CHAPTER 23

Management of the mining inspectorate

Introduction

1. This chapter explores how the mining inspectorate was managed, supported and reviewed within the Department of Labour (DOL).

Management and support

2. Mining inspectors were managed or supported by a team leader, the senior advisor high hazards (extractives) and the Mining Steering Group (MSG).

Their direct reporting line

3. Mr Firmin and Mr Poynter, and non-mining inspectors, reported to team leaders in Dunedin and Christchurch respectively. Those team leaders reported to service managers, who reported to the southern regional manager.[1] In keeping with DOL's policy of merging the mining inspectors with the generalist inspectorate, line management had no mining expertise.

4. The structure had several consequences. First, line management did not adequately understand the needs of an underground coal mining inspectorate. As one of the inspectors told Gunningham and Neal, 'There is a gap between generalist staff and us. I have had four managers in the past 11 years – each comes in assuming mining is no different from anything else and I try and educate them.' This lack of understanding sometimes made it difficult for the inspectors to carry out their duties effectively. Mr Firmin was once temporarily refused permission to travel 'because of resource limitations, which would have had the consequence of preventing him from engaging in almost all mine inspections required in his workplan.'[2]

5. Second, the two mining inspectors lacked adequate specialist support and their geographical separation made it hard for them to support each other.

6. Third, there were administrative and budgetary tensions because each region 'administered its own budget but funding inspectors to travel to the North Island came from the Southern region'. Even in the South Island the inspectors had to travel extensively, 'so travel and overnight accommodation costs arose as an issue.'[3]

7. Every month the inspectors reported in detail to their team leaders. For example, Mr Poynter reported that at Pike:
   - during the development stage of the mine, methane ignitions had been notified, the number of which were only discovered as part of an investigation;[4]
   - the stone dusting appeared inadequate;[5]
   - there appeared to be a breakdown of the strata management plan because pull testing of bolts had not been done for a long time;[6]
   - workers had raised the issue of the second means of egress, which was 'up the shaft, which is a 120m climb';[7] and
   - given the plans for production and an increase in the number of workers underground, it was agreed 'that the existing second egress should be enhanced by the completion of another egress as soon as possible.'[8]

8. The reports, both on Pike and other mines, contained information that should have caused a review of the department's approach to compliance. For example, from March 2010 to June 2010 Mr Poynter reported that a gold mine was operating in breach of the requirement to have two means of egress:[9]

> *Single access into [undisclosed] Mine has been open and operating since approx [undisclosed] and has had several visits from previous Inspectors. This has not been raised before. Owner managing risks. Have raised issue with Owner but have nor [sic] issued any notices at this stage … Breach of the HSE Underground Mining Regulations.*[10]

9. In evidence Mr Poynter described the gold mine, which had operated for many years, as having a long single entry and no other way out.[11] Even after Mr Poynter raised the issue in March 2010, enforcement was slow. Reports for June 2010 and July 2010 record that Johan Booyse, then the senior advisor high hazards (extractives), and Mr Firmin were to visit the mine.[12] The August 2010 report records that an improvement notice had been issued and was being disputed.[13] By September 2010 Mr Firmin was 'working on Negotiated agreement to construct Second Egress'.[14] The October 2010 report records 'Second egress agreed and Neg Agreement with Dol [sic] to complete'.[15]

10. A mine was allowed to operate unlawfully for many years in a way that had potential for serious harm or death. Inspectors who visited before Mr Poynter had not acted. After Mr Poynter's involvement, enforcement action still took approximately six months.

11. Health and safety concerns were often identified or reported at extractives sites, including a roof fall that resulted in serious injury,[16] and another fall that buried a mining machine.[17] These and other health and safety concerns should have raised questions about the effectiveness of DOL's scrutiny of the industry.

12. The shortage of mining inspectors featured regularly in reports. From August 2009 to September 2009 Mr Poynter reported that:

> *With only two warranted Inspectors covering the country resources are extremely stretched. In addition there is a lack of knowledge or inspections of high-risk extraction sites throughout the lower half of the North Island.*
>
> *Plans to inspect Underground Tunnel in Auckland Area but nothing has been down to evaluate the need in the lower half of the NI.*
>
> *The impact or risk on the Department should anything occur is high.*[18]

13. Mr Poynter's November 2009 to October 2010 reports repeated those comments and added, 'We are attempting to ensure all high-risk underground operations are visited but there are a large number of high-risk quarries that will not be proactively inspected.'[19] Mr Firmin also reported problems: 'Not able to inspect some high-risk sites in Auckland and Waikato. Partly because manager limited travel. Issue of what needs to be inspected needs to be addressed.'[20]

14. These problems went to the heart of the inspection function. The team leaders were unable to address major issues, which involved significant policy and resource implications, but the issues were known about higher up in DOL.

The senior advisor high hazards (extractives)

15. This position, based in the national office in Wellington, existed from 1988, although by another name. The role included:[21]

> *Work to bring about a significant improvement in workplace health and safety in the extractives sector …*
>
> *Provide professional and technical advice to the Department in the development of policy and standards as they apply to workplace productivity in the coal mining industry …*
>
> *Build effective relationships with key national and international stakeholders in the mines and quarries industries to ensure New Zealand mining and quarrying operations are managed in a safe and productive manner consistent with international best practice and to meet the strategic needs of the country.*[22]

16. The role was not concerned wholly with health and safety. The senior advisor and mining inspectors were part of the workplace group, whose functions include 'workplace relationships', 'productivity' and 'health and safety'.[23] This reflected the breadth of DOL's portfolios, 'which include labour, immigration, employment and accident compensation'.[24]

17. No significant improvement in health and safety was possible, given the limited number of mining inspectors and the inadequate systems. Additionally, the senior advisor had no staff or budget.[25] Mr Firmin thought the lack of budget and authority 'frustrated him [the senior advisor] in his efforts to try and work with us within the industry'.[26]

18. The role did not include direct oversight of the mining inspectors.[27] As Gunningham and Neal state, Messrs Poynter and Firmin had 'far less contact' with the senior advisor than they did with their team leader. 'He did not supervise their operational duties. They would contact Mr Booyse primarily when they needed specialist advice on an issue or in relation to the quarterly meetings of the Mining Steering Group.'[28] Following the Gunningham and Neal review, the structure was changed and by July 2011 the inspectors reported to the senior advisor.[29]

19. The inspectors needed expert support and guidance, but the senior advisor was not required to have underground coal mine expertise. The advisor was a member of the MSG and privy to the major issues facing the inspectors. Like their team leaders, he was probably powerless to remedy them.

Mining Steering Group (MSG)

20. This group, which was created following two underground coal mine tragedies in 2006, was to:

> *be a forum for national planning and setting of operational priorities across the sector*
> *… be a means of monitoring and resolving emergent mining issues*
> *… be responsible for improving the consistency of approach by mines inspectors in relation to regulatory checks and visits*
> *… enable the coordinated involvement of relevant line managers*
> *… assist with Dept's development of industry standards, guidelines and operating procedures.*[30]

21. According to the deputy chief executive of DOL's Labour Group, the MSG brought together 'all the resources working … on mining, and their managers, to maximise the effectiveness of their efforts'.[31]

22. Its members were the mining inspectors, the senior advisor and relevant team leaders, service managers and regional managers. Mining expertise was limited. For example, at one point the group questioned the need to store copies of the mine plans sent by operators to the inspectors and queried their purpose. The senior advisor and inspectors had to explain the importance of the plans. The group agreed to 'Seek legal opinion on what responsibilities flowed to the DOL following the handover from the MED [Ministry of Economic Development]'.[32] This was in 2010, over a decade after the department took over mines inspection.

23. The group was supposed to meet every three months but did not always do so.[33] It met between two and four times per year, although DOL stated that 'minutes may not always have been formally recorded and circulated after every meeting'.[34] The group discussed issues that, if addressed, could have substantially improved health and safety in mining.

24. Forming operational links with other agencies was seen as desirable, especially with the Ministry of Economic Development, to whom permit holders had to submit proposed mining plans. Those plans, if sufficiently detailed, may have assisted the inspectors. To Mr Firmin's knowledge, that link had not been established by July 2011.[35]

25. Professional development was discussed but thwarted by budget constraints. The July 2009 minutes record that the senior advisor was to 'look for opportunities for funding and for appropriate courses etc to increase inspectors [sic] development ASAP'.[36] In Gunningham and Neal's words:

> *A concern that the training provided to the mining inspectors might be inadequate is hardly new. During a 2006 review*[37] *concerns were expressed (particularly given the anticipated growth of the industry) not just about the need for specialist training but also regarding the inspectorate's core skills in areas such as investigation, report writing, record keeping, work planning and legal knowledge, machinery guarding etc.*[38]

26. The MSG discussed whether 'Johan [Booyse], Kevin [Poynter] and me [Mr Firmin] would go out and do some audits but again we were, you know there was lack of funding and it was just something we'd work on once we well could get some funding for that and put into the action plan for next year.'[39] DOL's mining business plan for 2010–11 contemplated the inspectors conducting a joint audit or inspection, but Mr Firmin said this did not happen.[40]

27. In July 2009 the group discussed making available a 'basic H & S [health and safety] Management plan for small business to use'.[41] By November 2011 it had not been produced. The senior advisor was concerned about the adequacy of the mining information on the DOL website, in particular the lack of mining regulations, guidelines, safety statistics, good practices and audit tools,[42] but much of this material did not exist.

28. Mr Poynter discussed with the MSG and senior managers his concerns about not reporting to a mine expert. He considered 'it made it a little bit dysfunctional in that with Michael [Firmin] reporting to somebody in Dunedin, me reporting to somebody in Christchurch and Johan [Booyse] reporting to somebody in Wellington, we were hardly an inspection or a mining inspection group. It was really difficult to try and have a co-ordinated approach.'[43]

29. The MSG was unable to tackle the problems confronting the inspectors. It appears to have lacked a budget and the authority to make key decisions.[44] It was disestablished on 19 August 2011.[45]

Lack of guidance information

30. The mining inspectors lacked sector-specific departmental guidance material. They had generic guidance, including an *Investigations Best Practice* manual and DOL operational procedures and guidance, but these had no focus on underground coal mines.[46] These deficiencies were compounded by the absence of codes of practice and guidelines for the industry, upon which the mining inspectors could have relied. Consequently, the inspectors sometimes used regulations issued under the repealed Coal Mines Act 1979, or overseas material.[47]

31. DOL did not compare its level of enforcement in underground coal mining with that for other industries, or with overseas levels.[48] A comparison could have helped the inspectors to evaluate their approach.

Inadequate reviews of inspectors

32. Performance reviews were intended to be, but were not always, conducted quarterly.[49] Because they were undertaken by a team leader, not a coal mining expert, it was not possible to carry out a qualitative evaluation. The approach Mr Firmin took to inspecting particular coal mines, including Pike, was never reviewed.[50] Mr Poynter said:

> *Nobody with a technical background ever sat down with me and discussed that performance approach. In fact, I was praised from time to time for being what they termed trying to follow the modern regulator view and work with voluntary compliance. The first major review of any work that we'd done, I guess, came after the November 19, and done by Gunningham and Neal.*[51]

33. DOL policy required that, where possible, inspectors contacted health and safety representatives to seek information and keep them abreast of compliance action. But the inspectors did not know about this policy.[52] Mr Firmin was not aware of any check upon the extent to which he performed this function.[53]

34. The inspectors' accident investigations were reviewed by team leaders or service managers,[54] not someone with coal mining expertise.

Resourcing of the mining inspection function

35. Higher levels of DOL, in particular the Workplace Services Management Team (WSMT), knew about the inadequate resources and shortage of extractive inspectors. The WSMT consisted of the group manager workplace services, the national support manager, the chief adviser health and safety, the chief adviser workplace relationships, and the four regional managers.[55]

Request for more resources

36. From mid-2009, the MSG focused increasingly on the shortage of mining inspectors. The group's July 2009 minutes record concern that adequate inspection services could not be maintained. One inspector, John Walrond, had left and was not replaced. Mr Poynter had 'pointed out that in Tasmania before the Beaconsfield Accident, the Chief Inspector of Mines had written to his minister stating he was not in a position to provide an adequate inspection service with the resources at his disposal.'[56]

37. The MSG considered the shortage again on 10 December 2009,[57] and decided to raise it with the WSMT. A group member cautioned that 'this is a difficult decision for WSMT, with no funds available, and may mean a trade-off with other staff.'[58] In February 2010[59] the group provided to the WSMT a memorandum dated 12 February 2010, which described the shortage as posing 'significant political, reputational and service standard/delivery risks to the DoL.'[60] The potential for catastrophe was described as 'very real.'[61] The group pointed out that '[b]ased on the current staffing levels, there is no realistic means for the DoL to service all high-hazard mining, tunnel or quarry operations, low-risk operations are not currently serviced.'[62]

38. The memorandum identified that the shortage had an adverse effect on other projects, for example developing a safety management system for small mines, technical guidance and an employee participation plan.[63] The position was likely to get worse due to productivity growth in New Zealand. Put simply, there were too few inspectors to inspect all extractives workplaces, advise the industry and help workers, both then and in the foreseeable future.

39. The WSMT rejected employing a third mining inspector.[64] By the July 2011 commission hearing, an additional inspector had still not been appointed. The WSMT was disestablished as from 31 August 2011.[65]

Staffing costs

40. DOL provided the direct salary and superannuation costs of staff employed in the mining inspection area from 2004–05 to 2010–11. These remained fairly constant:

2004/05	$331,000
2005/06	$294,000
2006/07	$248,000
2007/08	$178,000
2008/09	$371,000
2009/10	$348,000
2010/11	$323,000

Figure 23.1: Salary and superannuation costs for the mining inspection function

41. Those costs do not equate to salaries of the two mining inspectors. Before the Pike River tragedy, a mining inspector's salary was up to about NZ$76,000.[66] This does not compare well with industry and overseas equivalents.

42. In Mr Poynter's view, the mining inspection function was not set up and resourced sufficiently to fulfil the statutory function of ascertaining whether the Health and Safety in Employment Act 1992 has been, or is likely to be, complied with.[67]

Oversight of the mining inspection function

43. DOL did not review the effectiveness of moving the mining inspectorate from the Ministry of Commerce to DOL: 'After the Cabinet decisions were made to transfer the MIG to the department it considered there was no mandate to complete a review.'[68]

44. Nor, before the Pike River tragedy, did it review the resources, size, operations, support and training of the inspectorate.[69] DOL stated that resourcing decisions took place within the wider workplace services business planning process.[70] It is unclear how this was done without first assessing the effectiveness and needs of the inspectorate.

45. There appears to have been no formal system for reviewing the mining inspectorate after a serious injury or fatality in a mine.[71] Mr Firmin thought there would be a procedure for reviewing performance following criticism by a coroner or court, but he had no knowledge of this occurring.[72] The 2006 Black Reef and Roa mine tragedies resulted in the formation of the MSG and a 2006–09 mining policy review.[73]

The Gunningham and Neal review

46. DOL commissioned Professor Neil Gunningham and Dr David Neal to review its interactions at the Pike River mine.[74] The problems they identified included a lack of general systems audits by the mining inspectors, a failure to ensure the development of codes of practice, insufficient professional development, inadequate written guidance for inspectors and managers' lack of mining expertise.[75]

47. Gunningham and Neal considered that '[g]iven the small size of the mining industry, its statistical profile and the anticipated level of risk, the Department's allocation of resources to mine inspection is reasonable.'[76] The inspectors' workload was considered reasonable and their performance and compliance approach at Pike River appropriate, because Pike was perceived as co-operative and responsive to informal safety recommendations. Safety culture was seen as 'largely intangible' and did not lend itself to ready investigation.[77] DOL was seen as a modern regulator. Evidence before the commission does not support these conclusions.

2006–09 mining policy review

48. Following the 2006 fatalities at Black Reef and Roa, the then minister of labour asked DOL to review whether the regulatory framework was 'effective in the high-hazard underground mining environment, and whether there was a case to return to greater regulatory prescription and re-establish a separate mining inspectorate'.[78]

49. The policy review began in mid-2006 and, according to a DOL briefing paper, was 'conducted over a significant period of time in order to ensure a thorough, consultative review of a technical regulatory framework, and to avoid ad hoc reactions and unnecessary regulation'.[79] The review appears to have been given little priority.

50. Initially DOL took a broad approach. In 2006 it identified a possible need for clearer regulatory requirements, third-party checks for some underground activities and a code of practice focusing on small business operations.[80] Various papers were developed, including a consultation paper titled *Improving Health and Safety Hazard Management in the Underground Mining Industry*,[81] which sought feedback about safety cases, hazard notification, better guidance, improving employee participation and improving health and safety inspections.

51. There was a wide range of submissions.[82] There was support for mines to have health and safety systems and hazard management plans from the outset,[83] and for risk management to be supported by detailed guidance or approved codes of practice.[84] Greater prescription was not supported.[85] Unions and workers backed improving employee participation by using check inspectors, but employers and the industry did not.[86] Several submitters sought increased inspectorate resourcing and more frequent inspections.[87]

52. As time went on, the review increasingly focused on small mines. Two of the three main recommendations concerned small mines while other problems identified at an early stage were not dealt with.

53. In July 2009 a briefing paper to the minister of labour proposed that:[88]

- operators of small mines be required to document their health and safety system and hazard management plans when operations began. The minister disagreed;

- the competency requirements for managers of small underground coal mines (fewer than eight people) be raised. The minister agreed, and this was changed in 2010; and[89]
- DOL should address worker and union concerns about the quality of employee participation in underground mining through improved information and employee participation provisions. The minister agreed.

54. The MSG was concerned that they had not been allowed enough time to provide effective feedback into the review.[90] This is consistent with an insufficient connection between the inspectors and DOL's policy group.[91] James Murphy, the policy manager, workplace health and safety, who joined DOL in September 2008, could not recall the mining inspectors, senior advisor or the MSG ever raising policy issues.[92]

Risk registers

55. The DOL risk registers from 2005 to 2011 identify risks relevant to the mining inspectorate. In March 2010 the following risk was added: 'Limited mining resource. May have service failure, certainly very constrained service. Reputational risk in an event.'[93] This identification of reputation at risk is understandable but overlooks the real issue, the health and safety of mine workers.

56. The April to June 2011 risk register records that DOL had known for a considerable time that a Waikato mine was operating with one egress in breach of the regulations.[94] It also notes, essentially as a result of the demands of the Pike investigation, 'a significant business risk of some service delivery and/or business function failing due to unsubstainable [sic] work load of a Team Leader being shared across other staff.[95]

Conclusions

57. Management and oversight of the mining inspectors were deficient, leaving the inspectors inadequately supported. Problems affecting the inspectorate and the resulting risks were known at many levels of DOL, but were not competently addressed. Generally there was an inadequate focus on the health and safety risks posed by the underground coal mining industry.

ENDNOTES

1 Neil Gunningham and David Neal, Review of the Department of Labour's Interactions with Pike River Coal Limited, 4 July 2011, DOL0100010001/38, para. 110.

2 Ibid., DOL0100010001/38, para. 113.

3 Ibid., DOL0100010001/39, para. 115.

4 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 5 December 2008, DOL3000090027/2, 7.

5 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 2 September 2010, DOL3000090046/3.

6 Ibid.

7 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 7 May 2010, DOL3000090042/3.

8 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 2 September 2010, DOL3000090046/3.

9 The requirement is imposed by reg 23 of the Health and Safety in Employment (Mining – Underground) Regulations 1999.

10 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 7 April 2010, DOL3000090041/6; Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 7 May 2010, DOL3000090042/7; Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 7 May 2010, DOL3000090043/7; Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 5 July 2010, DOL3000090044/7.

11 Kevin Poynter, transcript, p. 3085.

12 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 5 July 2010, DOL3000090044/7; and Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 2 August 2010, DOL3000090045/7.

13 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 2 September 2010, DOL3000090046/7.

14 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 6 October 2010, DOL3000090047/6.

15 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 1 November 2010, DOL3000090048/6.

16 Michael Firmin, ORP April 2010, DOL3000090018/1.

17 Michael Firmin, Operational Review Process Monthly Report – Staff Member, 3 November 2008, DOL3000090001/4.

18 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 3 September 2009, DOL3000090035/6.

19 Kevin Poynter, Operational Review Process Monthly Report – Staff Member, 3 December 2009, DOL3000090038/6.

20 Michael Firmin, Operational Review Process Monthly Report – Inspectors, 3 September 2010, DOL3000090022/11.

21 That role was current as at 31 August 2011: Department of Labour, Answers to Questions for Department of Labour, 31 August 2011,

DOL7770010009/14, para. 33.

[22] Department of Labour, Answers to Questions for Department of Labour: Appendix H – Position Description Senior Advisor High Hazards, 31 August 2011, DOL7770010009_02/3.

[23] Ibid., DOL7770010009_02/2.

[24] Ibid.

[25] Ibid., DOL7770010009_02/3.

[26] Michael Firmin, transcript, p. 605.

[27] Department of Labour, Answers to Questions, DOL7770010009/14, para. 33.

[28] Neil Gunningham and David Neal, Review, DOL0100010001/38, para. 112.

[29] Michael Firmin, transcript, p. 600.

[30] Department of Labour, Mining Steering Group, Minutes, DOL0020020011/1.

[31] Susan (Lesley) Haines, witness statement, 20 June 2011, DOL7770010001/7, para. 32.

[32] Department of Labour, Mining Steering Group, Minutes, 31 March 2010, DOL0020020011/8 and /9.

[33] Michael Firmin, transcript, p. 606.

[34] Department of Labour, Answers to Questions, DOL7770010009/15, para. 37.

[35] Michael Firmin, transcript, p. 610.

[36] Department of Labour, Mining Steering Group, Minutes, 10 July 2009, DOL0020020011/24.

[37] Review of Coverage of Clients by the Extractives Inspectorate, 2006, as cited by Neil Gunningham and David Neal, Review, DOL0100010001/98, para. 347.

[38] Neil Gunningham and David Neal, Review, DOL0100010001/98, para. 347.

[39] Michael Firmin, transcript, p. 622–23, Department of Labour, Mining Steering Group, Minutes, 10 July 2009, DOL0020020011/25.

[40] Michael Firmin, transcript, p. 623. These planned audits were not those commissioned by the government following the Pike tragedy and undertaken by Australian experts with DOL support.

[41] Department of Labour, Mining Steering Group, Minutes, 10 July 2009, DOL0020020011/23–24.

[42] Ibid., DOL0020020011/25.

[43] Kevin Poynter, transcript, p. 2974.

[44] Michael Firmin, transcript, pp. 606–07.

[45] Department of Labour, Answers to Questions, DOL7770010009/17, para. 42.

[46] Michael Firmin, transcript, p. 2823.

[47] Ibid., pp. 647–48; Kevin Poynter, witness statement, 22 June 2011, DOL7770010006/4, para. 18.

[48] Kevin Poynter, transcript, p. 2980.

[49] Ibid., p. 2975.

[50] Michael Firmin, transcript, pp. 2817–19.

[51] Kevin Poynter, transcript, p. 2981.

[52] Michael Firmin, transcript, p. 2832; Kevin Poynter, transcript, p. 2970.

[53] Michael Firmin, transcript, p. 2833.

[54] Ibid., pp. 2820–21.

[55] Department of Labour, Answers to Questions, DOL7770010009/18, para. 46.

[56] Department of Labour, Mining Steering Group, Minutes, 10 July 2009, DOL0020020011/21.

[57] Department of Labour, Mining Steering Group, Minutes, 10 December 2009, DOL0020020011/19.

[58] Ibid.

[59] Memorandum, Department of Labour, Mining Steering Group to Workplace Services Management Team, 12 February 2010, DOL0020020022.

[60] Ibid., DOL0020020022/1.

[61] Ibid., DOL0020020022/4

[62] Ibid., DOL0020020022/3.

[63] Ibid., DOL0020020022/5.

[64] Department of Labour, Mining Steering Group, Minutes, 17 February 2010, DOL0020020021/1.

[65] Department of Labour, Answers to Questions, DOL7770010009/19, para. 47.

[66] Michael Firmin, transcript, p. 599.

[67] Kevin Poynter, transcript, pp. 3039–40.

[68] Department of Labour, Answers to Questions, DOL7770010009/10–11, para. 28.

[69] Ibid., DOL7770010009/7, para. 20.

[70] Ibid.

[71] Michael Firmin, transcript, p. 615.

[72] Ibid., pp. 615–16.

[73] The MSG minutes of 31 March 2010 record what appears to be relatively informal feedback by the investigator into the Black Reef mine tragedy. Issues were identified with DOL processes, mine plans being needed and the extractives inspectors needing to take proper file notes of their visits: Department of Labour, Mining Steering Group, Minutes, 31 March 2010, DOL0020020011/12.

[74] Professor Gunningham is a lawyer, social scientist and co-director of the National Research Centre for Occupational Health and Safety at the Australian National University. Dr Neal is a senior barrister, consultant in health and safety law and member of the Law Council of Australia's Occupational Health and Safety Committee: Neil Gunningham and David Neal, Review, DOL0100010001/6.

[75] Ibid., DOL0100010001.

[76] Ibid., DOL0100010001/9, para. 8.

[77] Ibid., DOL0100010001/12, para. 22.

[78] Department of Labour, Briefing: Underground Mining – Background on Department of Labour's Legislative and Investigative Approach, 20 December 2010, DOL0010020492/5, para. 20.

[79] Ibid., DOL0010020492/5, para. 22.

[80] Department of Labour, Answers to Questions for Department of Labour: Appendix J – Bundle of Documents Regarding 2006–2010 Review, DOL7770010009_07/17.

[81] Department of Labour, Improving Health and Safety Hazard Management in the Underground Mining Industry, March 2008, DOL0010020279.

[82] Department of Labour, Summary of Public Submissions on Discussion Paper Improving Health and Safety Hazard Management in the Underground Mining Industry, September 2008, DOL0010020323/5.

[83] Ibid., DOL0010020323/12.

[84] Ibid., DOL0010020323/12–13.

[85] Ibid., DOL0010020323/6.

[86] Ibid., DOL0010020323/16.

[87] Ibid., DOL0010020323/18.

[88] Department of Labour, Briefing: Options for Improving Health and Safety in Underground Mining, 2 July 2009, DOL0010020445.

[89] Health and Safety in Employment (Mining Administration) Amendment Regulations 2010.

[90] Department of Labour, Mining Steering Group, Minutes, 10 July 2009, DOL0020020011/24.

[91] Michael Firmin, transcript, p. 607.

[92] James Murphy, transcript, p. 503.

[93] Department of Labour, Answers to Questions for Department of Labour: Appendix M – Risk Register Extracts, March 2010, DOL7770010009_12/3.

[94] Ibid., 4 August 2011, DOL7770010009_12/2.

[95] Ibid., DOL7770010009_12/4.