The authors concluded that Mr Poynter's approach was 'entirely consistent with the precepts of responsive regulation, which was the formal approach of DOL to compliance and enforcement'.[77]

71. It is difficult to fathom why there was no prosecution or, at the very least, a written warning issued to Pike. The investigation exposed a serious safety incident involving the miner, a maintenance fitter and a mine deputy. Serious harm resulted and the incident had no mitigating features. Mr Poynter also discovered a disabled safety device on the same machine, which should have increased concern about the safety culture at Pike and called into question the need for a much firmer compliance approach from the inspectors.

The inspection of mine records

Introduction

72. The mine kept comprehensive records compiled by employees throughout the company. Most concerned production and operational issues, but both these and incident and accident reports contained information directly relevant to workplace safety. The records included incident reports, deputy statutory reports, machine and equipment inspection reports, gas data and charts, control room reports, the incident/accident register, the hazard register and the near-hit register.[78]

73. The commission analysed a large part of the available information and data, and compiled schedules that grouped safety-related information according to subject matter.[79] The topics included mine ventilation, methane spikes, the bypassing of safety devices, tag board issues, emergency equipment, and actual and potential ignition sources.

74. Mr Poynter was questioned by counsel assisting the commission with reference to numerous excerpts from the schedules. Mr Poynter was unaware of most of this relevant safety-related information. Some examples of his answers and reactions follow.

Methane spikes

75. Gas charts recorded methane readings obtained from a sensor at the top of the main vent shaft. Numerous spikes, where the methane reading was 1.25% or more, were recorded in the weeks before the explosion. Mr Poynter agreed that these readings indicated an even higher methane content somewhere in the mine, given that methane

would be considerably diluted by the time it reached the top of the vent shaft. Mr Poynter observed that these spikes were occurring because of uncontrolled gas incidents and 'each one of those, in my view, should've been notified.' He added that the extent of the spikes suggested 'an issue with the ability of the mine to control the gas, and that's a ventilation issue'.[80]

76. Another indicator of methane control problems was the tripping of the main fan or machines when a safety device shut off an engine in response to a high methane level. Mr Poynter was asked whether at any time before the explosion he was aware of the extent of tripping, including tripping of the main fan. He responded: 'not the frequency that I'm being shown here. I was aware of one scenario where I was rung by a deputy to get a clarification of when it was appropriate to, what the regulation said about exiting the mine but not to this extent.'[81]

Bypassing and contraband

77. Mr Poynter was also questioned about the practice of bypassing methane sensors or safety devices and confirmed that he was unaware of this practice and that had he known of it an investigation and compliance action would have followed.[82] Similarly, Mr Poynter did not know about problems with contraband, including the discovery of cigarette butts, cigarette lighters and aluminium drink cans underground. Had he been aware of this conduct occurring in 2009 and 2010 he would have required the mine to 'carry out a retraining programme, like a re-induction around this particular issue and that there would be random daily, random checks every day, every shift, so people were searched before they went underground'. He would also have considered enforcement action against the company.[83]

A provision of safety data

78. On 22 January 2010, while conducting an inspection at the mine, Mr Poynter saw information from the accident register displayed onscreen. He requested the details for the last three months and received 41 pages by email the same day.[84] He had not, however, reviewed the information because of time and other work pressures.[85]

79. The commission observed that, in giving evidence, Mr Poynter was obviously disturbed when the extent of the safety issues at the mine was revealed to him. He said that 'there just wasn't enough time' to peruse mine records, that there was no system provided by DOL to facilitate obtaining and analysing documents, that the inspectors were not 'trained in auditing' and agreed that the mine inspectors were essentially there to conduct physical inspections.[86]

Conclusions

80. The commission has reached a number of conclusions:

- The inspectors acted in accordance with DOL policy and largely met the operational requirement to conduct mine inspections at three-monthly intervals.
- They also collaborated and responded well to requests from the company for technical advice and approvals.
- The inspectors obtained only a limited snapshot of the mine's physical systems during inspections, and possessed insufficient information to make an informed judgement concerning the level of compliance at Pike River.[87]
- It was also essential to conduct targeted audits of the documented mine systems and operational information, but the inspectors had no system, training or time to undertake this work.[88]
- Nonetheless, the inspectors assumed that the mine was compliant and indeed that Pike was a 'best practice' company.
- The inspectors used only negotiated agreements and then did not always record agreed actions in

accordance with DOL's operating procedures; nor did agreements stipulate a date for the performance of such actions.

- If the inspectors had properly understood the level of compliance at the mine, they would not have used only negotiated agreements but a range of compliance/enforcement options.
- The inspectors found the requirement that employers use 'all practicable steps' to comply with their obligations under Regulations 23 and 28 of the Health and Safety in Employment (Mining – Underground) Regulations 1999 difficult to interpret, and feared that any compliance action could result in a successful court challenge.[89]
- The provision of a second egress from the mine was so serious as to require the issue of a prohibition notice.

81. These conclusions should be viewed in the context of the environment within which the inspectors were forced to operate. In an answer under cross-examination Mr Poynter said, 'We were dysfunctional in that we reported to separate managers. We had one advisor who had no coal background, although he was technically very good … and there was no co-ordinated approach even … we weren't resourced and we weren't particularly well set up to be able to provide the service that we were expected to provide.'[90] The commission agrees with these comments, and emphasises the need to consider this section alongside Chapter 22, 'The decline of the mining inspectorate'.

82. The above conclusions represent an assessment of the DOL's actual oversight of the mine. Another question is whether a well led and operationally competent regulator would have acted more decisively at Pike River. The commission considers it is probable that an effective regulator would have issued a prohibition notice when Pike commenced hydro mining in September 2010 without a usable second outlet (egress) from the mine. The notice would have stopped hydro mining until the planned second intake (to double as a walkout egress) was developed and importantly would have provided the opportunity for the development of improved ventilation and methane control within the mine.

ENDNOTES

[1] Neil Gunningham and David Neal, Review of the Department of Labour's Interactions with Pike River Coal Limited, 4 July 2011, DOL0100010001.
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[3] Health and Safety in Employment Act 1992, ss 29(a), 30(b), 30(c).
[4] Ibid., ss 31, 39, 41, 56(B), 54(A).
[5] Ibid., s 49(3).
[6] Ibid., ss 47, 48, 25, sch 1.
[7] Health and Safety in Employment (Mining – Underground) Regulations 1999, reg 8.
[8] Ibid., reg 8(1).
[9] Michael Firmin, transcript, pp. 605–07.
[10] Ibid., p. 590.
[11] Memorandum, Department of Labour Mining Steering Group to Workplace Services Management Team, 12 February 2010, DOL0020020022/3.
[12] Michael Firmin, transcript, p. 598.
[13] Department of Labour, Mines Quarries and Tunnels – Indication of Inherent Risk, DOL0020020003/1.
[14] Michael Firmin, transcript, pp. 590, 667.
[15] Ibid., p. 628.
[16] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/2–3.
[17] Alan Cooper, witness statement, 21 October 2011, DOL7770040001/2.
[18] Michael Firmin, witness statement, 19 October 2011, DOL7770040002/4–5, paras 11–18.
[19] Michael Firmin, transcript, p. 2898.
[20] Richard Davenport, Inspection Audit Report, 13 February 2007, DOL3000070190/2–3.
[21] Michael Firmin, notes, DOL3000070008/1.
[22] Health and Safety in Employment (Mining – Underground) Regulations 1999, reg 28.
[23] Michael Firmin, witness statement, 19 October 2011, DOL7770040002/7, para. 29.
[24] Letter, Michael Firmin to Neville Rockhouse, 28 February 2007, DOL3000070190/1.
[25] Michael Firmin, transcript, pp. 2863, 2896–97.
[26] Michael Firmin, witness statement, 19 October 2011, DOL7770040002/16, para. 82.
[27] Michael Firmin, transcript, p. 2895.
[28] Kevin Poynter, transcript, p. 3092.
[29] International Labour Organisation, Code of Practice on Safety and Health in Underground Coalmines, May 2006, p. 129, para. 21.5.2., http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/normativeinstrument/wcms_110254.pdf
[30] United States: Code of Federal Regulations, Safety and Health Standards – Underground Metal and Nonmetal Mines, 30 CFR § 57.22202(a)(1); Canada: Coalmining Occupational Health and Safety Regulations, 1990, reg 114(1)(b); Queensland: Coal Mining Safety and Health Regulation, 2001, reg 353(1), (3); New South Wales: Coal Mine Health and Safety Regulation 2006, reg 118.
[31] Jonathan (Joe) Edwards, witness statement, 24 May 2011, MCD0001/18–19, paras 70–73.
[32] Memorandum, from Kobus Louw, to all staff, 13 November 2008, DAO.025.34372.
[33] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/14, para. 66.

[34] Email, Kevin Poynter to Kobus Louw, 14 November 2008, DOL3000010087/1.
[35] Michael Firmin, notes, 14 November 2008, DOL3000070204/1.
[36] Henry (Harry) Bell, witness statement, 23 June 2011, FAM0001/10–11, para. 34.
[37] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/15, para. 76.
[38] Henry (Harry) Bell, witness statement, 23 June 2011, FAM0001/10–11, paras 35–36.
[39] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/15, para. 76.
[40] Email, Kevin Poynter to Kobus Louw, 19 November 2008, DOL3000010086/1.
[41] Michael Firmin, notes, 20 November 2008, DOL3000070205/1.
[42] Email, Kobus Louw to Kevin Poynter, 28 November 2008, DOL3000020037.
[43] Email, Kevin Poynter to Kobus Louw, 28 November 2008, DOL3000010085/1.
[44] Email, Kobus Louw to Kevin Poynter, 3 December 2008, DOL3000020036.
[45] Email, Kevin Poynter to Kobus Louw, 24 December 2008, DOL3000010084/1.
[46] Email, Kobus Louw to Kevin Poynter, 24 December 2008, DOL3000020035/1.
[47] Kevin Poynter, INSITE file detail report, 13 February 2009, DOL3000070077/1.
[48] Neil Gunningham and David Neal, Review, DOL0100010001/65, paras 211–35.
[49] Ibid., DOL0100010001/103, para. 369.
[50] Health and Safety in Employment (Mining – Underground) Regulations 1999.
[51] Michael Firmin, witness statement, 19 October 2011, DOL7770040002/26–27, paras 150–56.
[52] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/18–20, paras 91–102.
[53] Ibid., DOL7770040003/20–21, paras 104–07.
[54] Kevin Poynter, transcript, p. 3076.
[55] Kevin Poynter, INSITE file detail report, 8 April 2010, DOL3000070155/3.
[56] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/38, para. 220.
[57] Email, Neville Rockhouse to Kevin Poynter, 12 April 2010, DOL3000010009/7.
[58] Kevin Poynter, INSITE file detail report, 12 August 2010, DOL3000070169/3.
[59] Letter, Kevin Poynter to Douglas White, 31 August 2010, DOL3000070170/1.
[60] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/47, paras 280, 282.
[61] Memorandum, Gregory Borichevsky to Douglas White, 29 October 2010, DOL3000070172/1–2.
[62] Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/47, para. 282.
[63] Kevin Poynter, transcript, pp. 3080–82.
[64] Department of Labour, Operating Procedure: Improvements and Improvement Notices, 17 October 2005, DOL3000100031/1.
[65] Ibid., DOL3000100031/2.
[66] Ibid., DOL3000100031/4–7.
[67] Department of Labour, Operating Procedure – Prohibition Notices, 5 May 2003, DOL3000100034.
[68] Department of Labour, Operating Procedure – Written Warnings, 5 May 2003, DOL3000100039.
[69] Neil Gunningham and David Neal, Review, DOL0100010001/122, para. 447.
[70] Ibid., DOL0100010001/127, para. 463.
[71] Michael Firmin, transcript, p. 2854.
[72] Department of Labour, Crush Incident: Pike River Coal, 14 February 2010, DOL3000070137.
[73] Ibid., DOL3000070137/13, paras 8.1–8.4.
[74] Kevin Poynter, INSITE file detail report, 22 September 2010, DOL3000070134/3.
[75] Kevin Poynter, transcript, p. 3014.
[76] Neil Gunningham and David Neal, Review, DOL0100010001/125–26, paras 459-60.
[77] Ibid., DOL0100010001/127, para. 464.
[78] Karyn Basher, witness statement, 10 November 2011, CAC0117.
[79] Royal Commission on the Pike River Coal Mine Tragedy (Karyn Basher), Instances of Methane Recorded in 'CH610 Aux Fan Shaft Methane' Graphs, Deputy Statutory Reports and Deputies Production Reports (30 September – 19 November 2010), February 2012, CAC0145; Royal Commission on the Pike River Coal Mine Tragedy (Karyn Basher), Summary of Pike River Coal Mine Deputies Production Reports for March and October 2010, November 2011, CAC0116; Royal Commission on the Pike River Coal Mine Tragedy (Katherine Ivory), Summary of Pike River Coal Limited Deputy Statutory Reports for March and October 2010, November 2011, CAC0115; Royal Commission on the Pike River Coal Mine Tragedy (Katherine Ivory), Summary of Pike River Coal Mine Deputies Production Reports for November 2010, January 2012, CAC0116A; Royal Commission on the Pike River Coal Mine Tragedy (Katherine Ivory), Summary of Pike River Coal Mine Deputy Statutory Reports for November 2010, January 2012, CAC0115A; Royal Commission on the Pike River Coal Mine Tragedy (Katherine Ivory), Summary of the Reports of Certain Incidents and Accidents at the Pike River Coal Mine, November 2011, CAC0114.
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[81] Ibid., p. 3033.
[82] Ibid., pp. 3033–36, 3043–44.
[83] Ibid., pp. 3040–43.
[84] Ibid., p. 3011.
[85] Pike River Coal Ltd, Incident Registers – Site Summary – Pike River Mine: Report Period 1/09/2009 to 31/12/2009, 22 January 2010, DOL3000020014/2–42; Kevin Poynter, transcript, p. 3037.
[86] Kevin Poynter, transcript, p. 3038.
[87] Ibid., p. 3018.
[88] Kathleen Callaghan, witness statement, 31 October 2011, FAM00042/46, 57.
[89] As provided for in s 46 of the Health and Safety in Employment Act 1992, and as a result made ineffectual decisions about the location of the underground fan and the adequacy of egress from the mine.
[90] Kevin Poynter, transcript, p. 3040.