# IN THE MATTER OF

**The Hazelwood Coal Mine Fire Inquiry**

**STATEMENT OF KYLIE ANNE WHITE**

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Attention: Peter Stewart

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I, Kylie White, of level 9, 121 Exhibition Street, Melbourne, Victoria, Executive Director of the Earth Resources Regulation Branch (**ERR Branch**) of the Department of State Development, Business and Innovation (**DSDBI**), can say as follows:

# Introduction

## My role and responsibilities (Board’s attachment paragraph 2)

* 1. My name is Kylie Anne White.
  2. I have held my current role since July 2013. My primary responsibilities are:
     1. to regulate the minerals, extractive, geothermal and petroleum industries in accordance with the Acts named below and the delegations given to me;
     2. to implement policies that relate to the regulatory framework which I apply;
     3. to undertake community consultation and engagement where relevant to my role; and
     4. to manage the ERR Branch.
  3. My work background is in natural resource management, including forestry regulation.

I have the following academic qualifications:

1. Graduate of the Advanced Management Program, Harvard Business School, Executive Education, Boston, Massachusetts, USA;

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1. Master of Science (Environmental Management), University of New England; and
2. Bachelor of Science (Forestry), Australian National University.
   1. This Statement has been prepared pursuant to the request made by the Board in a letter dated 9 May 2014.
   2. The Letter requests that this witness statement cover the following topics:
      1. background;
      2. regulation of Hazelwood mine;
      3. occupational health and safety;
      4. rehabilitation of Hazelwood mine;
      5. outbreaks of fire at Hazelwood mine;
      6. the Technical Review Board (**TRB**); and
      7. review.
   3. This Statement seeks to address each of these matters. In the headings to each section of this Statement I indicate to which paragraph in the attachment to the Board’s letter the section refers.
   4. The information contained in paragraphs 13 to 177 of this witness statement is derived from research carried out by officers of the DSDBI at my request in response to the Inquiry and is accurate to the best of my knowledge, information and belief.

## DSDBI’s role and responsibilities in relation to mine regulation (Board’s attachment paragraph 1)

* 1. The ERR Branch forms part of the DSDBI. It is one of eight branches that together comprise the Corporate, Planning and Compliance Services division of the DSDBI. There are, in turn, ten divisions within DSDBI.

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Now produced and shown to me and marked ‘KAW-1’ is a true copy of an organisational chart of the DSDBI effective at 18 March 2014 **[**[**DSDBI.0006.001.0411**](DSDBI/0006/001/DSDBI.0006.001.0411.pdf)**]**.

* 1. The Corporate, Planning and Compliance Services division is headed by Deputy Secretary Rob Barr. I report directly to Rob Barr. Rob Barr reports directly to the Secretary DSDBI, Howard Ronaldson.
  2. The ERR Branch is located in five offices: Melbourne, Traralgon, Ballarat, Bendigo, and Benalla.
  3. There are approximately 46 full time equivalent positions in the ERR Branch; that is, while more than 46 people work in the ERR Branch, the total workload equates to that of 46 full time positions.
  4. In relation to mine regulation, DSDBI regulates aspects of mining activities under the *Mineral Resources (Sustainable Development) Act 1990* (**MR(SD) Act**) and the relevant regulations. I discuss this in greater detail in paragraphs 15 to 20 when setting out the regulatory framework administered by DSDBI.

## Predecessors to DSDBI (Board’s attachment paragraph 3)

* 1. Since privatisation of the Latrobe valley mines in 1996 the *Mineral Resources Development Act 1990* (**MRD Act**), and then the MR(SD) Act, have been administered by the:
     1. Minister for Agriculture and Resources (privatisation to 12 March 2001);
     2. Minister for Energy Resources (13 March 2001 to 4 December 2002);
     3. Minister for Resources (5 December 2002 to 30 November 2006); and the
     4. Minister for Energy and Resources (1 December 2006 to the present).
  2. From privatisation until 4 December 2002 the predecessor to the ERR Branch was located in the Department of Natural Resources and Environment (**DNRE**). On 5 December 2002 DNRE was split into the Department of Primary Industries (**DPI**) and the Department of Sustainability and Environment (**DSE**). Earth resources regulation

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was placed into DPI. On 1 July 2013 DPI was joined with the Department of Environment and Primary Industries and earth resources regulation was moved to DSDBI.

# Regulation of the mine

## Regulatory framework administered by DSDBI (Board’s attachment paragraph 4)

1. The mining, extractive, petroleum and geothermal industries generate approximately 2% of Victoria’s Gross State Product (**GSP**). In Victoria the ‘mining’ industry comprises the mining of coal, copper, sands, antimony and gold. Taken alone, the mining industry comprises approximately 1% of Victoria’s GSP.
2. The ERR Branch regulates aspects of the mining, extractive, petroleum and geothermal industries under the following Acts and Regulations:
   1. MR(SD) Act;
      1. *Mineral Resources (Sustainable Development) (Extractive Industries) Regulations 2010;*
      2. *Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013* (**MR(SD)(MI) Regulations**);
   2. *Mines (Aluminium Agreement) Act 1961* (this Act regulates the Alcoa mine at Anglesea);
   3. *Extractive Industries (Lysterfield) Act 1986*;
   4. *Pipelines Act 2005* (**Pipelines Act**):
      1. *Pipelines Regulations 2007* (**Pipelines Regulations**). Responsibility for regulation under the Pipelines Act and the Pipelines

Regulations is shared with Energy Safe Victoria;

* 1. *Petroleum Act 1998*;
     1. *Petroleum Regulations 2011*;

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* 1. *Offshore Petroleum and Greenhouse Gas Storage Act 2010*;
     1. *Offshore Petroleum and Greenhouse Gas Storage Regulations 2011*;
  2. *Geothermal Energy Resources Act 2005*;
     1. *Geothermal Energy Resources Regulations 2006*;
  3. *Greenhouse Gas Geological Sequestration Act 2008*;
     1. *Greenhouse Gas Geological Sequestration Regulations 2009*;
     2. *Greenhouse Gas Geological Sequestration (Exemption) Regulations 2009*.

1. Of these laws, the MR(SD) Act and the MR(SD)(MI) Regulations are relevant to the regulation of Hazelwood mine.
2. The ERR Branch uses two main tools in order to regulate the mining industry:
   1. the decision making powers of the Minister and the Department Head under the MR(SD) Act and the MR(SD)(MI) Regulations; and
   2. establishing and then implementing programs and strategies to ensure that licensees and others who receive an authority or approval under the MR(SD) Act and the MR(SD)(MI) Regulations comply with their obligations under their authority, approval and under law.
3. More than one half of the ERR Branch’s resources are devoted to regulating the mining industry.
4. Each year the ERR Branch has approximately 1,700 contacts with licensees and applicants under the MR(SD) Act concerning licences and approvals.
5. Under the MR(SD) Act and the MR(SD)(MI) Regulations mining in Victoria is controlled by the State by virtue of:
   1. mining licences;[1](#_bookmark0)
6. I note that the MR(SD) Act also makes provision for the issue of exploration, retention and prospecting licences. Both an exploration and a retention licence entitle the holder to explore for minerals on the relevant

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* 1. work plans; and
  2. work authorities.

1. Licences allocate Crown rights to a resource; work plans and work authorities regulate particular aspects of the operation of a mine. Between them, these are the main instruments created by Parliament to meet the purpose and objectives of the MR(SD) Act in accordance with the principles set out by Parliament to guide its administration.
2. The purpose of the MR(SD) Act is:[2](#_bookmark1)

to encourage mineral exploration and economically viable mining and extractive industries which make the best use of, and extract the value from, resources in a way that is compatible with the economic, social and environmental objectives of the State.

1. This expands into three objectives:[3](#_bookmark2)
2. to encourage and facilitate exploration for minerals and foster the establishment and continuation of mining operations by providing for—
   1. an efficient and effective system for the granting of licences and other approvals; and
   2. a process for co-ordinating applications for related approvals; and
   3. an effective administrative structure for making decisions concerning the allocation of mineral resources for the benefit of the general public; and
   4. an economically efficient system of royalties, rentals, fees and charges; and
3. to establish a legal framework aimed at ensuring that—
   1. mineral and stone resources are developed in ways that minimise adverse impacts on the environment and the community; and
   2. consultation mechanisms are effective and appropriate access to information is provided; and
   3. land which has been mined or from which stone has been extracted or removed is rehabilitated; and
   4. just compensation is paid for the use of private land for exploration or mining; and
   5. conditions in licences and approvals are enforced; and

land. Work under an exploration or retention licence usually precedes an application for a mining licence. Hazelwood mine is not subject to an exploration licence.

1. MR(SD) Act, s 1.
2. MR(SD) Act, s 2.

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* 1. dispute resolution procedures are effective; and
  2. the health and safety of the public is protected in relation to work being done under a licence; and

1. to recognise that the exploration for, and mining or extraction of, mineral resources and stone must be carried out in a way that is not inconsistent with the **Native Title Act 1993** of the Commonwealth and the **Land Titles Validation Act 1994**.

25. From 30 August 2006 s 2A(1) of the MR(SD) Act has provided that ‘in the administration of this Act regard should be given to the principles of sustainable development’.[4](#_bookmark3)

1. Under s 8(1)(a) of the MR(SD) Act, a person cannot carry out mining in Victoria without obtaining a mining licence from the Minister (currently the Minister for Energy and Resources).
2. A mining licence offers the holder more rights than any other type of licence recognised by the MR(SD) Act. The holder of a mining licence may, subject to its conditions, other relevant approvals and consents carry out mining and exploration for minerals on the relevant land.[5](#_bookmark4)
3. The Minister may issue a mining licence.[6](#_bookmark5)
4. An applicant for a mining licence must satisfy the Minister that the applicant can meet the requirements set out in s 15(6) of the MR(SD) Act. These are:
   1. the applicant is a fit and proper person to hold the licence;
   2. the applicant intends to comply with the MR(SD) Act;
   3. the applicant genuinely intends to do the mining work that is the subject of the licence;
   4. the applicant has an appropriate program of work; and
   5. the applicant is likely to be able to finance the proposed work and rehabilitation of land.
5. MR(SD) Act, ss 2A(1) and 2A(2).
6. MR(SD) Act, s 14(1).
7. MR(SD) Act, s 26.

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1. The Minister may impose conditions on a licence addressing the following subject matter:[7](#_bookmark6)
   1. rehabilitation of the land;
   2. protection of the environment;
   3. protection of groundwater;
   4. providing and implementing environmental offsets on the land or any other land;
   5. work undertaken under a licence;
   6. expenditure;
   7. reporting the discovery of minerals;
   8. entering into a rehabilitation bond;
   9. payment of fees;
   10. payment of an environmental levy;
   11. payment of royalties (other than in respect of lignite);
   12. access to and use of the land by the holder of another licence that is limited to a particular stratum; and
   13. protection of community facilities.
2. Once issued, the Minister may approve the renewal,[8](#_bookmark7) transfer,[9](#_bookmark8) variation or cancellation[10](#_bookmark9) of a mining licence,[11](#_bookmark10) while the licensee may surrender their licence (with the consent of the Minister).[12](#_bookmark11)
3. MR(SD) Act, s 26(2).
4. MR(SD) Act, s 31.
5. MR(SD) Act, s 33(2).
6. MR(SD) Act, s 38.
7. MR(SD) Act, s 34(1).
8. MR(SD) Act, s 37(1).

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*Mining licence (Board’s attachment paragraph 4)*

1. The Governor in Council approved mining licence number 5004 for Hazelwood mine on 10 May 1996.

Now produced and shown to me and marked ‘KAW-2’ is a copy of MIN5004

# [[DSDBI.0001.001.0001](DSDBI/0001/001/DSDBI.0001.001.0001.pdf)].

1. On 10 September 1996 the Governor in Council revoked the licence and:
   1. granted mining licence number. 5004;
   2. approved an authority to commence work; and
   3. approved a work plan and a rehabilitation plan.
2. The order was published in the Victoria Government Gazette on 12 September 1996.

Now produced and shown to me and marked ‘KAW-3’ in a copy of Victoria Government Gazette No. S 104 dated Thursday 12 September 1996 **[**[**DSDBI.0001.001.0015**](DSDBI/0001/001/DSDBI.0001.001.0015.pdf)**]**.

1. The licence for Hazelwood mine contained conditions addressing environmental matters such as drainage and discharge, groundwater, dust and noise, and operational matters such as roads, fencing, security, car parking and royalties.
2. On 11 July 2006 the Minister’s delegate approved its amalgamation with mining licences 5449-5452 and a variation to the licence. The effect of this was:
   1. to cause a net increase in the licensed area so as to permit mining to take place on the West Field; and
   2. to add a new condition to the licence requiring the licensee to spend $667,930 per annum on work in the licensed area.
3. The variation and amalgamation were registered on 12 July 2006.

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Now produced and shown to me and marked ‘KAW-4’ are true copies of the variation and amalgamation of mining licence no. 5004 **[**[**DSDBI.0006.001.0412**](DSDBI/0006/001/DSDBI.0006.001.0412.pdf)**]** and **[**[**DSDBI.0006.001.0413**](DSDBI/0006/001/DSDBI.0006.001.0413.pdf)**]**.

1. While the licence established broad rules governing mining activity at the mine, the work plan and the rehabilitation plan set out the detailed rules for how the mine was required to operate and then rehabilitate the land before and after closure of the mine.

*Work plan (Board’s attachment paragraph 4*).

1. A work plan is needed to undertake mining work,[13](#_bookmark12) while a work authority may authorise mining work to commence.[14](#_bookmark13)
2. The Department Head (currently the Secretary to the DSDBI) may approve an application for a work plan.[15](#_bookmark14)
3. Pursuant to the MR(SD) Act, a work plan for Hazelwood mine, as a ‘declared mine’, must contain:[16](#_bookmark15)
   1. specification of the location and how mining work is to be carried out;
   2. an environmental management plan
   3. prescribed mine stability requirements and processes including assessment and controls of mine stability risks;
   4. a rehabilitation plan; and
   5. a community consultation plan.
4. Schedule 15 to the MR(SD)(MI) Regulations sets out in detail what must be included in a work plan.

Now produced and shown to me and marked ‘KAW-5’ is a true copy of Schedule 15 of the MR(SD)(MI) Regulations **[**[**DSDBI.0006.001.0415**](DSDBI/0006/001/DSDBI.0006.001.0415.pdf)**]**.

1. MR(SD) Act, s 40(1).
2. MR(SD) Act, s 42(4)(d).
3. MR(SD) Act, s 40(4).
4. MR(SD) Act, s 40(3).

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*Work plan 11 May 1996*

1. The first work plan for Hazelwood mine was approved on 10 September 1996 as part of the privatisation of the mine. It has since been varied seven times, with the latest variation taking place in 2009.
2. On 5 May 1997 the Department Head’s delegate approved a variation to the work plan that permitted the mining of kaolin clays from the mine.

Now produced and shown to me and marked ‘KAW-6’ is a true copy of the work plan variation approved on 5 May 1997 **[**[**DSDBI.0006.001.0502**](DSDBI/0006/001/DSDBI.0006.001.0502.pdf)**]**.

1. On 20 May 1997 the Department Head’s delegate approved a variation to the work plan that permitted the then licensee to defer two aspects of its planned rehabilitation works at the mine:
   1. rehabilitation of part the eastern overburden dump and a small part of the eastern batters in order to allow the then licensee to create an overburden dump within the mine boundary that would require material to be conveyed across the eastern batters; and
   2. rehabilitation of the eastern overburden dump in order to leave open the possibility of dumping ash there.

Now produced and shown to me and marked ‘KAW-7’ is a true copy of the work plan variation approved on 20 May 1997 **[**[**DSDBI.0006.001.0507**](DSDBI/0006/001/DSDBI.0006.001.0507.pdf)**]**.

1. On 1 October 1997 the Department Head’s delegate approved a variation to the work plan to permit the placement of overburden in the internal overburden dump first proposed in the work plan variation approved on 20 May 1997.

Now produced and shown to me and marked ‘KAW-8’ is a true copy of the work plan variation approved on 1 October 1997 **[**[**DSDBI.0006.001.0511**](DSDBI/0006/001/DSDBI.0006.001.0511.pdf)**]**.

1. On 9 October 1997 the Department Head’s delegate approved a variation to the work plan to permit construction of a live coal facility to the south of the existing slot bunker.

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Now produced and shown to me and marked ‘KAW-9’ is a true copy of the work plan variation approved on 9 October1997 **[**[**DSDBI.0006.001.0515**](DSDBI/0006/001/DSDBI.0006.001.0515.pdf)**]**.

1. On 6 December 2000 the Department Head’s delegate approved a variation to the work plan to allow mining in Phase 1 of the West Field. The work plan variation was sought for:
   1. initial truck and shovel overburden stripping in block 1a and placement of this material in three nominated placement sites;
   2. subsequent bucket wheel stripping of two blocks and placement of overburden into the Stage 2 internal overburden placement;
   3. temporary diversion of a section of Eel Hole Creek;
   4. coal winning from two blocks; and
   5. normal ancillary activities to support operations.

Now produced and shown to me and marked ‘KAW-10’ is a true copy of the work plan variation approved on 6 December 2000 **[**[**DSDBI.0006.001.0519**](DSDBI/0006/001/DSDBI.0006.001.0519.pdf)**]**.

1. On 22 February 2001 the Department Head approved a variation to the work plan constituting the approval of an environmental management plan for Phase 1 of the development of the West Field.

Now produced and shown to me and marked ‘KAW-11’ is a true copy of the work plan variation approved on 22 February 2001 **[**[**DSDBI.0006.001.0649**](DSDBI/0006/001/DSDBI.0006.001.0649.pdf)**]**.

*Work plan 11 May 2009 (Board’s attachment paragraph 4)*

1. Finally, on 11 May 2009 the Department Head’s delegate approved a variation to the work plan that allowed mining in Phase 2 of the West Field.

Now produced and shown to me and marked ‘KAW-12’ is a true copy of the work plan variation approved on 11 May 2009 **[**[**DSDBI.0006.001.0704**](DSDBI/0006/001/DSDBI.0006.001.0704.pdf)**]**.

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1. There are two mechanisms under the MR(SD) Act to vary a work plan:
   1. the licensee could apply to vary the work plan;[17](#_bookmark16) or
   2. the Department Head could direct a licensee to apply to vary a work plan.[18](#_bookmark17)
2. In certain circumstances, the licensee is not required to obtain a planning permit for work the subject of a variation to a work plan.[19](#_bookmark18) If a planning permit is required, then the draft work plan variation is referred to relevant referral authorities for comment and, if appropriate, objection.[20](#_bookmark19)
3. On 14 January 2014 the licensee applied to vary the work plan for Hazelwood mine.

The application is pending. The application serves two objectives:

* 1. to ensure that the work plan meets the prescribed mine stability requirements and processes for ‘declared mines’;[21](#_bookmark20) and
  2. to alter aspects of the work plan in order to meet operational requirements.

1. In seeking to meet the second objective, the licensee seeks permission:
   1. to change the western boundary of the North Field of Hazelwood mine;
   2. to redefine the nomenclature used to identify areas of the mine in the approved work plan so that it aligns with operational practices;
   3. to refine mining sequencing and batter rehabilitation.

## Role or responsibility in mitigating the risk of fire, working with other agencies to mitigate fire risk, and integrated fire management planning (Board’s attachment paragraphs 5, 6 and 7)

1. From 1 January 2008 DPI’s role changed. DPI, as the mining regulator, ceased to have a role or responsibility in mitigating the risk of fire at Hazelwood mine under the MR(SD) Act. DSDBI as mining regulator presently does not participate in the
2. MR(SD) Act, s 41.
3. MR(SD) Act, s 41AA.
4. MR(SD) Act, s 42A.
5. MR(SD) Act, s 77TB, 77TD, 77TE and 77TF.
6. The prescribed mine stability requirements and processes are set out at Part 2 of Schedule 15 of the MR(SD)(MI) Regulations.

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Integrated Fire Management Planning at State level, at regional level in the Gippsland region, or at municipal level in the City of Latrobe.

1. I note two things:
   1. from privatisation until 1 January 2008 DPI had a role and responsibility in mitigating the risk of bushfire at Hazelwood mine under the MRD Act and the *Occupational Health & Safety Act 2004* (**OHS Act**); and
   2. DSDBI, as mining regulator, presently has a support role in responding to a fire emergency at Hazelwood mine under the Emergency Management Manual Victoria **[**[**DSDBI.0006.004.0001**](DSDBI/0006/004/DSDBI.0006.004.0001.pdf)**]** and by virtue of the licensee’s obligation to notify the Chief Inspector of Mines of a ‘reportable event’ under s 41AC of the MR(SD) Act.

# Occupational health and safety

## Transfer of responsibility, transfer of staff and relationship with VWA (Board’s attachment paragraphs 8, 9 and 10)

1. Legislative, regulatory and administrative reforms from 2002 through to 2010 gave rise to the removal of responsibility for ensuring compliance with occupational health and safety requirements from the jurisdiction of DNRE and then DPI to the VWA.
2. In 2002 the *Mineral Resources (Health and Safety in Large Open-Cut Mines) Regulations 1995* were repealed. Occupational health and safety in the Latrobe Valley mines was then governed by two regulations:
   1. the *Occupational Health & Safety (Mines) Regulations 2002* (**OH&S Mines Regulations**); and
   2. the *Mineral Resources Development Regulations 2002* (**MRD Regulations**).
3. The OH&S Mines Regulations set occupational health and safety requirements for Victorian mines. The MRD Regulations required work plans to include an occupational health and safety plan.[22](#_bookmark21)
4. MRD Regulations, Schedule 5, cl 8.

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1. Following enactment of the OH&S Mines Regulations and the MRD Regulations two administrative actions occurred:
   1. the VWA delegated its power to enforce those aspects of the occupational health and safety regime established by the OH&S Act and the OH&S Mines Regulations to the DPI; and
   2. and the VWA and DPI entered into a memorandum of understanding.

In this way, the DPI remained in charge of regulating occupational health and safety at the mine.

Now produced and shown to me and marked ‘KAW-13’ is a true copy of the delegations from 2002 **[**[**DSDBI.0006.001.0922**](DSDBI/0006/001/DSDBI.0006.001.0922.pdf)**]**.

Now produced and shown to me and marked ‘KAW-14’ is a true copy of the memorandum of understanding between DPI and VWA dated 14 August 2003 **[**[**DSDBI.0006.001.0932**](DSDBI/0006/001/DSDBI.0006.001.0932.pdf)**]**.

1. In May 2006 Neil Pope reported to the Minister for Energy Industries and Resources about the regulation of occupational health and safety in Victoria’s earth resources industries. Mr Pope recommended that, among other things:[23](#_bookmark22)
2. [The VWA] should resume direct responsibility for the administration and enforcement of the [OH&S Act] and its Regulations in the earth resources industries.
3. [The VWA] should be delegated with responsibility for the assessment of occupational health and safety requirements of Work Plans and Operation Plans. This would include, but not necessarily be limited to, assessment of an occupational health and safety plan submitted as part of a Work Plan under the MRDA Regulations.
4. DPI should retain responsibility for the approval of Work Plans and Operation Plans under the [MR(SD) Act], the [*Electricity Industry Act 2000*] and the [*Petroleum Act 1998*]. This should be subject to the approval by [the VWA] of occupational health and safety responsibilities delegated by the Minister.

Now produced and shown to me and marked ‘KAW-15’ is a true copy of Neil Pope, *Report into the Regulation of Occupational Health and Safety in Victoria’s Earth Resources Industries*, May 2006 **[**[**DSDBI.0003.001.1051**](DSDBI/0003/001/DSDBI.0003.001.1051.pdf)**]**.

1. Neil Pope, *Report into the Regulation of Occupational Health and Safety in Victoria’s Earth Resources Industries*, May 2006 at 122.

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1. The then government accepted the above recommendations. In 2006 officers from DPI and VWA established a steering committee to manage the transfer of occupational health and safety regulatory responsibilities from the DPI to VWA. The committee met periodically from late 2006 to early 2008.
2. On 15 February 2007 the steering committee prepared a project plan. It divided the project into four phases:[24](#_bookmark23)
   1. knowledge exchange (from January 2007 to March 2007);
   2. capability building (from April 2007 to October 2007);
   3. transition management (from November 2007 to January 2008); and
   4. review (from February 2008 to March 2008).

Now produced and shown to me and marked ‘KAW-16’ is a true copy of the steering committee’s project plan **[**[**DSDBI.0006.001.0954**](DSDBI/0006/001/DSDBI.0006.001.0954.pdf)**]**.

1. On 24 December 2007 DPI and the VWA entered into a memorandum of understanding to govern the parties’ relationship during a ‘transitional’ period and on an ‘ongoing’ basis.

Now produced and shown to me and marked ‘KAW-17’ is a true copy of the memorandum of understanding between DPI and VWA dated 24 December 2007 **[**[**DSDBI.0006.001.1038**](DSDBI/0006/001/DSDBI.0006.001.1038.pdf)**]**.

1. The transitional arrangements applied from 1 January 2008 to 1 July 2008. The ongoing arrangements applied from 2 July 2008 onwards.
2. The transitional arrangements addressed:
   1. incident notification;
   2. closing out unfinalised open notices and directions;
3. VWA and DPI, *Project Plan – Transfer of OHS Regulation from Department of Primary Industries to Victorian WorkCover Authority*, version 1 dated 15 February 2007 at 3.

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* 1. receiving and following up occupational health and safety and dangerous goods (‘DG’) complaints;
  2. processing explosives licences and high consequence dangerous goods licences and permits; and
  3. the continued operation of the steering committee until 1 July 2008.

1. The ongoing arrangements addressed:
   1. field staff communication;
   2. overlapping responsibilities;
   3. provision of advice to external stakeholders;
   4. investigations and enforcement;
   5. emergency and crisis response;
   6. work and operations plans;
   7. operational issues arising from the MR(SD) Act;
   8. sharing information on tenement numbers and licensee details;
   9. sharing intelligence;
   10. sharing historical records;
   11. collaborating on incident notification;
   12. inquiries and complaints;
   13. splitting of functions as to statistical reporting; and
   14. representation at the National Mine Safety Framework, the Chief Inspectors of Mines Conference and at Victorian occupational health and safety stakeholder consultation fora.

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1. In June 2008 Deloitte Touche Tohmatsu conducted an audit of the transfer of occupational health and safety responsibilities at mines from DPI to the VWA. The audit considered:[25](#_bookmark24)
   1. awareness of responsibilities for occupational health and safety in the mining industry transferred from DPI to the VWA;
   2. DPI’s understanding and resourcing of the residual risk following the transfer of responsibilities for occupational health and safety in the mining industry to the VWA;
   3. the manner in which occupational health and safety and mining industry knowledge was transferred from DPI to the VWA; and
   4. responsibilities for and retention of documentation in relation to occupational health and safety in the mining industry created before 1 January 2008.

Now produced and shown to me and marked ‘KAW-18’ is a true copy of the Deloitte report **[**[**DSDBI.0006.001.0978**](DSDBI/0006/001/DSDBI.0006.001.0978.pdf)**]**.

1. The audit concluded as follows:[26](#_bookmark25)

Our examination of the transfer of DPI responsibilities for OH&S in the mining industry to the VWA highlighted that overall, DPI have a sound awareness of the responsibilities for OH&S in the mining industry transferred from DPI to VWA and an understanding of the residual risk following this transfer of responsibilities.

The answers to our Key Internal Audit Questions are outlined below …

|  |  |
| --- | --- |
| Key Internal Audit Question | Answer |
| 1. Is there clear awareness of responsibilities for OH&S in the mining industry that were [sic] transferred from DPI to VWA? | Yes |
| 2. Is the residual risk to DPI following the transfer of responsibilities for OH&S in the mining industry to VWA appropriately understood and resourced. E.g. residual risks associated with public safety | Yes |
| 3. Can DPI demonstrate that it has made all practicable attempts to ensure a comprehensive transition of OH&S responsibility to | Yes |

1. Deloitte Touche Tohmatsu, *Department of Primary Industries Occupational Health & Safety Regulation in Mining* dated June 2008 at 3.
2. Ibid at 3 to 4.

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|  |  |
| --- | --- |
| VWA? |  |
| 4. Are responsibilities for the retention of documentation understood? | Yes |

1. In relation to each Key Internal Audit Question 1, the audit found as follows:[27](#_bookmark26)

The responsibilities for OH&S in the mining industry transferred from DPI to VWA are detailed in the Memorandum of Understanding (MoU) between the Department of Primary Industries and the Victorian WorkCover Authority. The MoU is effective from 1 January 2008.

In addition to the above, a Steering Committee was established in November 2006 to promote awareness and manage the transfer of responsibility and knowledge for OH&S in the mining industry from DPI to VWA.

1. The audit made the following suggestions for improvement:[28](#_bookmark27)

It was noted in discussions with management that the Steering Committee established to oversee the transfer of responsibility for OH&S in the mining industry will meet until 30 June 2008, after which time, the need for the Steering Committee going forward will be reviewed.

In reviewing the need for the Steering Committee post 30 June 2008, factors that DPI and VWA should consider include:

* The nature of agenda items over the past months. A shrinking agenda may suggest that the Steering Committee will not be required going forward.
* The nature of issues arising within Steering Committee meetings over the past months. The existence of minor issues capable of being dealt with via DPI/VWA line managers may suggest that the Steering Committee will not be required going forward.
* Confirmation of the mechanism to address any emergency / future issues.
* Level of understanding of where residual responsibilities (if any) will reside.
* Whether the responsibilities as described in the MoU are adequately defined and whether any amendments are required to the MoU.
* Whether it may be appropriate for the committee to continue to meet and discuss operational activities. This may be an appropriate forum to share industry knowledge that me be useful in relation to completing site inspections and audits of work authorities.

1. Ibid at 5.
2. Ibid at 5 to 6.

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1. In relation to Key Internal Audit Question 2, the audit found as follows:[29](#_bookmark28)

The areas of residual risk to DPI following the transfer of responsibilities for OH&S in the mining industry to VWA are clearly detailed in the MoU.

Schedule 2, “Ongoing Arrangements”, of the MoU, in particular, section 1.2 “Overlapping responsibilities” contains a table which clearly sets out the areas of residual risk to both DPI and VWA.

It was noted in the MoU and following discussions with management that DPI and WorkSafe Victoria will consult on matters where their jurisdictions overlap, with the lead agency being the agency with the highest degree of control over the issue.

1. In relation to Key Internal Audit Question 3, the audit found as follows:[30](#_bookmark29)

Our examination of documentation and subsequent discussions with DPI staff highlighted that OH&S and mining industry knowledge was transferred from DPI to VWA via monthly Steering Committee meetings.

In addition to the above, it was noted in discussion with DPI staff members that a number of other activities have been undertaken to assist in the transfer of OH&S and mining industry knowledge from DPI to VWA and DPI and VWA to the mining industry. These activities include the Tripartite forum, the production of a minerals and extractive operations newsletter, training and presentations and a letter from Worksafe Victoria to all mine and quarries.

1. In relation to Key Internal Audit Question 4, the audit found as follows:[31](#_bookmark30)

The MoU clearly details the responsibility for and retention of documentation in relation to OH&S in the mining industry created prior to 1 January 2008. Schedule 2 “Ongoing Arrangements”, in particular, section 2.3 “Historical records” provides as follows:

“2.3.1 Copies of *recent* OH&S information pertaining to sites have been provided to WorkSafe Victoria electronically. There is some information located on hard copy files that will remain with DPI. In the future, WorkSafe Victoria may wish to view this historical information. The agencies will share access to current information as arranged and agreed through local managers”.

1. The audit did not make any suggestions for improvement in relation to Key Internal Audit Questions 2, 3 and 4.[32](#_bookmark31)
2. The audit noted that under the terms of the memorandum of understanding DPI retained responsibility as ‘lead agency’ for ‘public safety and amenity’. It described that activity in the following terms:[33](#_bookmark32)
3. Ibid at 7.
4. Ibid at 8.
5. Ibid at 9.
6. Ibid at 7, 8 and 9.
7. Ibid at 14.

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***Public safety and amenity***

DPI is responsible for ensuring that prior to commencing work, each Work Authority has sufficient public liability insurance and that it is maintained at all times. Work Authorities include information in relation to the use of fencing, gates, access to sites, blasts, fly rock and signage in their work plans and operational plans which are submitted to DPI for approval prior to commencement of any work to be completed. DPI ensures that public safety requirements are met through site visits or audits that may be conducted to ensure that the work plan/operational plan is adhered to.

1. On 20 December 2007 the chief executive officer of the VWA withdrew authorisation to officers of the DPI concerning the exercise of occupational health and safety powers under the OH&S Act and the regulations.

Now produced and shown to me and marked ‘KAW-19’ is a true copy of the withdrawal of authorisation dated 20 December 2007 **[**[**DSDBI.0006.001.1024**](DSDBI/0006/001/DSDBI.0006.001.1024.pdf)**]** and **[**[**DSDBI.0006.001.1027**](DSDBI/0006/001/DSDBI.0006.001.1027.pdf)**]**.

1. In 2010 the last remnant of the DPI’s former jurisdiction concerning occupational health and safety under the MRD Regulations was removed with the deletion of the provision in the regulations requiring work plans to address occupational health and safety.[34](#_bookmark33) The provision in the MR(SD) Act which empowered the Governor in Council to make regulations concerning health and safety plans was repealed in the same year.[35](#_bookmark34)
2. One staff member from DPI transferred to VWA. Greg Sleziak was Acting Manager Minerals and Extractive Operations (Gippsland). His former position is currently held by Anne Bignell.
3. The relationship between DSDBI and VWA is now governed by a third memorandum of understanding, effective from 1 January 2011 to 31 December 2013.

Now produced and shown to me and marked ‘KAW-20’ is a true copy of the memorandum of understanding between DPI and VWA dated 13 January 2011 **[**[**DSDBI.0006.001.1056**](DSDBI/0006/001/DSDBI.0006.001.1056.pdf)**]**.

1. Clause 1.2 of Schedule 1 of the MOU governed the manner in which the parties proposed to manage areas of overlapping responsibilities with respect to work at the mine:
2. *Mineral Resources Development (Mining) Amendment Regulations 2010*, r 9.
3. *Energy Resources Legislation Amendment Act 2010*, s 55.

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* 1. **Overlapping responsibilities**
     1. Both agencies have objectives in their legislation that dictate responsibility for public safety matters and the use of explosives. WorkSafe Victoria has responsibility for public safety arising from work-related activities.
     2. WorkSafe Victoria and DPI will consult on matters where their jurisdictions overlap with the lead agency being the agency with the highest degree of control over the issue. (Note safety aspects of gathering lines under the *Petroleum Act 1998* will also be referred to EnergySafe Victoria (“ESV”).)

|  |  |  |
| --- | --- | --- |
| Safety related elements | DPI | WorkSafe Victoria |
| Public safety and amenity | * Lead Agency | * Support Agency |
| Public safety (work related) | * Support Agency | * Lead Agency |
| Operation design and works  approval | * Lead Agency | * Support Agency |
| Variations to operation plans  and licences | * Lead Agency | * Support Agency |
| Well Integrity | * Lead Agency | * Support Agency |
| Occupational health and  safety | * Support Agency | * Lead Agency |
| Explosives | * Support Agency | * Lead Agency |
| Blasting impacts (airblast &  ground vibration) | * Lead Agency | * Support Agency |
| Site rehabilitation planning | * Lead Agency | N/A |
| Site rehabilitation activity | * Lead Agency | * Support Agency |

1. Clause 1.3 of the MOU governed the provision of advice:
   1. **Provision of Advice to External Stakeholders**

WorkSafe Victoria and DPI will work together to ensure good communication of advice which will assist both agencies to effectively administer their respective legislation and to inform and educate duty holders accordingly.

|  |  |  |
| --- | --- | --- |
|  | **DPI** | **WorkSafe Victoria** |
| **Technical advice** | Sustainable development  including design, safe operating standards,  approval of work and  operations plans, protection | Occupational health and  safety; Dangerous Goods including explosives  licensing. |

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|  |  |  |
| --- | --- | --- |
|  | of people and site  rehabilitation. |  |

1. Pursuant to clause 1.5 of the MOU both bodies agreed to discharge their duties when responding to a crisis or emergency in accordance with the *Emergency Management Act 1986*.
2. The memorandum of understanding expired on 31 December 2013. Both parties are in negotiations to enter into a new memorandum of understanding. It is a convention in government that the parties continue to act in accordance with the terms of the expired memorandum of understanding until a new agreement is entered into.

# Rehabilitation of the mine

## Rehabilitation plans and future work to be done (Board’s attachment paragraphs 11 and 13)

1. The content of a licensee’s rehabilitation obligations are governed by the provisions of Part 7 of the MR(SD) Act, conditions under the licence, and an approved rehabilitation plan. The primary obligation is contained in s 78 of the MR(SD) Act: a licensee must rehabilitate land in accordance with a rehabilitation plan approved by the Department Head.
2. The rehabilitation plan must take into account:[36](#_bookmark35)
   1. any special characteristics of the land;
   2. the surrounding environment;
   3. the need to stabilise the land;
   4. the desirability or otherwise of returning agricultural land to a state that is as close as is reasonably possible to its state before the mining licence or extractive industry work authority was granted; and
   5. any potential long term degradation of the environment.
3. MR(SD) Act, s 79(1)(a).

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1. The licensee must rehabilitate the land during the course of doing work under a mining licence, and must complete rehabilitation before the mining licence expires.[37](#_bookmark36) This requirement limits the risk that all of a mine would need to be rehabilitated upon its closure.
2. Conditions 15 and 16 of the licence approved in 1996 governed rehabilitation. They provided as follows:
3. **PROGRESSIVE REHABILITATION**
   1. Progressive reclamation will be conducted as per the rehabilitation plan. In addition, any further rehabilitation work will be carried out at the direction of an Inspector.
   2. As and when directed by an Inspector of Mines, despite any compensation agreements between the licensee and the owner of any private land in the licence, the licensee shall undertake progressive reclamation of the land in the licence.
   3. **FINAL REHABILITATION**
      1. Final reclamation will be in accordance with the rehabilitation plan and any additional requirements as directed by an Inspector.
      2. Failure to complete works in accordance with a rehabilitation plan or in accordance with the directions of an Inspector, shall constitute grounds upon which the rehabilitation bond may be forfeited either in whole or in part in accordance with Section 83 of the MRD Act.
4. The stated aim of the 1996 rehabilitation plan for Hazelwood mine was:[38](#_bookmark37)

… to provide an overall vision for the ultimate rehabilitation of all disturbed land at Morwell Mine in compliance with policy requirements.

1. The policy requirement underpinning the 1996 rehabilitation plan was:[39](#_bookmark38)

… to ensure that land disturbed by coal-winning activities is stabilised and landscaped to blend into or complement existing natural features, allowing further beneficial use at the earliest practical time. Proposals will be developed in consultation with agencies, interest groups and the public.

1. The 1996 rehabilitation plan comprised the following matters:[40](#_bookmark39)
   1. screening operations;
2. MR(SD) Act, s 81(1).
3. *Morwell Mine Rehabilitation Concept Master Plan*, clause 5. Published at Victoria Government Gazette No. S 104 Thursday 12 September 1996 at 34.
4. Ibid at 33.
5. Ibid at 34 to 35.

|  |  |  |
| --- | --- | --- |
| b. | final land use; | 25 |
| c. | water management; |  |
| d.  e. | visual management;  ecological management; |  |
| f.  g. | fire protection;  timing; and |  |
| h. | critical decision points. |  |

1. The overall rehabilitation concept in 1996 focused upon flooding the mine in order to form a lake, after removing operational infrastructure from the mine. The remaining land areas would be used for grazing, conservation, recreation and forestry.[41](#_bookmark40)
2. The 1996 rehabilitation plan envisaged five year rolling implementation plans.[42](#_bookmark41) With respect to fire safety, the rehabilitation was governed by *Latrobe Valley Open Cut Mines Fire Service Policy and Code of Practice* (**Code of Practice**) and the document ‘Trees and Fire Protection’.[43](#_bookmark42)

Now produced and shown to me and marked ‘KAW-21’ is a copy of ‘Trees and Fire Protection’ **[**[**DSDBI.0006.001.0022**](DSDBI/0006/001/DSDBI.0006.001.0022.pdf)**]**.

## Rehabilitation work (Board’s attachment paragraph 12)

1. To date, the following rehabilitation work has been undertaken at Hazelwood mine:
   1. rehabilitation of external overburden, ash and waste dump sites. This involved landscaping and then the revegetation of the sites;
   2. placement of overburden on part of the mine floor;
   3. placement of ash on part of the mine floor (this comprised the Hazelwood Ash Retention Area (**HARA**));
2. Ibid at 37.
3. Ibid at 35.
4. Ibid.

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* 1. covering of exposed coal faces on the upper levels of the north eastern batter down to the HARA.

1. I note:
   1. the progressive rehabilitation program update provided by the licensee to DPI, and approved as an appendix to the 2009 variation to the work plan; and
   2. the licensee has carried out work with the rehabilitation of the Morwell Wetlands.

While this work is outside the scope of the rehabilitation plan, it resulted in the re-creation of a wetlands area.

## 2009 rehabilitation plan (Board’s attachment paragraphs 11 and 13)

1. On 8 February 2008 the then licensee applied to vary the work plan in order to allow mining in Stage 1B of the West Field. This application included an application to vary the rehabilitation plan.

Now produced and shown to me and marked ‘KAW-22’ is a true copy of the letter from International Power Hazelwood to DPI dated 8 February 2008 **[**[**DSDBI.0006.002.0152**](DSDBI/0006/002/DSDBI.0006.002.0152.pdf)**]**.

1. This was a further stage in a regulatory process to open West Field Phase 2 to mining that had involved:
   1. amendment of the mining licence to increase the mine area; and
   2. preparation and assessment of an environment effects statement (**EES**), amendment to the Latrobe Planning Scheme (**Scheme**) and four planning permits.
2. The panel commissioned to assess the EES and the Scheme amendment conducted hearings in 2004. The panel’s terms of reference were successfully challenged at the Victorian Civil and Administrative Tribunal that year, and the matter was remitted to the panel. It then conducted a new hearing in 2005.

Now produced and shown to me and marked ‘KAW-23’ is a true copy of Hazelwood West Field EES Latrobe Planning Scheme Amendment C32 Final Panel Report **[**[**DSDBI.0003.001.0089**](DSDBI/0003/001/DSDBI.0003.001.0089.pdf)**]**.

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1. Rehabilitation formed a component of the proposal assessed by the panel:[44](#_bookmark43)

Requirements for mine closure, and especially for rehabilitation, exist at both Commonwealth and State levels. Objective 5.1 of the National Strategy for Ecological Sustainable Development states:

‘….. to ensure mine sites are rehabilitated to sound environmental and safety standards and to a level at least consistent with the condition of the surrounding land.’

More specific requirements are included in the Victorian Mineral Resources Development Act 1990, which requires that the rehabilitation plan must take account of:

* any special characteristics of the land;
* the surrounding environment;
* the need to stabilise the land;
* the desirability or otherwise of returning agricultural land to a state that is or as close as is reasonably possible to its state before the mining licence was granted; and
* any potential long-term degradation of the environment.

In the EES, the proponent addresses each of the above requirements and provides specific information about how they apply to the Hazelwood Coal Mine site.

The land on which the Hazelwood Coal Mine exists does have special characteristics, especially the existence of the below ground surface deep coal seam (Morwell 1 seam) and the deeper highly pressurised aquifers (Morwell or M1 aquifer and the Traralgon or M2 aquifer). The effects of the aquifers on the safety of the mine are critical to the operation of the mine. The maintenance of the integrity of the aquifers and their potential future uses are important issues in the mine closure and its rehabilitation.

The surrounding environment is typical of the land in the Morwell River Valley and floodplain, an area that has been used for farming activities (mainly grazing) for well over 100 years. Considerable infrastructure exists close to the mine, including the Morwell Township, industrial developments, power stations, major roads and railway line. There are relatively limited areas of remnant vegetation, mainly occurring along road reserves and watercourses and as isolated pockets, especially associated with drainage lines.

Stability of the land is a major issue and includes the stability of the void due to pressures within the aquifers. It also includes the stability of the coal batters due to groundwater pressures in the vertical and horizontal jointing in the coal. The assessment and management of the pressures in the aquifers raise serious questions about ensuring stability of the mine site and the surrounding land. On a wider geographic scale, the existence of the Hazelwood Coal Mine void together with the voids of other mines in the area are important to the geological stability of the Morwell Township and the associated infrastructure mentioned above. The ultimate long-term aim for the mine after mining

1. *Hazelwood West Field EES Latrobe Planning Scheme Amendment C32 Final Report*, March 2005 at 194 to 195.

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ceases includes the long-term stability of the land in and around the mine site and also within a few kilometres of the mine.

Returning the land to its pre-existing use as quality agricultural land is unlikely to be feasible. The deep void (Relative Level (RL) - 70 metres (70 metres below sea level) to RL – 100 metres (100 metres below sea level)) together with the effects of the aquifers and the limited availability of topsoil all indicate that the mine area will not become agricultural land.

The potential for long-term degradation of the environment will depend on the actions taken as part of the rehabilitation process. For example, instability of the mine could impact on the local surface and subsurface drainage systems. The mine could also be a source of dust unless the revegetation is successful. Unless the risk of fire from the ignition and subsequent slow combustion of coal remaining within the mine void are minimised, smoke could be a significant nuisance. An extreme possibility of an off-site effect is the escape of a fire in the mine area into surrounding land.

1. The panel was concerned to ensure that the rehabilitated mine did not pose a bushfire hazard:[45](#_bookmark44)

The DSE indicated a preference for the flattening of the batters and capping them with overburden to “provide a more hospitable substrate for plants to establish in and would have the additional, not insignificant, benefit of reducing the risk of fire on the exposed coal surfaces.

1. DSE raised concerns about the use of fire at the revegetated mine:[46](#_bookmark45)

The Panel agrees with the DSE about the concern of using fire for ecological reasons on the revegetated mine batters. The Panel would go further than the DSE and suggest that even with capping with over burden, the use of fire in the mine could still be a fire risk. Exposure of coal due to uneven spreading of over burden is a possibility. Erosion of the over burden capping on what would still be quite steep slopes is probably even more likely. And there is always the question of the existence of fire holes in the area; their very existence suggests that fires in the coal occurred well before any intervention by man.

1. The panel recommended the following:[47](#_bookmark46)

The long-term view is that the mine void will become a mine lake but the filling of the mine needs to be done in a controlled and measured way over many years. There are a number of significant uncertainties that need to be resolved before a mine closure plan and rehabilitation plan can be finalised.

There is uncertainty about the hydraulic connection between the Morwell and Traralgon aquifers, which has implications for the stability of the mine. Stability is required to prevent the complete collapse of the mine floor and of the batters into the mine void. Water pressure in the deeper aquifers must be stabilised over time, while water pressure within the joints between the coal blocks must be reduced by some form of drainage system that will continue to function well for perhaps hundreds of years into the future.

1. Ibid at 203.
2. Ibid.
3. Ibid at 243.

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A further uncertainty is the choice of techniques and practices that will produce the best revegetation outcome for the rehabilitation of the Hazelwood Coal Mine. There are many variables that are involved but the objective should be very clear – to produce a stable ecosystem in a highly modified environment, one that requires minimal human intervention to sustain it.

These uncertainties are common to all the miners in the Latrobe Valley. Consequently there appears to be considerable advantages by the industry adopting a co-operative approach with DPI taking a coordinating role to assist in the resolution of the rehabilitation issues.

Despite these uncertainties, IPRH needs to provide an adequate Mine Closure Plan and a Rehabilitation Plan, or agreement on a process to reach this.

1. In 2009 the work plan variation was approved. Part 6 contained the varied rehabilitation plan. The goal for rehabilitation of the mine was to:[48](#_bookmark47)

Provide a technically feasible, safe stable and sustainable landscape that reflects the aspirations of stakeholders within the practical constraints of rehabilitation for the mine.

1. The goal required the following objectives to be met:[49](#_bookmark48)

* a safe and stable self-supporting structure;
* to maximise the opportunities for establishment of a self-sustaining ecosystem;
* to minimise the use of natural resources; and
* to minimise the cost of recovery of resources.

1. The plan identified seven issues for consideration in developing and implementing the rehabilitation plan:[50](#_bookmark49)
   1. mine stability;
   2. natural equilibrium;
   3. batter stability;
   4. infrastructure;
   5. rehabilitation material/ecosystem function;
   6. resource recovery; and
2. *Work Plan Variation Mining Licence 5004 Phase 2 of the West Field Development of Hazelwood Mine*, April 2009 at 6-1.
3. Ibid.
4. Ibid at 6-1 to 6-2.

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* 1. public safety.

1. The main features of the rehabilitation plan are:[51](#_bookmark50)
   1. filling the mine pit void in order to create a lake;
   2. the placement of high-magnesium ash into the HARA;
   3. reshaping overburden and coal batters;
   4. removing mine infrastructure;
   5. allowing public access following closure, if it would be safe to do so; and
   6. revegetating rehabilitated areas in a manner that is ecologically sound in light of the absence of sufficient quantities of topsoil.
2. Revegetation is to be carried out in accordance with a code of practice approved as part of the work plan.[52](#_bookmark51)
3. The lack of availability of overburden is a constraint on rehabilitation. To manage this constraint, the plan identified four stages for the placement of overburden in order:[53](#_bookmark52)
   1. ‘to provide fire protection and a nutrient base to support plant growth that in turn provides long term batter stability’; and
   2. ‘to assist with counterbalancing aquifer pressures’.
4. Figures 6.1 to 6.4 of the plan show the areas where progressive rehabilitation of the mine would take place. Figure 6.1 shows rehabilitation at the end of block 1C of mining operations. Figure 6.2 shows rehabilitation at the end of block 2B of mining operations. Figure 6.3 shows rehabilitation at the end of block 3 of mining operations. Finally, Figure 4 shows rehabilitation at the end of block 4 of mining operations.
5. Rehabilitation of the northern batters of the mine is shown to proceed incrementally over two of the four stages identified in Figures 6.1 to 6.4
6. Ibid at 6-2 to 6-3.
7. Ibid at Appendix A.
8. Ibid at 6-3.

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## Compliance with rehabilitation plans (Board’s attachment paragraph 16)

1. The licensee is currently in compliance with its obligations under the approved rehabilitation plan, as varied from time to time.

## Purpose of rehabilitation bond (Board’s attachment paragraph 14)

1. In order to mitigate the risk of a licensee failing to comply with their obligation to rehabilitate land the MR(SD) Act empowers the Minister:
   1. to determine the amount of a rehabilitation bond;[54](#_bookmark53) and
   2. to require a licensee to assess their rehabilitation liability for the purpose of determining the quantum of a rehabilitation bond.[55](#_bookmark54)
2. The then licensee paid a rehabilitation bond of $15,000,000 to the Minister in May 1996. It was registered on 4 October 1996. This was determined at the time of privatisation. Based upon my searches so far, I do not have any information as to how this sum was calculated.

Now produced and shown to me and marked ‘KAW-24’ is a true copy of the registration of rehabilitation bond registered on 4 October 1996 **[**[**DSDBI.0003.001.1191**](DSDBI/0003/001/DSDBI.0003.001.1191.pdf)**]**.

1. This amount was re-affirmed on 8 June 2001.

Now produced and shown to me and marked ‘KAW-25’ is a true copy of the registration of rehabilitation bond dated 8 June 2001 **[**[**DSDBI.0003.001.1190**](DSDBI/0003/001/DSDBI.0003.001.1190.pdf)**]**.

1. Were the licensee to default on their obligations under the approved rehabilitation plan then the bond would be applied to the cost of rehabilitating the mine in accordance with the plan.[56](#_bookmark55) If, however, the licensee were to comply with their obligations under the MR(SD) Act and the rehabilitation plan upon closure of Hazelwood mine then the rehabilitation bond would be returned to them.[57](#_bookmark56)
2. MR(SD) Act, s 80(1).
3. MR(SD) Act, s 79A(1).
4. MR(SD) Act, ss 82(1) and 83(4).
5. MR(SD) Act, s 82(1).

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## Rehabilitation liability assessment (Board’s attachment paragraph 15)

1. DSDBI is currently undertaking a project to devise a methodology to assess the rehabilitation liability for all mines in Victoria. This project commenced in 2010.
2. The project was suspended in 2012 in light of:
   1. the ERR Branch’s efforts to respond to the movement in the northern batter at Hazelwood mine in 2011. This, among other things, caused the closure of Princes Freeway;
   2. the ERR Branch’s efforts to respond to the collapse of the Morwell River diversion at Yallourn mine in 2012.
3. The project recommenced in late 2013.

## Bringing forward rehabilitation (Board’s attachment paragraph 17)

1. I discuss my views on the feasibility of bringing forward rehabilitation of the northern batters of Hazelwood mine at paragraphs 178 to 192, below.

## Actions if the licensee were to fail to rehabilitate Hazelwood mine (Board’s attachment paragraph 18)

1. Based on the current regulatory regime, the licensee would be required to rehabilitate Hazelwood mine over the life of the mine. If the licensee were to fail to do so then the Minister would be empowered to require them to comply with the rehabilitation plan.[58](#_bookmark57) Should they fail to comply with the regulator’s requirements then:
   1. the Minister could carry out the unfinished rehabilitation work;[59](#_bookmark58) and
   2. seek reimbursement of the cost as a debt to the extent that it were to exceed the rehabilitation bond.[60](#_bookmark59)
2. MR(SD) Act, ss 83(1) and 83(3).
3. MR(SD) Act, s 83(1).
4. MR(SD) Act, s 83(4).

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# Outbreaks of fire at the mine

## Reporting under s 41AC of the MR(SD) Act (Board’s attachment paragraph 19)

1. On 9 February 2014 John Mitas, Chief Inspector of Mines, was notified of the outbreak of fire at the mine pursuant to s 41AC of the MR(SD) Act. The sequence of events was:
   1. an officer of the licensee notified Anne Bignell of DSDBI by telephone; and
   2. Ms Bignell then rang Mr Mitas.
2. This is the only time that he has been notified of a fire at Hazelwood mine under s 41AC of the MR(SD) Act. I note that s 41AC of the MR(SD) Act only came into operation on 30 June 2010.
3. Since amendments in 2012, that provision now requires a licensee to report a ‘reportable event’ to the Chief Inspector of Mines as soon as practicable after it has occurred.
4. Regulation 33(2) of the MR(SD)(MI) Regulations prescribes ‘reportable events’ in relation to Hazelwood mine. These include a ‘major outbreak of fire’.
5. Before s 41AC of the MR(SD) Act came into effect the licensee of Hazelwood mine was required to notify DPI of significant outbreaks of fire at the mine under the occupational health and safety regime. This came into effect following privatisation.

## Earlier fires (Board’s attachment paragraphs 20 and 21)

1. On 14 February 1944 a bushfire was ignited by a farmer north west of the then township of Yallourn. A northerly wind blew embers into the Yallourn open cut coal mine. Fire took hold in the mine.
2. Little more than one month later the Hon Leonard Stretton handed the Governor of Victoria his *Report of the Royal Commission to Inquire Into the Place of Origin and the Causes of the Fires which commenced at Yallourn on the 14th day of February, 1944; the Adequacy of the Measures which had been taken to Prevent Damage; and the*

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*Measures to be taken to Protect the Undertaking and Township of Yallourn* (**Stretton Report**).

1. His Honour’s main criticism was of the absence of any plan to protect Yallourn township, the mine and power station from bushfire:[61](#_bookmark60)

It may be shortly stated at the outset that there was no general plan which was of any real value. When one speaks of a general plan, one has in mind one which is under the supreme control of one person or body: which is to be set in motion and directed by that supreme person or body; which has one clear purpose to be achieved by clearly defined methods; which is understood by all persons who are to take part in its working; and which demands of all those persons the recognition that they are subject to the discipline by which the plan is to be made real and practicable.

1. His Honour’s preference as to the subject matter and focus of the plan was clear:[62](#_bookmark61)

Fire is an almost unavoidable concomitant of brown coal open cut mining. Inflammable dust is created by the mining process and by the necessary traffic in the mine. No very elaborate internal protection against fire caused by bush fires is necessary if sufficient protection is given against the normal, industrial fire risk.

Now produced and shown to me and marked ‘KAW-26’ is a true copy of the Stretton Report **[**[**DSDBI.0003.001.0001**](DSDBI/0003/001/DSDBI.0003.001.0001.pdf)**]**.

1. In a history of the mine authored by a former production manager of the mine in 1995,

J.A. Vines recorded that on 4 November 1977 a fire was (apparently) ignited by a passing vehicle in the mine. It was extinguished two days later. By then over 1,400 State Electricity Commission of Victoria (**SECV**) workers had been involved in the emergency response along with personnel from the CFA and the Royal Australian Air

Force.[63](#_bookmark62)

Now produced and shown to me and marked ‘KAW-27’ is a true copy of *A History of Morwell Open Cut: Its Origins and Development to June 1995* **[**[**DSDBI.0006.002.0001**](DSDBI/0006/002/DSDBI.0006.002.0001.pdf)**]**.

1. The SECV commissioned a committee to review the incident and make recommendations. The committee found that mine preparation for the fire was inadequate in light of the risk of ignition inherent in coal mining and the hot, windy
2. Stretton Report at 5.
3. Ibid at 8.
4. JA Vines, *A History of Morwell Open Cut: Its Origins and Development to June 1995* at 248 to 251.

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weather conditions on the day. This was due, in part, from a lag in maintenance caused by recent industrial action:[64](#_bookmark63)

The strong winds combined with the dry condition of the coal bench due to lack of water spray coverage caused the rapid and extensive spread of the fire. Pipe reticulation of fire prevention water had not been kept up with progress of operational faces during the prolonged industrial bans and strikes from mid 1977 and significantly reduced fire protection as well as fire fighting capabilities.

Now produced and shown to me and marked ‘KAW-28’ is a true copy of *Morwell Open Cut Fire 4, 5 & 6 November 1977 Final Report by Review Committee*, dated 29

June 1978 **[**[**DSDBI.0006.002.0009**](DSDBI/0006/002/DSDBI.0006.002.0009.pdf)**]**.

1. The committee made 28 recommendations.[65](#_bookmark64) In summary, the committee recommended, among other things, that the SECV increase and improve fire service reticulation, spray manifolds and equipment.
2. The Code of Practice was prepared in 1981 and revised in 1984 and then in 1994.

Now produced and shown to me and marked ‘KAW-29’ is a true copy of the 1994 revision of the Code of Practice **[**[**DSDBI.0003.001.0460**](DSDBI/0003/001/DSDBI.0003.001.0460.pdf)**]**.

1. By the time of the 1994 revision the Code of Practice stated that it fulfilled the requirements of what it described as the ‘emergency services acts’:[66](#_bookmark65)

* Country Fire Authority Act 1958
  + Section 43(1) “It shall be the duty of every municipal council and every public authority to take all practicable steps (including burning) to prevent the occurrence of fires on and to minimise the danger of the spread of fires on or from – any land vested in it or under its control or management.
  + Notwithstanding, Section 20 of this Act gives the Country Fire Authority “The duty of taking superintending and enforcing all necessary steps for the prevention and suppression of fires and for the protection of life and property in case of fire”.
  + Section 30 gives the Chief Officer of the Authority powers to take control and direction which may be exercised “Where the Chief Officer believes on reasonable grounds that there is danger of fire occurring or where a fire is burning or has recently been extinguished”.

1. Ibid at 250.
2. *Morwell Open Cut Fire 4, 5 & 6 November 1977 Final Report by Review Committee*, dated 29 June 1978.
3. Code of Practice at 2 to 3.

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* Emergency Management Act 1986
  + Sections 6 and 16, gives [sic] the Co-Ordination in Chief of Disaster Control, or other delegated person, authority to ensure that adequate measures are taken by Government Authorities to prevent and respond to emergencies and to assume a co-ordinating role in the implementation of Displan. (Which includes an actual or imminent occurrence of fire)
* Dangerous Goods Act 1985 and regulations (1990)
  + Section 4 states objectives of the Act which among other things “promote the safety of persons and property” in relation to dangerous goods, and “ensure that adequate precautions are taken against certain fires, explosions,” etc.
* Occupational Health and Safety Act 1958
  + Section 21. “An employer shall provide and maintain so far as is practicable for employers a working environment that is safe and without risks to health.”

1. Clause 4.4 of the Code of Practice set out the minimum requirements to protect worked out batters:[67](#_bookmark66)

* All benches are to be clay covered.
* All berms are to be eliminated by trimming or by filling with clay such as to shed fretted coal provided that batter stability calculations indicate that neither of these options will cause batter failure
* Tanker filling points are to be provided such that a tanker on any part of the worked out batters is within 5 minutes travel of a tanker filling point. Fixed sprays should be used in conjunction with the droppers for the tanker filling points in order to provide wetted breaks.

Alternatively:

Where practicable, fire break zones extending down to full depth of each batter may be utilised such that the length of exposed coal in any one batter is not greater than 500 m. These zones can be in the form of metalled vehicle access ramps or clay covering.

1. The Code of Practice was referenced in the approved work plan of 14 September 1996.

Clauses 7.4 to 7.7 of the approved work plan provided as follows:

* 1. BUSHFIRE MITIGATION PROGRAM

In recognition of the fact that the Mine is situated in high bushfire risk area and the potential consequences on the Mine infrastructure of a bushfire, HPC [Hazelwood Power Corporation] contributes to funding a Bushfire Mitigation Program in the area

1. Ibid at 10 to 11.

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surrounding the mine. The Bushfire Mitigation Program conforms with the “Latrobe Valley Open Cut Mines – Fire Service Policy and Code of Practice” – see Section 7.7 below.

* 1. EMERGENCY RESPONSE PLAN

HPC has developed an Emergency Response Plan to be followed in the event of an emergency such as fire or flood, catastrophic failure of Mine or plant, bomb threats, hazardous materials etc.

* 1. FIRE INSTRUCTIONS

As part of Fire Prevention management HPC has promulgated a set of Fire Instructions for Mine personnel, these instructions are updated prior to every fire season – usually in December. Prior to the fire season each year all Mine personnel are required to undertake fire training conducted by the Mine’s fire service section. The Fire Instructions are incorporated as part of the Mine’s Emergency Control Plan.

* 1. FIRE PROTECTION POLICY

HPC adheres to the “Latrobe Valley Open Cut Mines – Fire Service Policy and Code of Practice” issued April 1994 for the Mine, bunkers and their surroundings to ensure adequate:

* Management Accountability
* Preparedness and Planning
* Training and Personnel
* Installed Fire Protection Systems
* Fire Extinguishing Capability
* Emergency Procedures

The Fire Service Policy and Code of Practice contains the essential requirements and operating procedures for fire protection services for the Mine and its surrounding area.

An extensive network of water reticulation and sprays has been established in the Mine for fire protection.

1. Records held by DSDBI indicate that from 2001 through to 2008 five significant fire events were reported to DNRE or DPI.
2. On 12 February 2001 a fire occurred on the Energy Brix coal supply conveyor. The fire was most probably caused by a bearing failure on a return idler. CFA personnel brought the fire under control within approximately one hour of it being detected. No one was injured.
3. Greg Sleziak of DNRE was notified of the fire on 13 February 2001.

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1. Haze1wood Power Corporation conducted an investigation into the incident and prepared a report. The investigation found, among other things, that:[68](#_bookmark67)

There was a failure in the Mine’s Management System as the conveyors were operated in a hazardous condition and the system did not prevent or detect this condition.

1. The report made five recommendations concerning fire safety in and around the conveyor.[69](#_bookmark68)
2. No notice was issued. The matter was closed on 17 July 2001.

Now produced and shown to me and marked ‘KAW-30’ is a true copy of Hazelwood Power, *Investigation Report Conveyor M22 Belt Fire 12 February 2001* dated 8 March 2001 **[**[**DSDBI.0006.002.0027**](DSDBI/0006/002/DSDBI.0006.002.0027.pdf)**]**.

Now produced and shown to me and marked ‘KAW-31’ is a true copy of DNRE

*Notification Form* dated 17 July 2001 **[**[**DSDBI.0006.002.0045**](DSDBI/0006/002/DSDBI.0006.002.0045.pdf)**]**.

1. On 15 November 2003 spot fires developed in the mine. The cause of the first fire was not able to be determined. These spot fires then spread to the main slot coal bunker. The most significant fire was controlled by approximately midnight. About 100 CFA and other personnel fought the fires. No one was injured.
2. International Power Hazelwood conducted an investigation into the incident and prepared a report.
3. The report noted the climatic conditions on the day:[70](#_bookmark69)

Temperatures of 36°C and peak wind speeds of up to 63kph were experience[d] at the IPRH site on Saturday 15th November. The Mine considered these conditions a high fire risk and a number of fire precautions were taken, however additional precautions are recommended.

1. The report made 27 recommendations that addressed five issues:[71](#_bookmark70)
   1. reduce fire fuel;
2. Hazelwood Power, *Investigation Report Conveyor M22 Belt Fire 12 February 2001* dated 8 March 2001 at [3.6].
3. Ibid at [4].
4. International Power, *Report IPRH Coal Bunker Fire (Hazelwood Slot Bunker) 15th November 2003* at 4.
5. Ibid at 8 to 9.

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* 1. improve fire prevention in the bunker;
  2. improve fire fighting performance;
  3. improve emergency response performance; and
  4. improve safety in and around the bunker.

1. The licensee did not report the fire to DPI. Rather, Greg Sleziak learnt of the fire from the Hazelwood Mine Safety Committee meeting minutes on 30 December 2003.
2. Mr Sleziak attended the mine on 16 January 2004. He issued two directions to the licensee on 19 January 2004, being the day when the licensee’s investigation was concluded:[72](#_bookmark71)
   1. ‘[t]he risk of fire heights needs to be assessed and control measures implemented accordingly’; and
   2. ‘[c]ommunication and command need to be revisited to ensure that emergency plan, preparedness, an[d] response are relevant to the nature of the emergency. Consideration be given to: -Identifying, listing and communicating major assets that must be protected first by combat agencies. – Role and the capacity of others such as contracted services need to be revised and inc’.
3. Mr Sleziak asked that an action plan addressing those two instructions be provided within 14 days.
4. The matter was closed on 19 January 2004.

Now produced and shown to me and marked ‘KAW-32’ is a true copy of Minerals & Petroleum Victoria Complaint/Incident/Accident – Notification Report **[**[**DSDBI.0006.002.0046**](DSDBI/0006/002/DSDBI.0006.002.0046.pdf)**]**.

Now produced and shown to me and marked ‘KAW-33’ is a true copy of DPI, *Field Report* dated 19 January 2004 **[**[**DSDBI.0006.002.0048**](DSDBI/0006/002/DSDBI.0006.002.0048.pdf)**]**.

1. DPI, *Field Report* dated 19 January 2004.

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Now produced and shown to me and marked ‘KAW-34’ is a true copy of *IPH Response to Field Report issued by Greg Sleziak on 19 January 2004* **[**[**DSDBI.0006.002.0049**](DSDBI/0006/002/DSDBI.0006.002.0049.pdf)**]**.

Now produced and shown to me and marked ‘KAW-35’ is a true copy of International Power, *Report IPRH Coal Bunker Fire (Hazelwood Slot Bunker) 15th November 2003* **[**[**DSDBI.0006.002.0101**](DSDBI/0006/002/DSDBI.0006.002.0101.pdf)**]**.

1. On 3 April 2005 a fire developed on conveyors M171 and M172 and spread to the main coal bunker. Both the CFA and the MFB provided assistance to fight the fire. No serious injuries were caused.
2. On 6 April 2005 the then licensee notified DPI of the incident. On the same day inspector Greg Sleziak visited the mine.
3. On 11 April 2005 Mr Sleziak prepared a field report. Mr Sleziak requested a ‘Standard Operating Practice/Producer and risk assessment for combat fires at heights’ within eight days of the report.[73](#_bookmark72)
4. The licensee prepared a report in response to Mr Sleziak’s request which assessed the risk of such a fire as ‘medium’.[74](#_bookmark73)
5. On 28 April 2005 the then licensee prepared a report investigating the cause of the fire.

The report made 18 recommendations directed at four areas:[75](#_bookmark74)

* 1. improving emergency response procedures;
  2. improving fire fighting ability;
  3. reducing fire fuel; and
  4. improving safety in and around the bunker.

Now produced and shown to me and marked ‘KAW-36’ is a true copy of DPI, *Compliant/Incident Notification Report Form* dated 11 July 2005 **[**[**DSDBI.0006.002.0095**](DSDBI/0006/002/DSDBI.0006.002.0095.pdf)**]**.

1. DPI, *Field Report* dated 11 April 2005.
2. *IPHH Response to Field Report issued by Greg Sleziak on 11 April 2005*.
3. International Power Hazelwood, *IPRH Coal Bunker Fire (Hazelwood Slot Bunker) 3rd April 2005* dated 28 April 2005 at [6].

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Now produced and shown to me and marked ‘KAW-37’ is a true copy of DPI, *Field Report* dated 11 April 2005 **[**[**DSDBI.0006.002.0099**](DSDBI/0006/002/DSDBI.0006.002.0099.pdf)**]**.

Now produced and shown to me and marked ‘KAW-38’ is a true copy of *IPHH Response to Field Report issued by Greg Sleziak on 11 April 2005* **[**[**DSDBI.0006.002.0100**](DSDBI/0006/002/DSDBI.0006.002.0100.pdf)**]**.

Now produced and shown to me and marked ‘KAW-39’ is a true copy of International Power Hazelwood, *IPRH Coal Bunker Fire (Hazelwood Slot Bunker) 3rd April 2005* dated 28 April 2005 **[**[**DSDBI.0006.002.0101**](DSDBI/0006/002/DSDBI.0006.002.0101.pdf)**]**.

1. On 30 December 2005 a fire ignited in an old fire hole in the south eastern corner of the mine. By that time coal was no longer being mined at that part of the mine. Hot temperatures and strong north-westerly winds took the fire out of the fire hole. Two days later the fire was contained and the CFA withdrew its resources from the emergency response effort.
2. The licensee composed a panel of inquiry to investigate the cause of the fire and make recommendations. The panel recommended that the licensee:[76](#_bookmark75)
   1. improve emergency response procedures;
   2. improve fire fighting ability; and
   3. reduce the threat of fire by:
      1. utilising fire break zones down the full depth of each worked out coal batter so that the length of exposed coal in any one batter would be no greater than 500 m; and
      2. develop a fire training facility for mine workers and CFA personnel.

Now produced and shown to me and marked ‘KAW-40’ is a true copy of International Power Hazelwood, *Final Report IPRH Mine Coal Fire December 2005 30th December 2005* (undated) **[**[**DSDBI.0006.001.0052**](DSDBI/0006/001/DSDBI.0006.001.0052.pdf)**]**.

1. International Power Hazelwood, *Final Report IPRH Mine Coal Fire December 2005 30th December 2005*

(undated) at 7 to 9.

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1. On 12 October 2006 a fire broke out in the working face of the mine. The cause of ignition was investigated jointly by CFA and DPI and it was concluded that a collapsed bearing falling onto a conveyor belt and then the coal level at the tail drum end started the fire.
2. Once again, the factors leading to the spread of the fire into a more serious fire event were:[77](#_bookmark76)
3. hot and windy weather conditions; and
4. difficulties in carrying out the immediate emergency response.
5. Before the outbreak of the fire the licensee had taken precautions against the risk posed by the hostile weather conditions forecast for that day. The licensee ran approximately every second water spray to wet coal areas. At about 9:50 am a Fire Alert was declared, and the remaining water sprays were turned on.
6. Despite this, a fire was seen at conveyor M620 at approximately 10:45 am. It spread along the conveyor. Additional spot fires were then noticed. Mine personnel were diverted to respond to the fire. The CFA was called at 11:57 am, and arrived at 12:07 pm.
7. Two equipment failures then hampered the emergency response. Firstly, at about 3:30 pm two water pumping stations lost power. At the same time, the available water supply reduced because the software monitoring water level in the fire services tanks malfunctioned.
8. The presence of the fire and the failure of critical equipment caused the licensee and the CFA to evacuate most of their personnel from the mine. The fire fighting effort did not resume in full until water pressure was restored. It then took until 18 October 2006 before the emergency response concluded.
9. Following the fire both the CFA and the licensee prepared incident investigation reports. The CFA report, with the assistance of DPI, investigated the causes of the
10. GHD, *International Power Hazelwood October 2006 Mine Fire Investigation Incident Investigation Report*

dated January 2007 at 12 to 13.

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fire.[78](#_bookmark77) The licensee commissioned GHD to prepare the report which both investigated the incident and proposed recommendations for regulatory and operational reform.

Now produced and shown to me and marked ‘KAW-41’ is a true copy of CFA, *Final Report Morwell Open Cut Mine Fire, Morwell, Victoria, 3840* **[**[**DSDBI.0006.005.0001**](DSDBI/0006/005/DSDBI.0006.005.0001.pdf)**].**

Now produced and shown to me and marked ‘KAW-42’ is a true copy of GHD, *International Power Hazelwood October 2006 Mine Fire Investigation Incident Investigation Report* dated January 2007 **[**[**DSDBI.0006.001.0178**](DSDBI/0006/001/DSDBI.0006.001.0178.pdf)**]**.

1. GHD identified 18 underlying causes of the incident:[79](#_bookmark78)

Annual internal audit of all fire services facilities, systems and procedures as specified in current ‘Mine Fire Service Policy and Code of Practice’ had not been completed.

The ‘Mine Fire Service Policy and Code of Practice’ definition of the Pre Summer & Fire Season Works Program designates December and January as the months in which crucial fire preparation is to be undertaken, including fire training. It does not consider current weather, or for mine conditions.

No formalised or predefined conditions available for declaring a Fire Alert. Fire Alert processes are understood but are not always fully complied with.

Roles and responsibilities of Fire Services and personnel to support Fire Services during a Fire Alert and in an incident should be reviewed.

Work procedures and practices within the ‘Mine Fire Service Policy and Code of Practice’ and the ‘Fire Instructions’ are not systematically reviewed.

According to the ‘Mine Fire Service Policy and Code of Practice’, the wet testing system is required on or about the 12th December each year. This predefined date does not consider current weather, fire or mine conditions nor does it consider ensuring a continual functioning system.

Organisational responsibilities in fire prevention and safety precautions on plant, outlined within the ‘Fire Instructions for Hazelwood Power Mine’ are not systematically reviewed.

No formalised arrangements with the CFA to be put on alert for a fire.

Some CFA non-Morwell personnel did not have an understanding of fighting coal fires. Roles, responsibilities and procedures outlined within the Emergency Response Plan are

not systematically referred to during an emergency and should be more user friendly.

1. CFA, *Final Report Morwell Open Cut Mine Fire, Morwell, Victoria, 3840*.
2. GHD, *International Power Hazelwood October 2006 Mine Fire Investigation Incident Investigation Report*

dated January 2007 at 23 to 24.

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Interface and communications between Operations, Fire Services and Maintenance needs to be reviewed in terms of fire systems, particularly in relation to the power supply for the fire pumps.

Inadequate preparation and establishment of the ICP.

No formalised media communication protocol between the ICC and the ICP.

Differing information between the IPRH Significant Issue Corporate Response Plan and the IP Corporate Serious Incident Procedure.

The detection of smouldering bearings from faulty idlers relied on visual inspection from mine personnel.

Whilst it should be recognised that the priority was to ensure that sufficient water was used to control the spread of fires, some mine personnel did not understand the impacts of large quantities of water being transferred to the power station.

Resourcing during an ongoing incident response did not take into account both power station and mine requirements.

1. GHD made 20 recommendations.[80](#_bookmark79) In summary, they required wholesale review of the Code of Practice and the licensee’s emergency management plan.
2. On 13 February 2007 an Inspector of Mines issued an improvement notice to the licensee to comply with GHD’s recommendations.

Now produced and shown to me and marked ‘KAW-43’ is a true copy of DPI,

*Improvement Notice* dated 13 February 2007 **[**[**DSDBI.0006.001.0242**](DSDBI/0006/001/DSDBI.0006.001.0242.pdf)**]**.

1. This prompted a review of the Code of Practice. The ‘Purpose’ section of the revised Code of Practice removed reference to the *Country Fire Authority Act 1958* and the *Emergency Management Act 1986*. Instead, the purpose of the policy was stated to be the following:[81](#_bookmark80)

The purpose of this Fire Service Policy and Code of Practice is to achieve the Fire Protection Policy requirements by providing acceptable operating procedures for fire protection services for Mining Operations.

This will be provided by:

* Establishing a clear strategy and standard of open cut fire protection to:

1. protect all personnel within the Hazelwood Mine;
2. Ibid at 26 to 31.
3. Code of Practice at 6 (2007 revision).

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1. protect all plant and equipment required for the maintenance of coal winning operations, and
2. protect coal reserves to enable continuation of coal winning activities

* Ensuring that all personnel associated with the Hazelwood Mine or the Fire Service systems have an understanding and awareness of the effects of fire, the requirements of fire protection and are aware of their responsibilities.
* Providing a framework which ensures that fire protection objectives are coordinated, coherent and translatable into action and to ensure that these objectives are carried out.
* Ensuring that relevant statutory regulations are met and that a cooperative and coordinated approach is undertaken with relevant statutory authorities. i.e. CFA.
* Ensuring that the equipment used for fire service activities meets relevant operational standards.
* Setting procedures for the testing of new equipment and practices before being approved for general use in the Hazelwood Mine.

1. The revised Code of Practice was based on the following principles:[82](#_bookmark81)

* The control of sources of ignition such as cutting and welding, mobile equipment and motor vehicles and the safe storage of potentially flammable materials.
* The effective limitation and management of forested, wooded or grassed areas external to the open cut to inhibit the progress and effect of an external fire.
* Provision and maintenance of back-up facilities to fight and control any fire.
* An organised approach to prevention and suppression of fire and the formulation of emergency response plans and fire instructions.
* The use of an adequate communications system to mobilise and coordinate fire fighting facilities.
* The use of approved & tested fire fighting equipment and fittings which are compatible with outside combat agencies.
* The provision of water supplies, reticulated water and spray systems together with the trained personnel necessary for the operation of these systems to prevent or suppress fires. **Note: Whenever pipelines are to be disconnected from the water supply, all efforts must be made to have water restored back to the affected line before the end of the shift. If this is unachievable, then a temporary water supply is to be set up.**

1. Ibid at 14 (**emphasis** not added).

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* The provision of adequate training sessions and exercises to ensure that each employee understands the appropriate techniques and Hazelwood Mine procedures for fighting brown coal fires and undergoes refresher training sessions at regular intervals.
* The reduction of loose dry coal in the open cut, conveyors and coal bunker areas, by the application of appropriate design measures in conjunction with constant monitoring and wash down exercise where coal build up could become a fire hazard.

In order to properly protect all parts of the Hazelwood Mine, pipe work and sprays are to be installed as laid down by this Fire Service Policy and Code of Practice. However, it must be understood that a larger water supply system would be required to run all the sprays and protection systems simultaneously. This policy provides for diversity in the simultaneous application of the fire protection water supplies and distribution.

The maximum demand as defined in this Fire Service Policy and Code of Practice is an allowance of water usage upon which the design of the water supply system is based. The maximum demand rate of water use is considered to be sufficient to meet any likely contingency within the Hazelwood Mine. The distribution of this allowance of water usage is reasonably flexible for any situation but the use of more water than allowed for in one area may cause a reduction in the performance of the system.

…

1. Clause 3.4 of the revised Code of Practice set out minimum requirements for worked out batters. It provided as follows:[83](#_bookmark82)

* All benches are to be clay covered.
* All berms are to be eliminated by trimming or by filling with clay such as to shed fretted coal provided that batter stability calculations indicate that neither of these options will cause batter failure.
* Tanker filling points are to be provided such that a tanker on any part of the worked out batters is within 5 minutes travel of a tanker filling point. .**NOTE:** [sic] in the absence of tanker filling points a 4 hydrant manifold will suffice. Fixed sprays should be used in conjunction with the droppers for the tanker filling points in order to provide wetted breaks.

Alternatively:

* Where practicable, fire break zones extending down to full depth of each batter may be utilised such that the length of exposed coal in any one batter is not greater than 500 m. These zones can be in the form of metalled vehicle access ramps or clay covering, a minimum of 8 m wide.

1. Ibid at 16.

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1. On 13 September 2007 the licensee finalised the revised Code of Practice.
2. On 14 September 2007 the Inspector of Mines accepted, among other documents submitted by the licensee, the revised Code of Practice and advised the licensee that the improvement notice was deemed to be complied with.

Now produced and shown to me and marked ‘KAW-44’ is a true copy of the Code of Practice revised in 2007 **[**[**DSDBI.0003.001.0959**](DSDBI/0003/001/DSDBI.0003.001.0959.pdf)**]**.

Now produced and shown to me and marked ‘KAW-45’ is a true copy of the DPI *Entry Report* dated 14 September 2007 **[**[**DSDBI.0003.001.0431**](DSDBI/0003/001/DSDBI.0003.001.0431.pdf)**]**.

1. DPI had no role in conducting a review or requiring any action in relation to the fires on 14 to 22 September 2008 and 21 January 2012 at Hazelwood mine.

# Technical Review Board (Board’s attachment paragraphs 22 and 23)

1. In 2007 the north east batter at Yallourn mine collapsed. The mining warden conducted an inquiry. Following this the TRB was constituted for a two year term.
2. The TRB has since been reconstituted for two further two year terms.
3. The TRB is established under ss 54A, 54C, 54D and 54E of the MR(SD) Act as a panel advising on mine and quarry stability. Its terms of reference are:
   1. The Board will report to the Minister on an annual basis. The Minister may subsequently release the Board’s report to the Department and relevant industry stakeholders.
   2. The Board will periodically provide advice on mine and quarry stability, to the Minister and Department, in the following areas:
4. Strategy

* Written and/or verbal advice on the Department’s strategies and regulatory approach to mine and quarry stability and geotechnical issues.
* Written and/or verbal advice on new developments in technology and science relating to the understanding, monitoring or management of mine and quarry stability and related geotechnical and hydrogeological issues.

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1. Stability reports

* Review and interpret mine and quarry stability reports including monitoring data, that has been submitted to the Department and provide written advice to the Minister.

1. Other Activities

* Advise the Minister in formulating appropriate response to significant events relating to mine and quarry stability, and related geotechnical and hydrogeological issues.
* Advise the Minister on appropriate guidelines and educational initiative related to mine and quarry stability.
* With the knowledge and agreement of the Minister, interact directly with industry on mine and quarry stability and related geotechnical and hydrogeological issues, including participation in site visits, presentations and dialogue, particularly with respect to communicating findings of reviews with relevant stakeholders.
* In conjunction with the Department, interact directly with Monash University in relation to the Research and Development program on brown coal geotechnical and hydrogeological issues.

1. The most recent annual report for the TRB was for the year September 2012 to August 2013.

Now produced and shown to me and marked ‘KAW-46’ is a true copy of the TRB’s annual report for the year September 2012 to August 2013 **[**[**DSDBI.0006.001.0378**](Replacement%20KAW47%20-%20Technical-Review-Board-2012-13-Annual-Report.pdf)**]**.

# Review (Board’s attachment paragraphs 17, 24 and 25)

1. As the foregoing exposition of ERR Branch’s powers and activities demonstrates, at this point in time there are no straightforward answers to the questions posed at paragraphs 17, 24 and 25 of the Board’s attachment. The regulatory framework is complicated and the operation of Hazelwood mine is large, complex and has the potential to be dangerous.
2. Nonetheless, there are, in my view, two related issues with the regulatory framework insofar as it seeks to address the risk of fire in Hazelwood mine which, if addressed, might reduce the likelihood of a bushfire igniting in Hazelwood mine in the future:

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* 1. the prescriptive approach currently taken in the MR(SD) Act and the MR(SD)(MI) Regulations is not apt at identifying then addressing all risks which might arise from mining; and
  2. it is doubtful that the Department Head has the power to regulate Hazelwood mine in relation to mitigating the risk of fire.

1. The existing statutory framework is not the best tool to require work plans and/or rehabilitation plans to address fire risk during the operational life of Hazelwood mine. Despite the broad purpose, objects and sustainable development principles included in the MR(SD) Act, the statutory framework takes a prescriptive approach to the content of work plans and rehabilitation plans.
2. This is best exemplified by Schedule 15 to the MR(SD)(MI) Regulations. The list there limits rather than clarifies, setting boundaries for the matters to be provided for in a work plan and a rehabilitation plan that may not always be appropriate for every mine given the purpose and objectives of the MR(SD) Act.
3. Every mine is different, and the knowledge and expertise of mining operators and regulators also differ. A better system would require mining operators to identify risks and formulate the manner in which they would be addressed. The regulator’s role would then be:
   1. to assess the plans prepared by a licensee against the performance requirements established under the regulatory framework, often with the benefit of the expertise and experience of other regulators; and
   2. to oversee the mining operator’s compliance with any approved plan.
4. The current, more prescriptive approach was criticised in the report of the Economic Development and Infrastructure Committee (**EDIC**). Recommendation 19 of the EDIC review provided as follows:[84](#_bookmark83)

That the Victorian Government considers redirecting the regulatory focus of exploration, mining and extractive work plans towards outcomes and away from prescriptive conditions, in order to better manage risk and achieve socially, economically and environmentally sound outcomes.

1. EDIC, *Inquiry into Greenfields Mineral Exploration and Project Development in Victoria*, May 2012 at 194.

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1. The Victorian Government has accepted this recommendation.[85](#_bookmark84) On 25 February 2014 the *Mineral Resources (Sustainable Development) Amendment Act 2014* (**MR(SD) Amendment Act**) received Royal assent. Section 16 of the MR(SD) Amendment Act proposes to substitute s 40(3) of the MR(SD) Act to provide as follows:

"(3) A work plan must—

1. be appropriate in relation to the nature and scale of the work proposed to be carried out; and
2. identify the risks that the work may pose to the environment, to any member of the public, or to land or property in the vicinity of the work; and
3. specify what the licensee will do to eliminate or minimise those risks as far as reasonably practicable; and
4. if the licence is a mining licence or prospecting licence, in relation to the mining activities proposed to be carried out under the licence, include a plan for consulting with the community that demonstrates that the licence holder will use appropriate and effective measures to consult with the community throughout the period of the licence and is prepared in accordance with the regulations and any guidelines issued by the Minister relating to such plans (a ***community engagement plan***); and
5. if the licence is a mining licence or a prospecting licence under which mining activities are proposed to be carried out, include a rehabilitation plan for the land proposed to be covered by the licence; and
6. if the licence is a mining licence relating to a declared mine, contain the prescribed mine stability requirements and processes; and
7. contain any other matters required by the regulations.".
8. I understand that this provision will come into effect in 2016.
9. While the terms of the proposed s 40(3) of the MR(SD) Act would assist the Department Head to require a work plan to address fire risk, in my view further reform would be required in order to ensure that a work plan and/or rehabilitation plan could, if appropriate, address bushfire risk.
10. I am of the opinion that as currently drafted it is not clear under the MR(SD) Act or the MR(SD)(MI) Regulations that the Department Head would have the power to require a licensee to incorporate bushfire safety as an objective of a rehabilitation plan for the period before a mine has closed. The power in s 40(3) of the MR(SD) Act would be
11. Victorian Government, *Inquiry into Greenfields Mineral Exploration and Project Development in Victoria Government Response*, (undated) at 14.

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clarified somewhat with respect to work plans after s 16 of the MR(SD) Amendment Act came into effect, but not with respect to rehabilitation plans.

1. The DSDBI acknowledges public concern about whether rehabilitation of exposed batters could have prevented the ignition or the spread of fire in the mine. This concern is, in my view, legitimate and warrants further consideration.
2. If the Board were to consider that the mitigation of fire risk ought to be addressed, in part or whole, in a work plan and/or rehabilitation plan then the following matters would, among other things, need to be considered before such reform were implemented:
   1. whether exposed coal batters ought to be covered, or wetted with sprays on high risk days, or a combination of both methods;
   2. the type, quantity, availability and suitability of materials that would be required to cover exposed coal batters;
   3. the practicability and availability of water for reticulated water systems at worked out faces of Hazelwood mine;
   4. the impact of such work on the safe and productive operations of Hazelwood mine;
   5. impacts on mine stability, particularly of the northern batters adjacent to Princes Freeway;
   6. the compatibility of such work with the end of mine vision for Hazelwood mine;
   7. the cost of such work; and
   8. ramifications for other mines in Victoria.
3. It is important to note that this list is not exhaustive. The licensee, in particular, is in a better position than me or DSDBI to identify matters to consider before deciding whether and how to prepare a proposal to accelerate or modify rehabilitation of exposed coal faces at Hazelwood mine.

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1. Nor by setting out this list do I intend to discourage the Board, the State or the licensee from considering such works.
2. Rather, what I aim to demonstrate is that any proposal to alter the pace or type of rehabilitation at Hazelwood mine – and perhaps, by extension, other mines – must proceed with care.

Dated

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