## CHAPTER 22 The decline of the mining inspectorate

## Introduction

 This chapter explores the history and functioning of the mining inspectorate during three periods: under the Coal Mines Act 1979, when there was a separate inspectorate for coal mines; in a transition period from 1992 to 1998, after the enactment of the Health and Safety in Employment Act 1992 (HSE Act); and from 1998, when the coal mine inspectors became part of the Department of Labour (DOL) and were known as extractives inspectors.<sup>1</sup>

# The inspectorate under the Coal Mines Act 1979

2. Under the Coal Mines Act 1979 there was a specialist coal mines inspectorate, as it was then known, based in the Ministry of Energy, latterly the Ministry of Commerce. It was involved in major aspects of coal mining and the coal mining industry, including policy.<sup>2</sup>

## Inspectors

3. The act provided for a chief inspector, district, electrical and mechanical inspectors of coal mines.<sup>3</sup> Chief inspectors could support and review the actions of the inspectors. They held first class coal mine manager's certificates and had significant coal mining expertise, usually as manager of a large and challenging New Zealand mine such as Strongman, which had problems with gas and spontaneous combustion.<sup>4</sup> The chief inspector attended conferences of the Australian chief inspectors.

## Inspections

- 4. District inspectors had coal mining expertise and inspected mines within a particular geographical area. Inspections occurred with and without notice and following notification of incidents and accidents. Small mines were inspected monthly and large mines inspected weekly.<sup>5</sup>That reflected the mine's rate of progress and the time required for a comprehensive inspection.
- 5. Mines that posed a high level of hazard could receive greater attention, which resulted from discussion within the inspectorate rather than from a formal hazard assessment system.<sup>6</sup> Frequent inspection allowed the inspectors to become familiar with mines and to respond to problems swiftly and in an informed manner.

## **Relations with workers**

6. Inspectors had close relations with workers and workmen inspectors, who inspected mines on behalf of the workers. Those close relations were supported, and in some cases required, by the Coal Mines Act 1979. For example, inspectors had to inspect a mine as soon as practicable after notice of a serious accident and notify workmen inspectors of the proposed inspections. Workmen inspectors could accompany the inspector and make their own report to the mine manager.<sup>7</sup>

## Scrutiny of mine plans

7. Inspectors scrutinised mine plans at two stages. First, not less than three months before the beginning of each calendar year mine managers had to submit plans showing the proposed development and extraction for that year and the next nine years. Significant detail was required for the upcoming year – the haulage roads, airways, stoppings, boreholes and pump sumps – and increasingly less detail for the later years. Work could not be carried out until the plans were approved by an inspector.<sup>8</sup>

- 8. Second, mines producing up to 12,000 tonnes of coal per annum had to provide plans every 12 months, and mines producing more than 12,000 tonnes every six months. If an inspector believed a plan to be incorrect, a survey could be required, paid for by the mine owner.<sup>9</sup>
- 9. The plans enabled inspectors to understand what was going on within a mine. They would be checked against legislative requirements and for indications of sound mining practice, a concept that incorporated health and safety. Any issues would be raised with the licence holder.<sup>10</sup>

## Licensing

10. The involvement of the inspectorate started at an early stage. There were two types of licence: coal prospecting and coal mining. Each included conditions, into which the chief inspector could have input. Coal mining licences commonly included resource extraction, environmental and safety conditions.<sup>11</sup>

#### **Competence of workers**

11. The inspectorate was involved with competence assessment. A board of examiners ascertained the suitability of applicants for mining certificates of competence. Its membership was specialised and included the chief inspector and two holders of a first class coal mine manager's certificate with at least 10 years' coal mining experience and active involvement in the industry.<sup>12</sup>

#### High-voltage electrical equipment

12. The electrical inspector within the inspectorate assessed the use of standard voltage electrical equipment. Separate from the inspectorate was an Energy Safety Group, based in the Ministry of Energy, which authorised the use of and surveyed the high-voltage electrical lines often used by mines to supply electricity to underground equipment.<sup>13</sup> The group's results went to the inspectorate.<sup>14</sup>

#### Summary

13. The inspectorate was influential and had comprehensive involvement in major aspects of coal mining. It could ensure that health and safety was taken into account from an early stage. But this period should not be viewed through rose-tinted glasses. There were still accidents during the 13 years of the Coal Mines Act 1979. One, the fire at the Boatmans No. 4 mine, Reefton, on 18 September 1985, resulted in four deaths.<sup>15</sup>

# The transition period from the early 1990s to 1998

#### The late 1980s/early 1990s

- 14. In 1989 the Ministry of Energy was abolished.<sup>16</sup> The coal mining inspectorate, by then known as the Mining Inspection Group (MIG), was transferred to the Energy and Resources Division of the Ministry of Commerce. Following the Resource Management Act 1991, the MIG's resource management function was transferred to regional authorities. Consequently, its staffing was reduced and its work became more concerned with health and safety.
- 15. By 1992 the MIG's annual budget was approximately \$3 million, funded almost entirely by levies collected from the extractive industries.<sup>17</sup> There was some industry resistance to the cost of levies, which led to an independent review in 1991, but there was 'agreement on the efficacy of the group and the quality of its inspection and advisory services'.<sup>18</sup>

#### Transfer of the Mining Inspection Group deferred

16. In 1993 consideration was given to transferring the MIG to DOL, in order to rationalise staffing and resources, and to improve the effectiveness of the delivery of health and safety services 'through the availability of additional disciplines and support staff in the Department of Labour.'<sup>19</sup>

- 17. As a 1994 briefing paper of the Ministry of Commerce and DOL noted, both the MIG and the mines it serviced resisted the transfer, claiming it would have a bad effect on occupational safety and health in the industry.<sup>20</sup> The briefing paper also raised legislative and administrative difficulties. These included the fact that, because of the 'different institutional histories of the inspectorates', the extractives industries considered the MIG to be 'more "professional". This was reflected in generally higher qualifications and more experience, 'leading to...generally better terms and conditions of employment'. DOL also believed that attempting to integrate such staff into Occupational Health and Safety would be likely to 'create a number of management issues' including 'Branch Managers having responsibilities for staff and activities they do not fully understand'.<sup>21</sup>
- 18. The transfer did not proceed at that stage. The MIG remained with the Ministry of Commerce to provide occupational health and safety services for the mining, quarrying, petroleum and geothermal industries. DOL retained policy responsibility for those industries. The arrangements were agreed at ministerial level.<sup>22</sup>
- 19. In July 1998 MIG was transferred to DOL, with Cabinet approval.<sup>23</sup> There were two exceptions. First, the Energy Safety Group, by then in the Ministry of Commerce, continued to provide electrical safety services to the sector. Second, the permitting function remained with the Ministry of Commerce.

#### Staffing

20. From 1993 to 1998 the MIG consisted of about 20 to 25 people.<sup>24</sup> In 1995, for example, there were three coal inspectors, three mining engineers, five quarry inspectors, one electrical/mechanical engineer, two petroleum/ geothermal inspectors, two regional managers, one group manager and eight support staff.<sup>25</sup>

## Inspection frequency

21. The inspection frequency reduced. In 1993–94 all underground mines were to be inspected every two months. In 1995 that reduced to every three months because an 'increased emphasis on education and training' made the greater frequency unrealistic.<sup>26</sup> A 1996 mining inspectorate report 'indicates that a continued shortage in staff numbers and an increase in educational activities resulted in a reduction in field inspection work.<sup>27</sup> The declining number of minerals and coal inspections over the 1991–97 period is shown in Figure 22.1.





### Serious harm frequency rates

22. At the same time, mining serious harm frequency rates increased, as shown in Figure 22.2. The MIG's 1995 annual report noted that mine operators considered 'reduced inspection frequency and lack of mining regulations' were contributing factors.<sup>29</sup>



Figure 22.2: Serious harm frequency rates<sup>30</sup>

## Education

23. The MIG's involvement in education lessened. The board of examiners had been disestablished and the Extractive Industry Training Organisation (EXITO) now provided training and issued certificates of competence.<sup>31</sup>

## Responsibilities

24. Responsibility for health and safety was increasingly seen as falling squarely on the operator. This was seen as allowing reduced but targeted surveillance.<sup>32</sup>

## Summary

25. The period, from the early 1990s to 1998, was the beginning of the decline of the mining inspectorate. By the end of the period it had no statutory role in permitting and environmental matters. The number of inspections was reducing and reported serious harm rates were increasing.

## The mining inspectorate from 1998

- 26. There was continued decline after July 1998, when the MIG was transferred to DOL. The separate mining inspectorate ended.
- 27. Following the transfer, the inspectors fell within a department responsible for inspecting almost all New Zealand workplaces. They became part of the body of approximately 140 warranted health and safety inspectors within DOL,<sup>33</sup> who were mainly generalist inspectors but could access technical expertise.<sup>34</sup>
- 28. The mining inspectors were responsible for all 1000 or so coal and metalliferous mines, tunnels and quarries. Because they were also generalist health and safety inspectors and inspectors under the Hazardous Substances and New Organisms Act 1996, they had some responsibility for non-extractives matters.
- 29. The inspectors were not required to have expertise in the mining method used by the mines they inspected.<sup>35</sup> The two extractives inspectors in 2009–10, Michael Firmin and Kevin Poynter, did not have hydro-mining expertise, the method used by two main underground coal mines, Pike River and Spring Creek.
- 30. Underground coal mines tended not to be inspected by inspectors with other skills. This meant that neither mechanical inspectors nor those with expertise in workplace fatigue were inspecting underground coal mines.<sup>36</sup>
- 31. From 2009 DOL assumed increasing responsibility for electrical equipment inspection,<sup>37</sup> but lacked the required expertise. By July 2011 it had appointed an electrical inspector, but he did not have coal mine electrical expertise.

This is a complex area requiring specialist knowledge,<sup>38</sup> for example of sensor systems for gas and ventilation, variable speed drives and flameproof and intrinsically safe equipment.

32. The department did not have enough expertise to inspect the range of major hazards in underground coal mines, including geological, geotechnical, strata, spontaneous combustion, poor ventilation, methane and electrical. Assessing those and their controls requires a diverse range of expertise. Compliance cannot be assured by someone with mine manager qualifications physically inspecting a mine.<sup>39</sup> DOL told the commission that 'the technical nature and potential for catastrophic (low-frequency high-consequence) events in the underground extractives sector, particularly coal mining, is recognised and the sector is serviced by two full-time mines-qualified Health and Safety inspectors.<sup>40</sup>

## Too few mining inspectors

- 33. At the time of the transfer several mining inspectors resigned, meaning only two transferred to DOL.<sup>41</sup> Aside from February 1999 until early 2001 when there were three mining inspectors, DOL did not increase their number for three reasons:
  - there was no longer a legislative requirement to collect specific levies on coal mining,<sup>42</sup> this was seen as removing the need to inspect each workplace at least annually, and provide a minimum level of service;
  - although the numbers of inspectors had fallen, the inspection rates and inspector ratios were still higher than for any other sector, making it difficult to justify increases,<sup>43</sup> and
  - other authorities had taken over a number of functions previously performed by the MIG.<sup>44</sup>
- 34. From 2001 to October 2011 the number of mining inspectors fluctuated between one and two.<sup>45</sup> From April 2008 the two inspectors were Mr Firmin and Mr Poynter. Mr Firmin was based in Dunedin. He had been an inspector since 1995, but his warrant was only extended to include underground coal mines in February 1999.
- 35. Mr Poynter was based in Westport and started in April 2008. He received his certificate of appointment in June 2009, after completing training.<sup>46</sup> That allowed Mr Poynter to use the powers, including of inspection, under the HSE Act. But before completing training and being warranted he was conducting inspections. He would have had to involve a warranted inspector were enforcement steps required.<sup>47</sup>
- 36. Mr Poynter resigned in June 2011, which left only Mr Firmin for three months until September 2011. This was not the first time Mr Firmin was alone. Since February 1999 he had been the sole mining inspector on three other occasions: from March 2001 to June 2001, from October 2004 to July 2005 and from December 2006 until April 2008, all periods when an inspector had left but not yet been replaced.<sup>48</sup>
- 37. Because there were no mining inspectors in the North Island, Mr Firmin and Mr Poynter were responsible for inspecting all New Zealand extractives workplaces.<sup>49</sup> They alternated responsibility for the North Island on a sixmonthly cycle.<sup>50</sup>
- 38. From the 2004–05 business year onwards there were 20 quarry inspectors, but they were generalist inspectors whose warrants were extended to include quarries. Only some received additional training, given by the extractives inspectors. It is unclear how many actually inspected quarries. Many quarries were not being inspected.<sup>51</sup> In Mr Firmin's recollection, the last dedicated quarry inspector had left DOL about five years before the July 2011 commission hearing.<sup>52</sup>

## Expertise and professional development

39. Mining inspectors must meet prescribed qualification and experience criteria, which are not specific to underground coal mining.<sup>53</sup> DOL requires them to hold a first class mine manager's certificate of competence,<sup>54</sup> and provides initial training in such topics as legislation, compliance assessment and prosecution. This does not focus on underground coal mines and is not taught by people with mining expertise.<sup>55</sup> Mr Poynter's training did not deal

with the main mining regulations, the Health and Safety in Employment (Mining – Underground) Regulations 1999. His ventilation training was 'based on ventilation principles in normal workplaces like factories or warehouses.<sup>56</sup> The compliance training did not focus on complex mine systems.<sup>57</sup> In essence, his first class mine manager's certificate of competence was seen as reflecting sufficient industry-specific expertise.

40. There was no requirement for ongoing professional development, but Mr Firmin attended a Queensland risk management course in 2010.<sup>58</sup> There were training deficiencies in hazard identification,<sup>59</sup> auditing, workplace culture,<sup>60</sup> management practices, emergency response, inspections and investigations. In their review, Gunningham and Neal stated that 'the mines inspectors felt particularly disadvantaged, seeing themselves as specialists within a generalist inspectorate which did not see the need to equip them with mining specific skills they needed'. They quoted Mr Firmin:

Management's approach is – all you need [is] to check people's systems and any inspector can [do this] ... but I say I want ventilation, engineering training, geotechnical training, and they say it's not your responsibility why do you need training to that degree. ... sometimes I say I am coming [to a mine] to do ventilation, show us all you have done, but I need the qualifications to ask, is it adequate? ... You have to have continuous professional development ... I need to be competent, up with developments ... I want to be current, go on courses, sit exams. It helps my credibility on site.<sup>61</sup>

## **Fewer inspections**

41. In the year to 30 June 1997, before the MIG transferred to DOL, it completed 2246 compliance inspections, 157 of which were of 18 underground coal mines – an average of 8.7 inspections a year.<sup>62</sup> By the late 2000s DOL had decided that underground coal mines would be inspected four times a year. Additional visits occurred in response to incident notifications. That inspection frequency had to be justified. Mr Firmin recalled:

about three years ago when people at the Mining Steering Group started to challenge, 'Well, do you need to go to these places. How long do you need to go there?' And they weren't sort of trying to stop us, just saying, 'Well, do you need to do this? You need, there's less inspectors why do you need to go to these places this often?'<sup>63</sup>

42. A reduction in the number of inspections, called workplace assessments,<sup>64</sup> is reflected in data supplied by DOL.

Count of workplace assessment processes conducted in terms of the ANZSIC classification of B11 (Coal, black coal & brown coal mining) 1998–2011		
YEAR	WP ASSESSMENT PROCESS	
1998	109	
1999	211	
2000	190	
2001	53	
2002	154	
2003	184	
2004	137	
2005	43	
2006	8	
2007	58	
2008	42	
2009	47	
2010	36	
<b>2011</b> <sup>65</sup>	17	
TOTAL	1289	

#### Figure 22.3: Mining – the number of workplace assessments

43. From 1999 to 2005 there was a steady increase in the number of serious harm notifications from the extractives sector.<sup>66</sup>

- 44. The inspection regime reflected the number and workload of mining inspectors rather than the risks posed by individual underground coal mines.<sup>67</sup> In Queensland the inspection regime is based on a systematic assessment of the hazards of individual mines, using a mines inspection planning tool.
- 45. Nothing in the way inspectors carried out their duties meant that four inspections per year gave the same assurance as the previous average of 8.7.<sup>68</sup>

### Nature of inspections

- 46. Inspectors have to be notified at least 14 days before a mine is worked or a tunnel is started.<sup>69</sup> By then the design will have been finalised. Notifications do not include detailed design information.<sup>70</sup> Thus the inspectors have limited influence in this area.
- 47. Inspections were notified in advance,<sup>71</sup> rather than a mixture of with or without notice, as used under the Coal Mines Act 1979 and in many overseas jurisdictions.
- 48. Between four to eight hours was spent inspecting a large underground coal mine.<sup>72</sup> That time allocation and four inspections per year made it impossible to inspect all the workings of a large underground mine and assess the safety management and incident and accident reporting systems. Even allowing for a targeted approach, the inspection time and frequency were inadequate.
- 49. Inspections usually involved going under ground to check such aspects as the ventilation, roof bolting, stoppings and stone dusting. But mines were not systematically checked for compliance with the HSE Act and its regulations. As Gunningham and Neal note, the

starting point was certainly not an audit or other assessment of the company's health and safety management systems. They did not, for example, concern themselves specifically with whether the mine's occupational health and safety management system met legal requirements, complied with recognised practices or were subject to periodic review.<sup>73</sup>

50. Inspectors were not trained to audit mine systems,<sup>74</sup> despite auditing being one of the prescribed areas of examination for a health and safety inspector.<sup>75</sup> Nor did they have an audit tool.<sup>76</sup> Mr Firmin said that auditing was 'generally not something that anybody in the department, to my knowledge, does'.<sup>77</sup> He recalled the mining inspectors raising the matter, but nothing came of it.<sup>78</sup> Following the Pike tragedy, the government commissioned an urgent audit of underground coal mines using Australian experts, supported by DOL.

## Contact with workers, worker representatives and health and safety officers

- 51. There was limited contact with workers and their representatives. The inspectors usually spoke to workers, but not in a systematic way. They did not always give workers feedback about investigations. DOL did not provide workers with the inspectors' contact details. Mr Firmin could not recall underground coal mine workers ever phoning to raise a health and safety issue.<sup>79</sup>
- 52. Worker representatives rarely raised issues with the inspectors.<sup>80</sup> Only once had Mr Firmin received a hazard notice issued by a worker representative under the HSE Act, which related to an open cast coal mine.<sup>81</sup> When concerns were identified, inspectors did not always contact health and safety representatives, missing the opportunity to inform them and also gather relevant information.<sup>82</sup>
- 53. The inspectors' contact was often with the mine manager or operational management. For example, Mr Poynter had little contact with the health and safety manager at Pike, partly because of time pressure.<sup>83</sup>

#### Culture

54. The inspectors had raised internally the subject of their assessing workplace safety culture in mines, but they lacked the training to do this. DOL had developed a general workplace safety culture questionnaire, but it was not used by inspectors at underground coal mines.<sup>84</sup>

## **Education and experience**

- 55. The inspectors conducted information visits, which involved giving workers health and safety information, but it is not known how effective these were. Although inspectors were not involved in either granting qualifications or industry training, they were concerned about the adequacy of qualifications.<sup>85</sup>
- 56. Inspectors generally did not assess the ratio of experienced to inexperienced workers or routinely focus on the adequacy of workers' training and experience for particular tasks.<sup>86</sup>

## Gathering and use of data

- 57. Ideally, health and safety regulators should gather and analyse a range of modern health and safety data lag and lead indicators and personal and process safety data. The legislation requires notification of some, but not all, of that data. The regulator needs the capacity to analyse it.
- 58. DOL received serious accident data from underground coal mines but did not analyse it to identify patterns.<sup>87</sup> The inspectors lacked the time for this task and had not been trained to do so.<sup>88</sup> Certain categories of high-potential incidents had to be notified to DOL,<sup>89</sup> but it did not analyse them.<sup>90</sup> Underground coal mine process safety data did not feature. DOL did not gather lead indicator data for underground coal mines.<sup>91</sup>
- 59. The inspectors lacked a proper profile of underground coal mines, for example of their operations, key personnel, systems and hazards.<sup>92</sup> This was a result of a failure by DOL to collect and collate relevant information. Mr Firmin gave evidence that INSITE can produce a summary of the compliance history of an operator, but that summary does not include negotiated agreements, even if they have been breached.<sup>93</sup> It seems that INSITE cannot be readily searched to identify whether the same problem has arisen before with an employer. Inspectors needed to check the record of each interaction with a mine operator, which was time-consuming.

#### Enforcement

60. DOL aimed to seek voluntary compliance by using the minimum regulatory intervention.<sup>94</sup> The mining inspectors favoured low-level enforcement tools, particularly negotiated agreements, rather than requiring compliance through improvement, prohibition and infringement notices, and prosecutions. As Figures 22.4 and 22.5 show, there has been increased use of prohibition notices since the Pike River tragedy.

Improvement and Prohibition Notices issued in respect of coal mines 1 January 2005 – 30 June 2011			
YEAR	IMPROVEMENT NOTICE	PROHIBITION NOTICE	
2005	73	0	
2006	5	1	
2007	10	3	
2008	16	0	
2009	16	0	
2010	2	2	
2011	1	5	
TOTAL	123	11	

Figure 22.4: Improvement and prohibition notices

2004/2005 – 2009/2010			
YEAR	NEGOTIATED AGREEMENT	INFRINGEMENT NOTICE	
2004/2005	_*	13	
2005/2006	203	4	
2006/2007	909	12	
2007/2008	667	17	
2008/2009	662	7	
2009/2010	528	4	
TOTAL	2969	57	

Negotiated Agreements and Infringement Notices issued in respect of coal mine

\*Negotiated agreements have only been in use since 2005.

#### Figure 22.5: Negotiated agreements and infringement notices

- 61. Prosecutions occurred in response to accidents, but usually only when serious harm resulted.95
- There was a suggestion that higher approval was required for use of prohibition notices. Mr Poynter said in relation 62. to Pike: 'A prohibition notice would likely have to be approved by someone other than myself... So a prohibition for a - that stopped a mine producing coal would - that's a decision that would have to have [sic] asked from higher above.<sup>96</sup> Although prior consultation and sometimes legal advice may be desirable, inspectors should have authority to take decisive enforcement action.

#### Summary

63 From 1998 onwards the number and range of expertise of people inspecting mines declined. The mining inspectors' workload was formidable and the inspection frequency reduced. Training was insufficient. Modern health and safety data was not used to assess the risks posed by individual mines and focus the inspectors' efforts. Workers and worker representatives were not sufficiently involved with inspectors.

## Conclusions

Since the HSE Act came into force, there has been a substantial decline in the capacity and effectiveness of the 64. mining inspectorate and a loss of identity. It was understaffed, especially in later years. It lacked the required range of expertise. Its approach was outdated and its training and systems limited. There was inadequate contact with workers and worker representatives. The inspectors could not properly do their job of ascertaining and taking reasonable steps to assure health and safety compliance in underground coal mines.<sup>97</sup>

#### **ENDNOTES**

- <sup>1</sup> This report uses the terms 'mining inspector' and 'mining inspectorate'.
- <sup>2</sup> Ministry of Economic Development, Tier Two Paper, 6 May 2011, MED0000010001/56, para. 213.
- <sup>3</sup> Appointments were made under the State Services Act 1962. See Coal Mines Act 1979, ss 8-10.
- <sup>4</sup> Robin Hughes, transcript, pp. 234–35.
- <sup>5</sup> Ibid., p. 238.
- <sup>6</sup> Ibid., pp. 239-40.
- 7 Coal Mines Act 1979, ss 173, 177(2)-(3).
- <sup>8</sup> Ibid., ss 136, 136(1).
- 9 Ibid., s 151(3).
- <sup>10</sup> Robin Hughes, transcript, pp. 244–45.
- <sup>11</sup> Ministry of Economic Development, Tier Two Paper, 6 May 2011,
- MED0000010001/23, para. 74.
- <sup>12</sup> Coal Mines Act 1979, ss 210, 214.

- <sup>13</sup> High-voltage lines meant until they were stepped down by transformer to less than 650 volts
- <sup>14</sup> Ministry of Economic Development, Tier Two Paper, 6 May 2011,
- MED0000010001/55, para, 210.
- <sup>15</sup> There were 12 mining related fatalities between 1980 and 1991, Coronial Services, Mining deaths between 1979 and 2006, 21 December 2010, CAC0177/1
- <sup>16</sup> Ministry of Energy (Abolition) Act 1989.
- <sup>17</sup> Department of Labour, Tier Two Paper, 10 May 2011, DOL0000010001/47, para. 140.
- <sup>18</sup> Ibid., DOL000010001/48, para. 142.
- <sup>19</sup> Ibid., DOL000010001/48, para. 143.
- <sup>20</sup> Department of Labour and Ministry of Commerce, Administration of Health and Safety in Employment Act in Mining, Quarrying, Petroleum and Geothermal Industries, 8 April 1994, DOL0010010011/2, para. 6.

<sup>21</sup> Ibid., DOL0010010011/3, paras 13-14.

<sup>22</sup> Department of Labour, Tier Two Paper, 10 May 2011, DOL0000010001/49, para. 148.

<sup>23</sup> Ibid., DOL000010001/50, paras 150–51; Cabinet Office, Delivery of Occupational Safety and Health Services to the Extractive Industries, 23 March 1998, CAB (98) M 10/5D(1), MED0010040034/1.

<sup>24</sup> 23.5 full-time equivalents.

 $^{\rm 25}\,$  Ministry of Economic Development, Tier Two Paper, 6 May 2011,

MED0000010001/81, para. 280.

 <sup>26</sup> Ibid., MED0000010001/82, para. 282; Ministry of Commerce, Report of the Ministry of Commerce for the Year Ended 30 June 1995, MED0010040027/71.
 <sup>27</sup> Ministry of Economic Development, Tier Two Paper, 6 May 2011,

MED0000010001/82, para. 283; Mining Inspection Group, Ministry of Commerce, 1996 Annual Report, 1997, MED0010040030/12.

<sup>28</sup> Ministry of Economic Development, Tier Two Paper, 6 May 2011,

MED0000010001/83, para. 287. The commission does not have inspection data dealing discretely with the 1993–98 period.

<sup>29</sup> Mining Inspection Group, Ministry of Commerce, 1995 Annual Report, 1997, MED0010040032/12; Ministry of Economic Development, Tier Two Paper, 6 May 2011, MED0000010001/82, para. 285.

<sup>30</sup> Ibid., MED0000010001/83, para. 286. It is not known whether increased compliance with serious harm reporting requirements contributed to the increase.

<sup>31</sup> Regulation 17 of the Health and Safety in Employment (Mining Administration) Regulations 1996 grants the secretary of labour power to recognise an organisation as being able to issue certificates of competence. The only organisation so recognised is EXITO. See Department of Labour, Department of Conservation, Ministry of Economic Development and Ministry for the Environment, Joint Legislative Framework Paper, 6 May 2011, CL00000010001/92, para. 315.

<sup>32</sup> See, for example, George Munro, 'Opening the Doorway to Self-Management in the Mining Industry – The Reduced Site Surveillance Programme', in 1997 New Zealand Minerals and Mining Conference Proceedings, MED0010040031.

<sup>33</sup> About half of the inspectors are also warranted as inspectors under the Hazardous Substances and New Organisms Act 1996. Contractors also undertake audits under that act.

<sup>34</sup> Susan (Lesley) Haines, witness statement, 20 June 2011,

DOL7770010001/4, para. 15.

<sup>35</sup> Michael Firmin, transcript, p. 2810.

<sup>36</sup> Ibid., p. 603. The exception is inspections under the Hazardous Substances and New Organisms Act 1996.

<sup>37</sup> Department of Labour, Tier Two Paper, 10 May 2011, DOL0000010001/64, para. 228.

- <sup>38</sup> Michael Firmin, transcript, pp. 603–04, 635.
- <sup>39</sup> Ibid., pp. 635–38, 2809.
- <sup>40</sup> Geraint Emrys, witness statement, 20 June 2011, DOL7770010002/5, para.
  25.

<sup>41</sup> Letter, Brett Murray to Aedeen Boadita-Cormican, 6 July 2012, MBIE3000010002/1.

<sup>42</sup> Ministry of Energy (Abolition) Amendment Act 1998, s 3, which came into force 1 July 1998.

<sup>43</sup> Department of Labour, Tier Two Paper, 10 May 2011, DOL0000010001/52, para. 161.

<sup>44</sup> Ibid., DOL0000010001/52, para. 162.

<sup>45</sup> Letter, Brett Murray to Aedeen Boadita-Cormican, 6 July 2012,

MBIE3000010002/1.

<sup>46</sup> Kevin Poynter, transcript, p. 2965.

<sup>47</sup> Kevin Poynter, witness statement, 19 October 2011, DOL7770040003/8, para. 27.

<sup>48</sup> Letter, Brett Murray to Aedeen Boadita-Cormican, 6 July 2012,

MBIE3000010002/1.

<sup>49</sup> Michael Firmin, transcript, pp. 597–98.

 $^{\scriptscriptstyle 50}\,$  Neil Gunningham and David Neal, Review of the Department of Labour's

Interactions with Pike River Coal Limited, 4 July 2011, DOL0100010001/38–39, para. 114.

<sup>51</sup> Michael Firmin, transcript, p. 598; Memorandum, Department of Labour Mining Steering Group to Workplace Services Management Team, 12 February 2010, DOL0020020022/2.

<sup>52</sup> Michael Firmin, transcript, p. 601.

 $^{\rm 53}\,$  Health and Safety in Employment (Prescribed Matters) Regulations 2003, reg 6.

<sup>54</sup> Neil Gunningham and David Neal, Review, DOL0100010001/50, para. 159.
 <sup>55</sup> Kevin Poynter, transcript, p. 2966.

- <sup>56</sup> Ibid., pp. 2966–67.
- <sup>57</sup> Ibid., pp. 2966–68.
- <sup>58</sup> Michael Firmin, transcript, pp. 2812–13.
- <sup>59</sup> Kevin Poynter, transcript, p. 2968.
- <sup>60</sup> Ibid., p. 2983.
- <sup>61</sup> Neil Gunningham and David Neal, Review, DOL0100010001/98, para. 346.
- <sup>62</sup> Department of Labour, Tier Two Paper, 10 May 2011, DOL0000010001/50,

para. 153.

<sup>63</sup> Michael Firmin, transcript, pp. 643–44.

<sup>64</sup> Department of Labour, Answers to Questions for Department of Labour,

- 31 August 2011, DOL7770010009/6-7, paras 14, 19 (Table 4).
- <sup>65</sup> Figures to 30 June 2011, the end of 2010/11 financial year.

<sup>66</sup> Department of Labour, Tier Two Paper, 10 May 2011, DOL0000010001/52, para. 165.

- <sup>67</sup> Michael Firmin, transcript, pp. 643–45.
- <sup>68</sup> Ibid., p. 644.
- <sup>69</sup> Health and Safety in Employment (Mining Underground) Regulations 1999, reg 8.
- <sup>70</sup> Michael Firmin, transcript, pp. 630–31.
- <sup>71</sup> Ibid., p. 628.
- <sup>72</sup> Ibid., p. 629; Michael Firmin, witness statement, 22 June 2011,

DOL7770010005/5, para. 21.

- <sup>73</sup> Gunningham and Neal, Review, DOL0100010001/89, para. 306.
- <sup>74</sup> Michael Firmin, transcript, p. 2810.
- <sup>75</sup> Health and Safety in Employment (Prescribed Matters) Regulations 2003, reg 6(1)(a)(vi).
- <sup>76</sup> Kevin Poynter, transcript, p. 2985.
- 77 Michael Firmin, transcript, p. 2810.
- <sup>78</sup> Ibid., p. 2811.
- <sup>79</sup> Ibid., p. 612.
- <sup>80</sup> Ibid., pp. 640–41.
- <sup>81</sup> Ibid., p. 641.
- <sup>82</sup> Ibid., p. 2832.
- <sup>83</sup> Kevin Poynter, transcript, pp. 3118–20.
- <sup>84</sup> Michael Firmin, transcript, p. 640.
- <sup>85</sup> Kevin Poynter, transcript, pp. 2993–96.
- <sup>86</sup> Michael Firmin, transcript, p. 641; Kevin Poynter, transcript, p. 2996.
- <sup>87</sup> Michael Firmin, transcript, p. 614.
- <sup>88</sup> Ibid., pp. 614, 639.
- $^{\rm 89}\,$  Health and Safety in Employment Act 1992, s 25; Health and Safety in
- Employment (Mining Underground) Regulations 1999, reg 10.
- <sup>90</sup> Kevin Poynter, transcript, pp. 2979–80.
- <sup>91</sup> Michael Firmin, transcript, pp. 2813–19.
- <sup>92</sup> Ibid., pp. 2830–31.
- <sup>93</sup> Ibid., p. 2829.
- <sup>94</sup> Susan (Lesley) Haines, witness statement, 20 June 2011,
- DOL7770010001/6, para. 30.
- <sup>55</sup> Department of Labour, Answers to Questions, DOL7770010009/29, paras 67–69.
- <sup>96</sup> Kevin Poynter, transcript, p. 3081.
- <sup>97</sup> Health and Safety in Employment Act 1992, s 30; Michael Firmin, transcript, p. 2809.