Western Australia

Mines Safety and Inspection Act 1994

Mines Safety and Inspection Regulations 1995

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Western Australia

Mines Safety and Inspection Regulations 1995

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Western Australia

Mines Safety and Inspection Act 1994

Mines Safety and Inspection Regulations 1995

Part 1 — Preliminary

1.1. Citation

These regulations may be cited as the *Mines Safety and Inspection Regulations 1995* [1].

1.2. Commencement

These regulations come into operation on the day on which the *Mines Safety and Inspection Act 1994* comes into operation [1].

1.3. Terms used in these regulations

In these regulations, unless the contrary intention appears —

AS followed by a designation refers to the Australian Standard having that designation that is published by the Standards Association of Australia [2] and includes a reference to that standard as at the commencement day;

Australian Design Rule or ***ADR*** means —

(a) in relation to a vehicle manufactured before 1 July 1988, a design rule contained in the publication titled "Australian Design Rules for Motor Vehicle Safety — 2nd Edition" as at the commencement day, issued by the Commonwealth Department of Transport; and

(b) in relation to a vehicle manufactured on or after 1 July 1988, a design rule contained in the publication

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titled "Australian Design Rules for Motor Vehicles and Trailers — 3rd Edition" as at the commencement day, issued by the Commonwealth Department of Transport and Communications;

certificate means a certificate of competency;

Class I winding engine driver's certificate means a certificate issued under regulation 2.27;

Class II winding engine driver's certificate means a certificate issued under regulation 2.28;

Code of Signals means the Code of Signals referred to in regulation 11.31;

commencement day means the day on which these regulations come into operation;

dangerous goods has the same meaning as in the *Dangerous Goods Safety Act 2004*;

Department of Occupational Safety and Health means the department of the public service principally assisting the Minister administering the *Occupational Safety and Health Act 1984* in the administration of that Act;

deputy's certificate means a certificate issued under regulation 2.24;

district inspector, in relation to a mine, means the district inspector appointed for the area in which the mine is located;

exemption means an exemption granted under regulation 1.4 or 1.5;

existing mine means a mine in existence immediately before the commencement day;

factor of safety, in relation to a rope or other thing, means the ratio of the breaking force or strength of the rope or other thing to the maximum total static force on it including the component of its own weight;

first class mine manager's certificate means a certificate issued under regulation 2.21;

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hazardous substance means any substance defined as a hazardous substance in the National Model Regulations for the Control of Workplace Hazardous Substances;

Health Department means the department of the public service principally assisting the Minister administering the *Health Act 1911* in the administration of that Act;

licensed surveyor has the same meaning as in the *Licensed Surveyors Act 1909*;

magazine means a building, storehouse, structure, or place in which any explosive or blasting agent is kept or stored, whether in or about a mine, and includes detonator storage buildings and buildings containing capped fuses;

medical practitioner means a medical practitioner within the meaning of the *Medical Act 1894*;

National Model Regulations for the Control of Workplace Hazardous Substances means the publication of that name as at the commencement day, issued by Worksafe Australia;

night means the time beginning at sunset and ending at sunrise;

ppm means parts per million;

quarry manager's certificate means a certificate issued under regulation 2.22;

Radiological Council means the Radiological Council established under the *Radiation Safety Act 1975*;

repealed regulations means the *Mines Regulation Act Regulations 1976* and the *Coal Mines Regulations* repealed by regulation 17.2;

responsible person, in relation to a mine, means —

(a) the principal employer at the mine;

(b) any other employer at the mine; and

(c) the manager of the mine;

restricted quarry manager's certificate means a certificate issued under regulation 2.25;

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senior inspector, in relation to a mine, means the district inspector appointed by the State mining engineer to be the senior inspector responsible for the region in which the mine is located;

specified, in relation to a notice, certificate or other instrument, means specified in the notice, certificate or instrument;

surface mining operation means any mining operation that is not underground;

underground supervisor's certificate means a certificate issued under regulation 2.23;

Worksafe Australia means Worksafe Australia established under the *National Occupational Health and Safety Commission Act 1985* of the Commonwealth.

[Regulation 1.3 amended in Gazette 13 Dec 1996 p. 6932; 29 Feb 2008 p. 685.]

1.3A. Persons who are trainees for the purposes of the Act

(1) This regulation relates to the definition of "trainee" in section 4(1) of the Act.

(2) The class of persons who are trainees for the purposes of the Act are persons who are taking part in a traineeship scheme within the meaning of that term in the *Industrial Training Act 1975*.

[Regulation 1.3A inserted in Gazette 4 Apr 2005 p. 1102.]

1.4. Exemption — if substantial compliance

(1) If a person or a mine does not fully comply with a requirement of these regulations but the State mining engineer is satisfied that there is substantial compliance with the requirement, the State mining engineer may, in writing, exempt the person or mine from the requirement.

(2) An exemption may be granted subject to such conditions as the State mining engineer thinks fit and specifies in the exemption.

Extract from www.slp.wa.gov.au, see that website for further information

(3) A person having the benefit of the exemption must not contravene a condition of the exemption.

Penalty: See regulation 17.1.

(4) The State mining engineer may at any time amend or revoke an exemption granted under this regulation, and if the State mining engineer does so, the State mining engineer must provide written reasons for that amendment or revocation.

1.5. Exemption — if compliance unnecessary or impracticable

(1) The State mining engineer may, in writing, exempt a person or mine from compliance with a requirement of these regulations if the State mining engineer is satisfied that compliance with the requirement would be unnecessary or impracticable.

(2) An exemption may be granted subject to such conditions as the State mining engineer thinks fit and specifies in the exemption.

(3) A person having the benefit of the exemption must not contravene a condition of the exemption.

Penalty: See regulation 17.1.

(4) The State mining engineer may at any time amend or revoke an exemption granted under this regulation and, if the State mining engineer does so, the State mining engineer must provide written reasons for that amendment or revocation.

Extract from www.slp.wa.gov.au, see that website for further information

Part 2 — Administration

Division 1 — Inspectors

2.1. Issue of receipt for things taken

If an inspector takes and removes a sample of anything under section 21(1)(d) of the Act the inspector must issue a receipt for the thing to the manager of the mine from which the thing was taken unless in the inspector's opinion the thing is of no value or only of nominal value.

2.2. Designation of regions to which employee's inspectors are appointed

(1) The State mining engineer may, by notice published in the *Gazette*, designate —

(a) the regions for which employee's inspectors are to be appointed; and

(b) the number of employee's inspectors who are to be appointed for each region.

(2) The State mining engineer may, by further notice published in the *Gazette*, amend or revoke a notice under this regulation.

(3) If the State mining engineer by further notice amends or revokes a notice as provided in subregulation (2), the State mining engineer may provide in that further notice for matters of a transitional nature.

(4) Without limiting subregulation (3), the State mining engineer may provide in the notice for the interim representation of any region by an employee's inspector from another region.

2.3. Election of employee's inspectors

Schedule 1 has effect with respect to the election of employee's inspectors.

Extract from www.slp.wa.gov.au, see that website for further information

2.4. Performance of employee inspector's functions

(1) In this regulation —

function means a function under the Act.

(2) When performing any function, an employee's inspector is to be under the control and direction of the senior inspector for the region for which the employee's inspector is appointed.

(3) An employee's inspector must not perform any function outside the region for which the inspector was appointed except with the approval of the State mining engineer.

(4) An employee's inspector who performs any function with respect to safety and health matters at a mine must, with respect to those matters, liaise with any safety and health representative, and safety and health committee, at the mine.

[Regulation 2.4 amended in Gazette 19 Jan 1996 p. 237.]

Division 1A — Improvement notices, prohibition notices and provisional improvement notices

[Heading inserted in Gazette 4 Apr 2005 p. 1102.]

2.4A. Prescribed requirements for sections 31AK, 31AL and 31BK(1) of the Act

(1) In this regulation —

employee includes a person taken to be an employee by operation of section 15A, 15B or 15C of the Act;

notice means an improvement notice, a prohibition notice or a provisional improvement notice, as the case may require.

(2) It is a prescribed requirement for sections 31AK, 31AL and 31BK(1) of the Act that the manager of a mine post a notice, or a copy of it, on —

(a) a notice board at the mine that is conspicuous to and accessible by employees at the mine; or

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(b) 2 or more notice boards at the mine, so long as one of the notice boards is conspicuous to and accessible by any particular employee at the mine.

(3) If a notice relates to any plant at or related to a mine and the inspector issuing the notice —

(a) identifies the plant in the notice; and

(b) specifies in the notice that this subregulation applies to it,

it is also a prescribed requirement for sections 31AK, 31AL and 31BK(1) of the Act that the manager cause a copy of the notice to be displayed in a conspicuous position on or near the plant.

[Regulation 2.4A inserted in Gazette 4 Apr 2005 p. 1102-3.]

2.4B. Form for referral of improvement notice or prohibition notice for review

(1) Form 1 in Schedule 1A is prescribed, for the purposes of section 31AY(3) of the Act, as the form to be used for the referral under that section of an improvement notice for review by the State mining engineer.

(2) Form 2 in Schedule 1A is prescribed, for the purposes of section 31AY(3) of the Act, as the form to be used for the referral under that section of a prohibition notice for review by the State mining engineer.

[Regulation 2.4B inserted in Gazette 4 Apr 2005 p. 1103.]

2.4C. Form for referral of matter for review by Tribunal

Form 1A in the Schedule to the *Industrial Relations Commission Regulations 1985* [3] in the form in which it is in force on 4 April 2005 is prescribed, for the purposes of section 31BA(2)(a) of the Act, as the form to be used for the referral under that section of a matter for review by the Tribunal.

Extract from www.slp.wa.gov.au, see that website for further information

[Regulation 2.4C inserted in Gazette 4 Apr 2005 p. 1103.]

Division 2 — Safety and health representatives

[Heading amended in Gazette 19 Jan 1996 p. 237.]

2.5. Prescribed procedure for resolution of disputes

(1) The procedure set out in this regulation is prescribed for the purposes of section 70 of the Act in a case where no procedure has been agreed between the manager of the mine and the employers and the employees at the mine as applying in respect of the mine concerned.

(2) The employer or manager must arrange to meet with —

(a) if there is a safety and health representative in respect of the mine concerned, the employees and the safety and health representative; or

(b) if there is no safety and health representative in respect of the mine concerned, the employees or a person authorised by the employees to represent them at that meeting.

(3) The meeting must be held at a time that is as soon after the issue arises as is mutually convenient.

[Regulation 2.5 amended in Gazette 19 Jan 1996 p. 237.]

2.6. Introductory courses for health and safety representatives

(1) In this regulation —

introductory course means a course of a kind referred to in subregulation (2)(a) that is accredited as referred to in that provision;

transitional course means a course of a kind referred to in subregulation (2)(b) that is accredited as referred to in that provision.

(2) This regulation applies if, under section 14(1)(h) of the *Occupational Safety and Health Act 1984* —

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(a) a training course is accredited that is designed for safety and health representatives to attend, subject to course availability, during the first year of holding office; or

(b) a training course is accredited that is designed to update the knowledge of safety and health representatives who have completed an introductory course.

(3) A safety and health representative must, subject to the availability of introductory courses, try to attend an introductory course within the first 12 months of being elected.

(4) A safety and health representative who has not previously attended an introductory course may give to his or her employer notice in writing that the representative wishes to attend such a course.

(4a) A safety and health representative who has previously attended an introductory course but completed it before March 2005 may, if the representative has not completed a transitional course after February 2005, give to his or her employer notice in writing in accordance with subregulation (5) that the representative wishes to attend a transitional course.

(5) The notice referred to in subregulation (4) or (4a) must be given, not less than 21 days, or such shorter period as has been agreed between the safety and health representative and the employer, before the course commences.

(6) If a safety and health representative has given notice under subregulation (4) or (4a) in respect of a course, the employer must, subject to subregulation (8), permit the representative to take off work, with pay, such time, not exceeding 5 days, as is required for the purpose of attending that course.

Penalty: See regulation 17.1.

(7) An employer who has been given notice under subregulation (4) or (4a) in respect of a course may consult with the safety and health representative or the relevant trade union concerning the attendance of the representative at the course and, in those

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consultations, due regard must be given to the need to minimize any adverse effect on the operation of the business of the employer and the mine.

(8) If the employer has consulted under subregulation (7) with the safety and health representative or trade union concerned, the employer may decline to permit attendance at the course as wished but instead permit attendance at the next available course of the same kind that the representative wishes to attend.

(9) The pay to which a safety and health representative is entitled in respect of time the representative is permitted to take off work to attend an introductory course or a transitional course must be calculated at the representative's ordinary rate of pay on the time that would ordinarily have been worked had the representative worked his or her scheduled work time —

(a) including —

(i) regular over award payments for ordinary hours of work;

(ii) shift work premiums according to roster or projected roster including Saturday or public holiday shift;

(iii) industry allowances;

(iv) climatic, regional, and other like allowances;

(v) first aid allowances;

(vi) tool allowances;

(vii) qualification allowances;

(viii) service grants made on a regular basis;

(ix) experience allowance; and

(x) any penalty rates that are paid in relation to actual hours worked or payment of which are guaranteed by a contract of service whether the hours were required to be worked or not;

(b) but not including —

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(i) overtime payments (except if they form part of the contract of service);

(ii) camping allowances;

(iii) travelling allowances;

(iv) disability rates such as for confined spaces and dirty work;

(v) car allowances; or

(vi) meal allowances.

(10) Nothing in subregulation (9) excludes an entitlement to additional payments that may be prescribed in an award, order, or industrial agreement that —

(a) is made by, or registered by, The Western Australian Industrial Relations Commission or the Australian Conciliation and Arbitration Commission; or

(b) agreed between the employer and the safety and health representative as being applicable.

(11) An employer must not, as a result of this regulation, alter the conditions or remuneration of a person who is a safety and health representative to the detriment of that person.

Penalty: See regulation 17.1.

(12) Attendance at an introductory course or a transitional course must be regarded as service for the purposes of ascertaining any entitlement under an award.

[Regulation 2.6 amended in Gazette 19 Jan 1996 p. 237; 4 Apr 2005 p. 1104-5.]

2.6A. Training courses for "qualified representative" under section 31BF

(1) Each course of training described in subregulation (2) is prescribed for the purposes of the definition of "qualified representative" in section 31BF.

Extract from www.slp.wa.gov.au, see that website for further information

(2) The prescribed courses are —

(a) a course that was an introductory course, as defined in regulation 2.6(1), and that the safety and health representative completed after February 2005; and

(b) a course that was a transitional course, as defined in regulation 2.6(1), and that the safety and health representative completed after February 2005 after having, before March 2005, completed a course that was an introductory course, as defined in regulation 2.6(1).

[Regulation 2.6A inserted in Gazette 4 Apr 2005 p. 1106.]

2.6B. Form of notification of election result

Form 3 in Schedule 1A is prescribed as the form of notice of the result of an election to be given to the State mining engineer for purposes of section 56(10)(b) of the Act by the person who conducted the election.

[Regulation 2.6B inserted in Gazette 4 Apr 2005 p. 1106.]

Division 3 — Board of Examiners

Subdivision A — Preliminary

2.7. Terms used in these regulations

In this Division, unless the contrary intention appears —

appointed member, in relation to the Board, means a person who is appointed to be a member of the Board;

Board means the Board of Examiners.

Extract from www.slp.wa.gov.au, see that website for further information

Subdivision B — Constitution and proceedings

2.8. Constitution — Mine manager's and underground supervisor's certificates

When dealing with matters concerning mine manager's and underground supervisor's certificates (other than certificates for underground coal mines), the Board is to consist of —

(a) the State mining engineer;

(b) a senior inspector appointed by the Minister on the nomination of the State mining engineer;

(c) the principal of the Western Australian School of Mines; and

(d) 2 persons, each of whom must be the holder of a mine manager's certificate, appointed by the Minister on the nomination of the body known as the Chamber of Mines and Energy of Western Australia Inc.

2.9. Constitution — Quarry manager's certificate

When dealing with matters concerning quarry manager's certificates, the Board is to consist of —

(a) the State mining engineer;

(b) a senior inspector appointed by the Minister on the nomination of the State mining engineer;

(c) an officer of the Department of Technical and Further Education (TAFE) appointed by the Minister on the nomination of the Director of that Department; and

(d) 2 persons, each of whom must be the holder of a quarry manager's certificate, appointed by the Minister on the nomination of the body known as the Chamber of Mines and Energy of Western Australia Inc.

Extract from www.slp.wa.gov.au, see that website for further information

2.10. Constitution — Underground coal mine certificates

When dealing with matters concerning certificates for underground coal mines (other than winding engine driver's certificates), the Board is to consist of —

(a) the State coal mining engineer;

(b) a senior inspector appointed by the Minister on the nomination of the State mining engineer;

(c) the principal of the Western Australian School of Mines; and

(d) 2 persons, each of whom must be the holder of a mine manager's certificate, appointed by the Minister on the nomination of the body known as the Chamber of Mines and Energy of Western Australia Inc.

2.11. Constitution — Winding engine driver's certificate

When dealing with matters concerning winding engine driver's certificates, the Board is to consist of —

(a) the State mining engineer;

(b) an officer of the department who is formally qualified as a mechanical engineer appointed by the Minister; and

(c) a person appointed by the Minister on the nomination of the body known as the Trades and Labour Council of Western Australia.

2.12. Procedure if body fails to nominate

(1) If, within 60 days of being requested in writing by the Minister to do so, any body or person referred to in regulation 2.8, 2.9, 2.10 or 2.11 has not made any nomination for appointment required to be made by the body or person under that regulation, the Minister may make the appointment at the Minister's discretion.

(2) A person appointed as provided under subregulation (1) is to be taken to have been nominated under the relevant regulation.

Extract from www.slp.wa.gov.au, see that website for further information

2.13. Appointment of members

Subject to regulation 2.14, an appointed member of the Board is to hold office for such term, not being more than 3 years, as is specified in the member's instrument of appointment, and may from time to time be reappointed.

2.14. Vacation of office

The office of an appointed member of the Board becomes vacant if —

(a) the member resigns from office by notice in writing given to the Minister;

(b) the member's appointment expires or is terminated by the Minister; or

(c) any person or body who nominated the member withdraws that nomination by notice in writing given to the Minister.

2.15. Deputies

A member of the Board may, with the approval of the chairperson, appoint a deputy to act for the member when the member is unable to attend any meeting of the Board.

2.16. Chairperson

(1) The State coal mining engineer, or the deputy of the State coal mining engineer, is to be the chairperson of the Board when constituted as provided in regulation 2.10.

(2) In any other case, the State mining engineer, or the deputy of the State mining engineer, is to be the chairperson of the Board.

2.17. Quorum

A quorum for a meeting of the Board —

(a) when constituted as provided under regulation 2.11, is the chairperson and one other member of the Board; and

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(b) in any other case, is the chairperson and 3 other members of the Board.

2.18. Meetings

(1) The Board, or the examiners appointed by it, are to meet at such times and places as the Board or the examiners consider appropriate.

(2) To the extent that it is not provided in this subdivision, the Board is to determine its own procedure.

2.19. Voting

(1) A decision of the majority of members at a meeting of the Board at which a quorum is present is the decision of the Board.

(2) If the votes of members present at a meeting are equally divided, the chairperson is to have a casting vote in addition to a deliberative vote.

2.20. Examination of applicants

(1) For the purpose of determining the qualifications, experience and character of an applicant for a certificate, the Board may examine the applicant in writing or orally, or both, as it thinks fit, or may appoint examiners to conduct such examinations.

(2) Notice of intention to hold an examination is to be published in a newspaper or newspapers circulating generally in the State.

Subdivision C — Issue of certificates of competency

2.21. First class mine manager's certificate

(1) In this regulation —

applicant means an applicant for a first class mine manager's certificate;

mining law means —

(a) the Act and these regulations; and

Extract from www.slp.wa.gov.au, see that website for further information

(b) the *Dangerous Goods Safety Act 2004*, and regulations made under it, in so far as they apply to explosives.

(2) The Board may issue a first class mine manager's certificate to an applicant if the Board is satisfied that the applicant —

(a) holds —

(i) the Degree of Bachelor of Engineering in Mining from any Australian University; or

(ii) such other qualification as the Board may in any case consider to be equivalent to the degree referred to in subparagraph (i);

(b) has passed a separate examination set by the Board requiring a knowledge of mining law;

(c) has attained the age of 25 years;

(d) has had practical experience in or about a mine for a period of not less than 5 years, of which period at least 3 years has been general underground mining experience of a nature acceptable to the Board;

(e) is of good character; and

(f) has received satisfactory training in First Aid.

(3) For the purposes of subregulation (2)(a), the Board may accept the Degree of Bachelor of Science (Mining) from the Western Australian School of Mines instead of the qualifications specified in that subregulation but only if the applicant applies for the certificate within 2 years after the commencement day.

(4) For the purposes of subregulation (2)(d), the practical experience must include —

(a) in the case of an application for a first class mine manager's certificate for underground coal mines —

(i) 6 months at the coal face engaged in winning coal;

(ii) 3 months on ventilation control including dust and gas monitoring; and

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(iii) sufficient time to become competent in roof support, persons and materials transport and general mining applications;

and

(b) in any other case —

(i) face experience in operating a rockdrill on development and stoping faces for a period of not less than 3 months;

(ii) personal experience in using explosives in charging and firing both development and stoping rounds for a period of not less than 3 months;

(iii) 6 months full-time underground employment directly involved in ground support, haulage and transport and in general mine servicing.

(5) For the purposes of subregulation (2)(d), experience as an active certificated underground supervisor will be considered to be experience of a nature acceptable to the Board.

[Regulation 2.21 amended in Gazette 29 Feb 2008 p. 685.]

2.22. Quarry manager's certificate

(1) In this regulation —

applicant means an applicant for a quarry manager's certificate.

(2) The Board may issue a quarry manager's certificate to an applicant if the Board is satisfied that the applicant —

(a) holds —

(i) the Degree of Bachelor of Engineering from any Australian University;

(ii) a Diploma in Mining or Engineering from any recognized Australian Technical Institute;

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(iii) an Associate Diploma in Surface Mining from any recognized Australian Tertiary Education Institution;

(iv) a Degree or Diploma in Geology, or in mining or an earth sciences related discipline, that is considered by the Board to be appropriate;

(v) such other mining qualification as the Board may in any case consider to be equivalent to a qualification referred to in subparagraph (i), (ii), (iii) or (iv);

(b) has passed a separate examination set by the Board requiring a knowledge of mining law, as that term is defined by regulation 2.21(1);

(c) has attained the age of 24 years;

(d) has had experience in or about a quarry for a period of not less than 2 years and at least one year of that 2 year period has been first hand practical experience in production operations in a quarry or open pit, including not less than 3 months personal experience in the charging and firing of explosives in the quarry or pit or, if the application is made before 9 December 1997 —

(i) the applicant satisfies the requirements already set out in this paragraph; or

(ii) the applicant has had experience in or about a quarry for a period of not less than 2 years and at least one year of that 2 year period has been in close association with quarry pit operations, including not less than 3 months practical experience in the use of explosives and blasting agents in a pit;

(e) is of good character; and

(f) has received satisfactory training in First Aid.

[Regulation 2.22 amended in Gazette 28 Feb 1997 p. 1329-30; 29 Feb 2008 p. 685.]

Extract from www.slp.wa.gov.au, see that website for further information

2.23. Underground supervisor's certificate

(1) In this regulation —

applicant means an applicant for an underground supervisor's certificate;

mining law has the meaning given to that term by regulation 2.21(1).

(2) The Board may issue an underground supervisor's certificate to an applicant if the Board is satisfied that the applicant —

(a) has —

(i) successfully completed a Degree, Diploma or Associate Diploma in Mining Engineering from a recognized University, School of Mines, or Institute of Technology and has passed the mining law examinations set by the Board; or

(ii) passed both the mining practice and the mining law examinations set by the Board;

(b) has —

(i) had general experience in underground mining, and has been employed underground for a period of not less than 5 years; or

(ii) successfully completed a Degree, Diploma or Associate Diploma in Mining Engineering from a recognized University, School of Mines, or Institute of Technology and has been in full-time employment underground for a period of not less than 2 years;

(c) has had —

(i) face experience in operating a rockdrill on development and stoping faces for a period of not less than 3 months;

(ii) personal experience in using explosives in charging and firing both development and

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stoping rounds for a period of not less than 3 months; and

(iii) 6 months full-time underground employment directly involved in ground support, haulage and transport, and general mine servicing work;

(d) has attained the age of 23 years;

(e) is of good character; and

(f) has received satisfactory training in First Aid.

(3) The mining practice examinations referred to in subregulation (2)(a) may include methods and practices for —

(a) underground mine development and production stoping;

(b) ground support and stope filling and stabilisation;

(c) drilling and blasting;

(d) loading, haulage and transport;

(e) mine ventilation control measures for dust and other atmospheric contaminants;

(f) emergency preparation and response, including fire fighting;

(g) shaft operations and hoisting;

(h) underground construction and services including pumping and drainage.

[Regulation 2.23 amended in Gazette 29 Feb 2008 p. 685-6.]

2.24. Deputy's certificate

(1) In this regulation —

applicant means an applicant for a deputy's certificate;

mining law has the meaning given to that term by regulation 2.21(1).

(2) The Board may issue a deputy's certificate to an applicant if the Board is satisfied that the applicant —

(a) has —

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(i) successfully completed a Degree, Diploma or Associate Diploma in Mining Engineering from a recognized University, School of Mines, or Institute of Technology and has passed the mining law examinations set by the Board; or

(ii) passed both the mining practice and the mining law examinations set by the Board;

(b) has —

(i) had general experience in underground mining, and has been employed underground for a period of not less than 5 years; or

(ii) successfully completed a Degree, Diploma or Associate Diploma in Mining Engineering from a recognized University, School of Mines, or Institute of Technology and has been in full-time employment underground for a period of not less than 2 years;

(c) has had —

(i) face experience in coal mining operations and development for a period of not less than 6 months; and

(ii) 6 months full-time underground employment directly involved in ventilation control, roof support, shotfiring, conveyor haulage and transport;

(d) has attained the age of 23 years;

(e) is of good character; and

(f) has received satisfactory training in First Aid.

(3) The mining practice examinations referred to in subregulation (2)(a) may include methods and practices for —

(a) coal production by longwall methods, board and pillar and full extraction methods utilizing road headers, continuous miners and breaker-line supports;

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(b) induced caving and roof support methods;

(c) boring and shot firing;

(d) conveyor haulage and transport;

(e) mine ventilation control measures for dust, coal mine gases and other atmospheric contaminants;

(f) explosion prevention including the use of stonedust, water barriers, flameproof electrical installations and flameproof diesel engines;

(g) ventilation plans, circuit layouts and velocity and quantity calculations;

(h) emergency preparation and response, including fire fighting and the deployment and use of mines rescue teams;

(i) underground construction and services including pumping and drainage.

[Regulation 2.24 amended in Gazette 29 Feb 2008 p. 686.]

2.25. Restricted quarry manager's certificate

(1) In this regulation —

applicant means an applicant for a restricted quarry manager's certificate.

(2) The Board may issue a restricted quarry manager's certificate to an applicant if the Board is satisfied that the applicant —

(a) has passed relevant examinations set by the Board;

(b) has attained the age of 21 years;

(c) has had experience in quarry operations for a period of not less than 2 years, of which period at least one year has been first hand practical experience in production operations in a quarry or open pit, including at least 3 months personal experience in the charging and firing of explosives in the quarry or pit or, if the application is made before 9 December 1997 —

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(i) the applicant satisfies the requirements already set out in this paragraph; or

(ii) the applicant has had experience in or about a quarry for a period of not less than 2 years and at least one year of that 2 year period has been in close association with quarry pit operations, including not less than 3 months practical experience in the use of explosives and blasting agents in a pit;

(d) is of good character; and

(e) has received satisfactory training in First Aid.

(3) The relevant examinations referred to in subregulation (2)(a) must include examinations on the following subjects —

(a) quarrying, which may include —

(i) the layout and construction of a quarry excavation to provide stability of faces and safe entrance to and exit from such faces;

(ii) methods of breaking, excavating and crushing of rock;

(iii) practices used in the charging and firing of explosives and blasting agents including the control of fly rock, noise and ground vibration;

(iv) methods of loading and transport of rock and mining stores;

(v) ventilation and suppression of dust and atmospheric contaminants; and

(vi) any other subject concerning the safe operation of quarry workings;

and

(b) mining law, as that term is defined by regulation 2.21(1).

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(4) The requirement in subregulation (2)(c) relating to personal experience in the charging and firing of explosives does not apply to a person whose experience has been in a quarry where explosives were not used, but any certificate issued to such a person must be restricted to quarries where explosives are not used.

[Regulation 2.25 amended in Gazette 28 Feb 1997 p. 1330; 29 Feb 2008 p. 686.]

2.26. Classes of winding engine driver's certificates

The Board must classify a winding engine driver's certificate as either —

(a) Class I — that is, authorising a person to operate a winding engine having any power input; or

(b) Class II — that is, authorising a person to operate a winding engine having a power input exceeding 25 kW but not exceeding 75 kW.

2.27. Winding engine driver's certificate — Class I

(1) In this regulation, ***applicant*** means an applicant for a Class I winding engine driver's certificate.

(2) The Board may issue a Class I winding engine driver's certificate to an applicant if the Board is satisfied that the applicant —

(a) has passed relevant examinations set by the Board;

(b) has attained the age of 21 years;

(c) is of good character;

(d) is medically fit; and

(e) has —

(i) assisted, under the supervision of a qualified person, in driving an electric winding engine fitted with dead weight power operated brakes or multi-spring applied unit brakes, operated by an

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electric motor of not less than 75 kW for a period of not less than 300 hours at the rate of not less than 12 hours and not more than 40 hours per week;

(ii) assisted in carrying out the duties of a platman, skipman, or set rider, including shaft maintenance and shaft repairs for not less than 12 hours per week for a period of 6 weeks; and

(iii) a knowledge of the ancillary equipment normally associated with winding engines.

2.28. Winding engine driver's certificate — Class II

(1) In this regulation, ***applicant*** means an applicant for a Class II winding engine driver's certificate.

(2) The Board may issue a Class II winding engine driver's certificate to an applicant if the Board is satisfied that the applicant —

(a) has passed relevant examinations set by the Board;

(b) has attained the age of 21 years;

(c) is of good character;

(d) is medically fit; and

(e) has —

(i) assisted, under the supervision of a qualified person, in driving a winding engine driven by a power source having a power input of not more than 75 kW and not less than 25 kW for a period of not less than 300 hours at the rate of not less than 12 hours and not more than 40 hours a week;

(ii) assisted in carrying out the duties of a platman, skipman or set rider and has had experience in shaft maintenance and shaft repairs for not less than 12 hours per week over a period of not less than 6 weeks; and

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(iii) a knowledge of the ancillary equipment normally associated with winding engines.

2.29. Board may restrict certificate

When the Board issues a quarry manager's, underground supervisor's or deputy's certificate the Board may restrict the application of the certificate to one or both of the following —

(a) a specified mine or group of mines; or

(b) a specified type of work.

2.30. Applications

(1) In this regulation —

applicant means an applicant for a certificate.

(2) An applicant must apply in writing in the form approved for that purpose by the State mining engineer.

(3) Application forms may be obtained from the department.

(4) An applicant must provide evidence of any matter of which the Board is required to be satisfied.

(5) An application must have attached to it a statutory declaration made by the applicant declaring that the information contained in the application is true.

2.31. Fees

An application for any of the following certificates must be accompanied by the relevant fee specified in Schedule 2 —

(a) a first class mine manager's certificate;

(b) a quarry manager's certificate;

(c) a restricted quarry manager's certificate;

(d) a deputy's certificate;

(e) a winding engine driver's certificate; or

(f) an underground supervisor's certificate.

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2.32. Register of certificates

(1) The Board is to cause a register to be kept of certificates issued by the Board.

(2) The register must set out the following details in respect of each certificate —

(a) the full name and date of birth of the holder of the certificate;

(b) the serial number and date of issue of the certificate;

(c) any restriction imposed in relation to the certificate; and

(d) details of any reciprocal certificate held by the holder in another State or country.

2.33. Replacement certificates

If a person proves to the satisfaction of the Board that the person has lost a certificate issued to the person by the Board, the Board may, on payment of the relevant fee specified in Schedule 2, issue the person with a replacement certificate.

Subdivision D — Requirements to hold certificates of competency

2.34. Person not to act as shift supervisor or deputy without certificate

(1) A person must not act as an underground supervisor or in any more senior supervisory capacity that involves inspection of underground workplaces, unless the person —

(a) holds a first class mine manager's certificate or an underground supervisor's certificate; or

(b) has the approval in writing of the Board to do so under subregulation (3).

Penalty: See regulation 17.1.

(2) A person must not act as a deputy unless the person —

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(a) holds a first class mine manager's certificate, an underground supervisor's certificate or a deputy's certificate; or

(b) has the approval in writing of the Board to do so under subregulation (3).

Penalty: See regulation 17.1.

(3) The Board may give a person approval referred to in subregulation (1)(b) or (2)(b) if in the Board's opinion the person holds a certificate that is equivalent to a certificate referred to in subregulation (1)(a) or (2)(a), as the case may be.

2.35. Person not to act as underground manager without certificate

(1) A person must not act as an underground manager of a mine employing less than 25 persons underground unless the person —

(a) holds a first class mine manager's certificate or an underground supervisor's certificate; or

(b) has the approval in writing of the Board to do so under subregulation (3).

Penalty: See regulation 17.1.

(2) A person must not act as an underground manager or assistant underground manager of a mine employing 25 or more persons underground unless the person —

(a) holds a first class mine manager's certificate;

(b) has the approval in writing of the Board to do so under subregulation (3); or

(c) has been appointed in accordance with the Act to be the deputy underground manager during a period when the underground manager or alternate underground manager is incapacitated, absent or unavailable.

Penalty: See regulation 17.1.

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(3) The Board may give a person approval in writing referred to in subregulation (1)(b) or (2)(b) if in the Board's opinion the person holds a certificate that is equivalent to a certificate referred to in subregulation (1)(a) or (2)(a) (as the case requires).

2.36. Person not to act as quarry manager without certificate

(1) A person must not act as a quarry manager in a quarry where 25 or more persons are employed and where explosives are not used or in any quarry where less than 25 persons are employed unless the person —

(a) holds a first class mine manager's certificate, a quarry manager's certificate, a restricted quarry manager's certificate; or

(b) has the approval in writing of the Board to do so under subregulation (3).

Penalty: See regulation 17.1.

(2) A person must not act as a quarry manager of a quarry where 25 or more persons are employed and where explosives are used unless the person —

(a) holds a first class mine manager's certificate or a quarry manager's certificate; or

(b) has the approval in writing of the Board to do so under subregulation (3).

Penalty: See regulation 17.1.

(3) The Board may give a person approval in writing referred to in subregulation (1)(b) or (2)(b) if in the Board's opinion the person holds a certificate that is equivalent to a certificate referred to in subregulation (1)(a) or (2)(a) (as the case requires).

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2.37. Person not to operate winding engine without certificate

A person must not operate a winding engine (other than a hoist) in a mine unless the person holds a winding engine driver's certificate of the appropriate class for that winding engine.

Penalty: See regulation 17.1.

[Division 4 deleted in Gazette 4 Apr 2005 p. 1106.]

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Part 3 — Management of mines

Division 1 — Exploration operations

3.1. Application of Division

This Division applies only to and in relation to exploration operations.

3.2. Prescribed place at which record book is to be kept

For the purposes of section 23(1)(a) of the Act, the prescribed place at which a record book is to be kept in the case of exploration operations is at the principal office in Western Australia of the exploration manager.

3.3. Provision of information — earth disturbing operations

(1) This regulation applies to any exploration operation that involves the disturbance of earth (including drilling, costeaning or trial pit excavation).

(2) For the purposes of section 47(3) of the Act, information relating to any exploration operation to which this regulation applies must, so far as is practicable —

(a) be provided before the exploration operation takes place; and

(b) include details of the location, scope and nature of all such exploration operations (including the intended date of commencement and conclusion of exploration activities) that are proposed during an ensuing 6 or 12 month period (as elected by the exploration manager).

3.4. Provision of information — other operations

(1) This regulation applies to any exploration operation that does not involve the disturbance of earth.

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(2) For the purposes of section 47(3) of the Act, information relating to any exploration operation to which this regulation applies must, so far as is practicable —

(a) be provided before the exploration operation takes place; and

(b) include general details of the location, scope and nature of all such exploration operations (including the intended date of commencement and conclusion of exploration activities) that are proposed during an ensuing 12 month period.

3.5. Remedial work

(1) If any exploration operation (including an operation involving the disturbance of earth by drilling, costeaning or trial pit excavation) has been carried out at a site, the district inspector may direct that specified remedial work be carried out to make the site safe.

(2) The exploration manager for the exploration operation referred to in subregulation (1) must ensure that a direction given under that subregulation is complied with as soon as is practicable.

Penalty: See regulation 17.1.

3.6. Training of persons

(1) An employer must ensure that each employee engaged in exploration operations is provided with such training as is necessary to enable the employee to manage risks associated with the hazards of exploration operations in remote sites, including the lack of infrastructure and support and adverse climatic conditions.

Penalty: See regulation 17.1.

(2) The requirement in subregulation (1) is in addition to the requirements of regulation 4.13.

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3.7. Suitable equipment to be provided

An employer must ensure that employees engaged in exploration operations are provided with suitable vehicles and appropriate equipment (including communications and emergency equipment) to engage in that operation.

Penalty: See regulation 17.1.

3.8. Entry into disused mine workings

An employer must ensure that any employee engaged in an exploration operation does not enter any disused mine workings unless the employee is competent to do so and does so in accordance with an established safe procedure.

Penalty: See regulation 17.1.

3.9. Drilling and excavation operations

An employer must ensure that any employee engaged in exploration operations does not engage in drilling or excavation operations unless the employee is adequately trained and competent to do so.

Penalty: See regulation 17.1.

Division 2 — Notification of commencement or suspension of mining operations

3.10. Meaning of "notification"

In this Division —

notification means notification under section 42 of the Act.

3.11. Notification to be in writing

Each notification must be in writing.

3.12. General details to be included in notification

Each notification must include the following details —

(a) the name and location of the mine;

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(b) the number of the lease, tenement or other interest;

(c) the name and address of the principal employer at the mine;

(d) what mining operations are to be affected, and whether they are to be commenced, recommenced, abandoned or suspended; and

(e) the date on which the mining operations are to be commenced, recommenced, abandoned or suspended (as the case may be).

3.13. Project management plan to be provided for mine operations

(1) Notification of the commencement of mining operations at a mine must, in addition to the details set out in regulation 3.12, also include a plan that sets out —

(a) a summary of the proposed mining operations including a description of the type of mine, the treatment of minerals that is to take place at the mine, the number of persons who will be employed at the mine and the expected duration of mining operations at the mine;

(b) a broad assessment of the major risks associated with the mine and a summary of the strategies proposed to manage those risks;

(c) a general plan of the mine to an appropriate scale that shows the proposed mine layout and facilities in relation to the tenement boundaries, the national grid and RL datum levels;

(d) a plan of the mine that shows any proposed open pit and any underground layouts, including accesses to underground workings;

(e) a summary of proposed ventilation systems and stoping and development systems for any underground mine; and

(f) emergency preparation plans for the mine.

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(2) This regulation applies, with appropriate changes, to notification of the recommencement of mining operations involving underground operations or open cut mine operations at a mine if the mine was not being used immediately before the commencement day.

3.14. Details to be included in notification of suspension

Notification of the suspension of mining operations at a mine must, in addition to the details set out in regulation 3.12, include the following details —

(a) the reason for the suspension and the planned duration of the suspension;

(b) whether the closure is total or whether access to underground and/or open pit workings is to be maintained;

(c) if underground and/or open pit access is to be maintained, details of the arrangements that have been made for the provision of regular services and emergency services to ensure the safety of employees engaged in maintaining the mine;

(d) the measures that have been taken to prevent unauthorised access or entry to the mine;

(e) the precautions that have been taken to protect underground equipment and service installations; and

(f) any plans required to be prepared under section 88 of the Act.

3.15. Details to be included in notification of recommencement

Notification of the recommencement of mining operations at a mine must, in addition to the details set out in regulation 3.12, include the following details —

(a) sufficient information to demonstrate that mine services (including ventilation and de-watering) and emergency response capacity have been maintained or restored; and

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(b) details of any substantial changes that have been made to the mine or mining operations at the mine.

3.16. Details to be included in notification of abandonment

Notification of the abandonment of mining operations at a mine must, in addition to the details set out in regulation 3.12, include the following details —

(a) details of precautions taken to ensure that access to underground workings has been secured against unauthorised entry;

(b) details of precautions taken to prevent inadvertent access to open pit workings;

(c) details of precautions taken to prevent, so far as is practicable, any post mining subsidence into underground workings, by back-filling stope voids and by other appropriate measures;

(d) details of precautions taken to ensure that all plant and equipment have been removed or secured and left in a safe condition;

(e) details of precautions taken to remove or properly dispose of all hazardous substances at the mine; and

(f) any plans required to be prepared under section 88 of the Act.

Division 2A — Further requirements for record book entries under section 38(2), (4) and (6)

[Heading inserted in Gazette 4 Apr 2005 p. 1107.]

3.16A. Matters to be recorded

(1) This regulation applies where —

(a) a person is appointed under section 34(3) of the Act to be the deputy of a registered manager or of an alternate registered manager (a ***manager***);

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(b) a person is appointed under section 36(3) of the Act to be the deputy of an underground manager or of an alternate underground manager (an ***underground manager***); or

(c) a person is appointed under section 38(3) of the Act to be the deputy of a quarry manager or of an alternate quarry manager (a ***quarry manager***).

(2) A manager, underground manager or quarry manager for whom a deputy is appointed must, in addition to complying with section 38(2), (4) or (6) of the Act, as the case may be, make a record in the record book showing the particulars specified in subregulation (3).

(3) The particulars are —

(a) the day and time when the deputy started acting pursuant to the appointment;

(b) the day and time when the deputy stopped acting pursuant to the appointment; and

(c) the ground on which the appointment was made, that is whether because of incapacity, absence from the mine or otherwise, and a brief statement of the circumstances involved.

(4) The entries referred to in subregulation (3)(a) and (c) must be made as soon as is practicable after the deputy started acting.

(5) The entry referred to in subregulation (3)(b) must be made as soon as is practicable after the deputy stopped acting.

(6) The manager, underground manager or quarry manager concerned must ensure that the deputy signs each entry referred to in subregulation (3)(a) and (b) in respect of that deputy, as soon as is practicable after the entry is made, to show that the deputy agrees that the particulars entered for the purposes of that provision are correct.

[Regulation 3.16A inserted in Gazette 4 Apr 2005 p. 1107-8.]

Extract from www.slp.wa.gov.au, see that website for further information

Division 3 — Inspection of workplaces

3.17. Terms used in this Division

In this Division, unless the contrary intention appears —

working day, in relation to a workplace, means any day on which work is carried out at the workplace;

working shift, in relation to a workplace, means the period of time during which all or part of a particular shift is worked at that workplace.

3.18. Registered manager to ensure inspections carried out in accordance with this Division

The registered manager of a mine must ensure that each workplace at the mine is inspected as required under this Division.

Penalty: See regulation 17.1.

3.19. Inspection of workplaces in quarry operations

A workplace in a quarry operation must be inspected at least once during each working shift by the quarry manager, or by a person appointed by the quarry manager who is competent to perform such an inspection, to ensure that the workplace is safe for persons working there.

3.20. Inspection of underground workplaces in coal mines

Each underground workplace in a coal mine must be inspected by a deputy to whom the workplace has been assigned —

(a) at least once during each working shift to ensure that the workplace is safe for persons working there; and

(b) if there is a break between working shifts that exceeds 4 hours, not less than 2 hours before the new shift is commenced, to ascertain whether —

(i) any noxious or flammable gas is present in the workplace;

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(ii) ventilation in the workplace is adequate; and

(iii) the roof and sides of the workplace are in a safe condition.

3.21. Inspection of other underground workplaces

(1) An underground workplace (other than an underground workplace in a coal mine) must be inspected by a person who holds either a first class mine manager's certificate or an underground supervisor's certificate to ensure that the workplace is safe for persons working there —

(a) once in each working shift; or

(b) if the underground manager directs under subregulation (3) that the workplace be inspected at more frequent intervals, at such intervals as the underground manager directs.

(2) The underground manager must, in respect of each underground workplace, consider whether the underground workplace should be inspected more frequently than once in each working shift due to the nature of the workplace or the type of activities being conducted in the workplace.

(3) The underground manager may direct in writing that an underground workplace be inspected at specified intervals that are more frequent than once in each working shift.

3.22. Inspection of other workplaces

A workplace not referred to in regulation 3.19, 3.20 or 3.21 must be inspected at least once during each working day by a competent person to ensure that the workplace is safe for persons working there.

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Division 4 — Health surveillance

Subdivision A — Preliminary

3.23. Terms used in this Division

In this Division, unless the contrary intention appears —

approved person, in relation to a health assessment under this Division, means a person approved in writing by the State mining engineer to supervise the carrying out of such an assessment;

assessment form means a form approved for the purposes of this Division by the Mining Industry Advisory Committee;

audiometric test has the same meaning as in the *Workers' Compensation and Injury Management Act 1981* [4];

authorised medical officer means a medical practitioner employed by the Perth Chest Clinic and with experience in expiratory medicine;

biological monitoring means the measurement and evaluation of hazardous substances or their metabolites in the body tissues, fluids or exhaled air of a person;

chest x-ray means an x-ray of the chest in the standard postero anterior position to assess the lung fields and airways;

designated work means —

(a) work underground in a mine; or

(b) any other kind of work at a mine specified in writing by the State mining engineer on the advice of the Mining Industry Advisory Committee for the purposes of this definition;

existing employee, in relation to a mine, means an employee working at the mine immediately before the commencement day;

health surveillance record means a record of the results of any health assessment or biological monitoring required to be carried out under this Division;

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initial health assessment, in relation to an employee, means the health assessment carried out on that employee under regulation 3.25;

lung function test means the assessment of pulmonary function using spirometric procedures;

Mines occupational physician means the Mines occupational physician appointed under regulation 3.34;

new employee means a person who is employed to work at a mine after the commencement day and who —

(a) has not previously received an initial health assessment; or

(b) has previously received an initial health assessment but since that assessment —

(i) has engaged in designated work; and

(ii) has ceased to work in the mining industry for a period exceeding 2 years;

occupational disease means —

(a) a disease of a kind referred to in section 151(a)(iii) of the *Workers' Compensation and Injury Management Act 1981* [4]; or

(b) any other condition that results from exposure in a workplace to agents or substances to the extent that the normal physiological mechanisms are affected and the health of the employee is impaired as a consequence;

periodic health assessment, in relation to an employee, means a health assessment carried out on that employee under regulation 3.26;

Perth Chest Clinic means the Perth Chest Clinic of the Health Department;

respiratory questionnaire means a questionnaire in a form approved for the purposes of this Division by the Mining Industry Advisory Committee;

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specified occupational exposure work means any category of work in which an employee may be exposed to agents or substances which may warrant specific monitoring to assess potential adverse health effects or potential excessive exposure.

[Regulation 3.23 amended in Gazette 19 Jan 1996 p. 237; 4 Apr 2005 p. 1108.]

Subdivision B — Health surveillance system

3.24. Effect of Subdivision

This Subdivision has effect for the purposes of section 75(1) of the Act.

3.25. Initial health assessment

(1) The principal employer and each employer at a mine must ensure that an initial health assessment is carried out on each employee at the mine —

(a) in the case of an existing employee, within 2 years after the commencement day; and

(b) in the case of a new employee, if practicable before the day on which the person commences work at the mine or, if that is not practicable, within 3 months after that day.

(2) The health assessment must be carried out under the supervision of a medical practitioner or an approved person and must include —

(a) a record of the person's work history;

(b) a respiratory questionnaire;

(c) a lung function test;

(d) an audiometric test; and

(e) a chest x-ray.

(3) The medical practitioner or approved person under whose supervision the health assessment is carried out must —

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(a) record the results of the assessments referred to in subregulation (2)(a), (b), (c) and (d) on an assessment form; and

(b) forward the completed assessment form and the chest x-ray plate to the authorised medical officer.

3.26. Periodic health assessment

(1) The principal employer and each employer at a mine must ensure that a health assessment is carried out on each employee at the mine at intervals not exceeding 5 years.

(2) The health assessment must be carried out under the supervision of a medical practitioner or an approved person and must include —

(a) a record of the person's work history;

(b) a respiratory questionnaire;

(c) a lung function test;

(d) an audiometric test; and

(e) in the case of an employee who engages in designated work or who has engaged in designated work for at least 2 years in the previous 5 years, a chest x-ray.

(3) The medical practitioner or approved person under whose supervision the health assessment is carried out must —

(a) record the results of the assessments referred to in subregulation (2)(a), (b), (c) and (d) on an assessment form; and

(b) forward the completed assessment form and the chest x-ray plate (where applicable) to the authorised medical officer.

3.27. Additional health assessment

(1) In addition to the health assessments referred to in regulations 3.25 and 3.26, the State mining engineer may direct that specified further health assessments be carried out in

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respect of employees engaged in specified occupational exposure work at a mine.

(2) The principal employer and each employer at a mine must ensure that a direction given under subregulation (1) is complied with.

Penalty: See regulation 17.1.

3.28. Biological monitoring

(1) The principal employer and each employer at a mine must ensure that biological monitoring is carried out in respect of employees who engage in specified occupational exposure work at the mine, where there is a valid biological monitoring procedure and a reasonable likelihood that accepted values might be exceeded.

Penalty: See regulation 17.1.

(2) The State mining engineer may direct that biological monitoring be carried out in respect of specified employees at a mine (other than employees referred to in subregulation (1)).

(3) The principal employer and each employer at a mine must ensure that a direction given under subregulation (2) is complied with as soon as is practicable.

(4) The State mining engineer may require the results of any biological monitoring carried out in respect of employees at a mine to be provided to the State mining engineer.

(5) The principal employer and each employer at a mine must ensure that a requirement made under subregulation (4) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

3.29. Categories of employees who do not require health surveillance

Section 75 of the Act does not apply to an employee who —

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(a) normally works in an office, administration building, residential facility or recreational facility where there is no significant exposure to hazardous substances or agents; or

(b) is an employee of a contractor or is self-employed, and who is only engaged to work occasionally at a mine or mines for periods not exceeding, at any one time, one month.

3.30. Employer responsible for arranging health surveillance

(1) An employer at a mine is responsible for arranging any health assessment or biological monitoring required under this Subdivision.

(2) An employer at a mine must pay the expenses of any health assessment or biological monitoring required under this Subdivision.

(3) An employer may request an employee to attend at a specified place for the purposes of a health assessment or biological monitoring required under this Subdivision.

(4) An employee must not, without reasonable excuse, refuse or fail to comply with a request made under subregulation (3).

Penalty: See regulation 17.1.

Subdivision C — Information on health surveillance

3.31. Medical practitioner to provide results of health assessment

The medical practitioner or approved person under whose supervision a health assessment (including any biological monitoring) is carried out must —

(a) notify the employee of the results of the assessment and, if necessary, explain those results; and

(b) notify the employer of the outcome of the assessment and advise on the need for remedial action (if any).

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3.32. Authorised medical officer to provide x-ray results

The authorised medical officer must, after assessing a chest x-ray plate associated with a completed assessment form forwarded by a medical practitioner or approved person under this Division, —

(a) send a copy of the results of the chest x-ray assessment to the following persons —

(i) the employee; and

(ii) the medical practitioner or approved person under whose supervision the assessment was carried out;

(b) notify the employer of the outcome of the chest x-ray assessment; and

(c) send the assessment form together with a copy of the results of the chest x-ray assessment to the State mining engineer.

3.33. Department to keep records

(1) The State mining engineer must ensure that a system is established for keeping health surveillance records (whether at the department, at another department or at both).

(2) The system must cross reference an employee's health surveillance records to the certificate number of any mine worker's health certificate issued in respect of the employee under the repealed regulations.

3.34. Mines occupational physician

(1) A person is to be appointed or engaged under the *Public Sector Management Act 1994* to be the Mines occupational physician.

(2) The Mines occupational physician is to —

(a) supervise the keeping of health surveillance records at the department;

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(b) provide medical and technical advice to the State mining engineer and the Mining Industry Advisory Committee; and

(c) give technical and medical advice and support in respect of monitoring programs.

[Regulation 3.34 amended in Gazette 19 Jan 1996 p. 237; 28 Feb 2003 p. 668; 4 Apr 2005 p. 1109.]

3.35. Health surveillance records to be confidential records

(1) The medical practitioner must ensure that health surveillance records that the medical practitioner has are retained as confidential records.

Penalty: See regulation 17.1.

(2) An employer must ensure that records of the results or outcomes of health surveillance obtained by that employer under this Division are retained as confidential records.

Penalty: See regulation 17.1.

3.36. Employee may request a copy of record

If an employee applies in writing to the State mining engineer for a copy of any health surveillance record relating to the employee that is kept by the department, the State mining engineer is to cause a copy of that record to be provided to the employee.

3.37. Employer may find out whether employee has previously been assessed

If an employer enquires in writing to the State mining engineer as to whether an employee has previously been given a health assessment under this Division, the State mining engineer is to cause that information to be provided to the employer.

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3.38. Confidentiality

(1) In this regulation —

confidential information means information contained in any health surveillance record.

(2) Except as provided in subregulation (3) or (4), an employee of the department, of a medical practitioner or of an employer must not directly or indirectly divulge any confidential information obtained by reason of any function that person has, or at any time had, in the administration of the Act or these regulations.

Penalty: See regulation 17.1.

(3) Subregulation (2) does not apply to the divulging of information —

(a) to an employer, employee or any other person as required or permitted under this Division; or

(b) with the consent of the person to whom the information relates.

(4) Subregulation (2) does not apply to the divulging of statistical or other information that could not reasonably be expected to lead to the identification of any person to whom it relates.

3.39. Notice of occupational disease

If an employer at a mine receives advice from an employee or a person on behalf of an employee that the employee has an occupational disease, the employer must, as soon as is practicable, notify the Mines occupational physician in a form approved for that purpose by the State mining engineer that the employee has the disease.

Penalty: See regulation 17.1.

3.40. Remedial action

(1) If any health assessment or biological monitoring under this Division indicates the need for remedial action to be taken to

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protect the health of an employee at a mine, the employer must ensure that the action is taken as soon as is practicable.

Penalty: See regulation 17.1.

(2) The State mining engineer may, on the advice of the Mines occupational physician, direct in a particular case that specified remedial action be taken by an employer to protect the health of employees at a mine.

(3) An employer must ensure that a direction given under subregulation (2) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

Division 5 — Notice of accidents

3.41. Requirements if notice in writing

For the purposes of section 76 of the Act, when notice of an accident is given, or confirmed, in writing, the notice must be in the form approved for that purpose by the State mining engineer.

3.42. Monthly status report form

The manager of a mine must ensure that a report is provided to the district inspector in a form approved for that purpose by the State mining engineer as soon as is practicable after the end of each month relating to the status of all employees who have been injured by accidents at the mine, (whether during that month or otherwise), and including the total hours worked by employees and the number of employees.

Penalty: See regulation 17.1.

Division 6 — Surveys and plans

3.43. Meaning of "Board"

In this Division —

Board means the Mines Survey Board.

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3.44. Mines Survey Board

(1) The Mines Survey Board is to consist of —

(a) the State mining engineer, who is to be the chairperson of the Board; and

(b) 5 persons appointed by the Minister, of whom —

(i) 2 must be persons who hold authorised mine surveyor's certificates and are currently engaged in the mining industry and who are nominated by the body known as the Institution of Engineering and Mining Surveyors Australia Inc. — Western Australian Division;

(ii) one must be a member of the teaching staff of a course in mine surveying at Curtin University Western Australian School of Mines, a college of the Department of Technical and Further Education (TAFE) or a tertiary education institution of equivalent standing, who holds a recognized qualification in surveying;

(iii) one must be a person nominated by the Surveyor General; and

(iv) one must be a person who is a licensed surveyor currently engaged in the mining industry and holds an authorised mine surveyor's certificate (grade 1) and who is nominated by the Institution of Surveyors Australia — Western Australian Division.

(2) A question arising at a meeting of the Board must be decided by a majority of the members of the Board present at the meeting.

(3) The Board may co-opt any person having relevant specialized knowledge or experience, but a person so co-opted is not entitled to a vote.

(4) A quorum of the Board is 4 persons.

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3.45. Authorised mine surveyor's certificate — grades

If the Board issues an authorised mine surveyor's certificate to a person the Board must classify the certificate as being either —

(a) grade 1 — that is, authorising the person to make or draw surveys or plans of underground mines and quarries; or

(b) grade 2 — that is, authorising the person to make or draw surveys or plans of quarries only.

3.46. Requirement to hold authorised mine surveyor's certificate

(1) A person must not make or draw a survey or plan of a quarry unless the person —

(a) holds an authorised mine surveyor's certificate (either grade 1 or grade 2); or

(b) is acting under the control and supervision of a person who holds an authorised mine surveyor's certificate (grade 1 or grade 2).

Penalty: See regulation 17.1.

(2) A person must not make or draw a survey or plan of an underground mine unless the person —

(a) holds an authorised mine surveyor's certificate (grade 1); or

(b) is acting under the control and supervision of a person who holds such a certificate.

Penalty: See regulation 17.1.

(3) The manager of a mine must cause a record to be made in the record book of the name of the mine surveyor appointed to make or draw the survey or plan of the mine and the day on which that person was appointed.

Penalty: See regulation 17.1.

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3.47. Issue of authorised mine surveyor's certificate

(1) In this regulation —

applicant means an applicant for an authorised mine surveyor's certificate.

(2) An applicant must —

(a) apply to the Board in the form approved for that purpose by the State mining engineer; and

(b) supply documentary evidence of the matters of which the Board is required to be satisfied under this regulation.

(3) The Board may issue an authorised mine surveyor's certificate to an applicant if the Board is satisfied that the applicant —

(a) holds the qualifications set out in subregulation (4);

(b) in the case of an application for an authorised mine surveyor's certificate (grade 1), has made underground surveys of a nature and under supervision satisfactory to the Board for a period of not less than 24 months;

(c) in the case of an application for an authorised mine surveyor's certificate (grade 2), has made surveys of quarry operations of a nature and under supervision satisfactory to the Board for a period of not less than 12 months; and

(d) is of good character.

(4) An applicant for an authorised mine surveyor's certificate (grade 1 or grade 2) must hold —

(a) the degree or diploma in mine surveying technology from Curtin University Western Australian School of Mines;

(b) the 3 year diploma of mine surveying from the Department of Technical and Further Education (TAFE) or, if an application for the certificate is made within 12 months after the coming into operation of the

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Mines Safety and Inspection Amendment Regulations (No. 2) 1997 [1], the diploma of mining surveying from the Department of Technical and Further Education (TAFE); or

(c) surveying qualifications from any School of Mines, University, Institute of Technology or Technical College deemed by the Board to be equivalent to a qualification referred to in paragraph (a) or (b).

(5) For the purposes of subregulation (4)(c), the surveying qualifications must include —

(a) in the case of an application for an authorised mine surveyor's certificate (grade 1), at least 2 mining units and a geology unit; and

(b) in the case of an application for an authorised mine surveyor's certificate (grade 2), at least one mining unit.

[Regulation 3.47 amended in Gazette 4 Jul 1997 p. 3498.]

*[**3.48.** Omitted under the Reprints Act 1984 s. 7(4)(e).]*

3.49. Instruments and accuracy

(1) A person who carries out a survey at a mine must ensure that —

(a) the survey is carried out using instruments and equipment of precision equal to best current industry standards and technology; and

(b) the survey is carried out to a standard that accords with good engineering practice and is to an accuracy of not less than 1:5000.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to a person who carries out a survey of a mine in accordance with an approval given by the district inspector under subregulation (3).

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(3) The district inspector may, in a particular case, approve in writing the carrying out by a person of a survey of a mine by means other than those specified in subregulation (1) if the district inspector considers that the means will be sufficiently accurate.

3.50. Datum station and co-ordinator

(1) A person who carries out a survey of a mine must establish, in the general vicinity of the mine, a datum station which is to serve as the origin for the survey and the co-ordinate system used.

Penalty: See regulation 17.1.

(2) The position of the datum station referred to in subregulation (1) must be established in terms of the Map Grid of Australia 1994 co-ordinate system and the Australian Height Datum (AHD).

(3) A person who carries out a survey of a mine must ensure that if a local grid system is used for mine surveying and management the relationship between that grid system and the Map Grid of Australia 1994 in terms of distance and with respect to true bearing is established.

Penalty: See regulation 17.1.

[Regulation 3.50 amended in Gazette 27 Jul 2001 p. 3798.]

3.51. Particulars required in mine plans

(1) For the purposes of section 87(1)(c) of the Act, the following particulars must be contained in plans referred to in that section —

(a) a plan of the lease or tenement in which the mine is situated showing —

(i) the datum station established as the origin of the survey;

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(ii) the relationship to the Map Grid of Australia 1994; and

(iii) the relationship to the local grid system;

(b) in relation to quarry operations, a plan showing the true size and shape of all excavations and sufficient cross-sections showing advances made in the quarry operations and the areas reclaimed or again filled in;

(c) a general plan of any underground levels to a scale that accords with good engineering practice that shows, so far as is practicable, the true size and shape of all development openings, but a composite plan may be accepted if each level on that plan can be clearly seen;

(d) if any underground drill holes at the mine contain potentially hazardous services including electrical power cables, compressed air lines or diesel fuel lines, details of the location of those holes;

(e) so far as is practicable, longitudinal sections or projections to a scale that accords with good engineering practice that shows all underground mining operations;

(f) so far as is practicable, sufficient cross-sections or projections to a scale that accords with good engineering practice that clearly shows the ore bodies and the parts of ore bodies mined out;

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(g) the date when the plan was made; and

(h) certification by the person who made the plan that the plan is correct.

(2) In relation to a plan of underground mine operations the certification referred to in subregulation (1)(h) must be in the following form —

"

This is to certify that this survey has been done by myself (or by persons under my own supervision), subject to adequate inspection and field check, and is the actual result of the observations and measurements, and the survey and plan have been done in accordance with the requirements of the *Mines Safety and Inspection Act 1994* and the regulations made under that Act.

DATED the day of 20

. . . . . .

Authorised Mine Surveyor Grade . . .

Certificate No. . . . . .

".

[Regulation 3.51 amended in Gazette 27 Jul 2001 p. 3798.]

3.52. When plans must be provided to State mining engineer

For the purposes of section 87(2) of the Act, the plans referred to in subsection (1) of that section must be provided to the State mining engineer —

(a) within one year after the commencement of mining operations at the mine;

(b) in the case of any mine where there are underground operations, at intervals not exceeding 5 years following the initial provision of plans;

(c) before any planned period of suspension of mining operations at the mine; and

(d) as soon as practicable after the mine is closed.

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3.53. Form of plans

For the purposes of section 87(2) of the Act, the plans referred to in subsection (1) of that section must be provided to the State mining engineer —

(a) in the case of the initial set of plans, in hard copy form;

(b) in the case of plans provided before any suspension of mining operations at the mine or when the mine is closed, in hard copy form accompanied, so far as is practicable, by a copy in electronic form; and

(c) in the case of any plans provided at times other than those referred to in paragraph (a) or (b) —

(i) if the State mining engineer approves, in micro film or in electronic form;

(ii) if the State mining engineer does not approve of the plans being given in micro film or electronic form, in hard copy form.

3.54. Plan of scene of fatal accident

(1) This regulation applies if the Coroner or deputy Coroner or an inspector requires a survey to be carried out or a location plan to be prepared of the scene of any fatal accident at a mine (whether underground or elsewhere at the mine).

(2) If this regulation applies, the manager of the mine must ensure that a person is not engaged to carry out the survey or to prepare the location plan unless the person is the holder of an authorised mine surveyor's certificate.

Penalty: See regulation 17.1.

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Part 4 — General safety requirements

Division 1 — General

4.1. Protective clothing and equipment

(1) The manager of, and each employer at, a mine must ensure that employees and other persons at the mine —

(a) wear or use personal protective clothing or equipment provided if it is necessary to protect them against any hazard at the mine; and

(b) are properly fitted with such clothing or equipment and are properly instructed by a competent person as to how to use the clothing or equipment.

Penalty: See regulation 17.1.

(2) The manager of, and each employer at, a mine must ensure that any personal protective clothing and equipment supplied for use at the mine —

(a) conforms with any applicable Australian Standard;

(b) is properly maintained; and

(c) is replaced if it becomes defective.

Penalty: See regulation 17.1.

(3) If a sign or notice is displayed at a mine directing that persons wear or use any personal protective clothing or equipment in an area of the mine, any employee or other person entering or in that area must wear or use the clothing or equipment.

Penalty: See regulation 17.1.

(4) Subregulation (3) does not apply to an employee or person who has, before entering the area, been exempted in writing by the manager from wearing or using the clothing or equipment in that area.

(5) An employee and any other person at a workplace must ensure that loose clothing, personal adornments and hair are confined

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so as to prevent entanglement with any machinery, electrical equipment or other device at the workplace.

Penalty: See regulation 17.1.

4.2. Confined spaces

The manager of, and each employer at, a mine must ensure that the requirements of sections 10, 11.8, 12.1, 12.2, 12.3, 12.4, 12.10, 12.11, 13.1, 13.2, 13.3, 13.9, 13.14, 13.15, 13.16, 14.1, 14.2 and 14.7 of AS 2865 are complied with in relation to work carried out in a confined space at the mine.

Penalty: See regulation 17.1.

4.3. Hot work procedures

(1) The manager of, and each employer at, a mine must ensure that a person is not allowed to use welding, oxy-acetylene cutting or other hot work equipment at the mine if there is any risk of personal injury or damage to plant or facilities from fire unless the person has a permit to do so signed by a competent person at the mine.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply at —

(a) a workshop or similar controlled work environment; or

(b) a workplace protected by a fixed fire suppression system.

4.4. Guards and handrails

(1) The manager of, and each employer at, a mine must ensure that adequate handrails, guards or fences are provided on all steps, stairs, elevated walkways and platforms, and on any other elevated workplace where there is a risk of injury to employees from falling.

Penalty: See regulation 17.1.

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(2) Each responsible person at a mine must ensure that any ladder on a chimney stack, or on any other elevated structure, at the mine —

(a) is enclosed to minimize the risk of falling and is fitted with rest platforms within the confines of the enclosure at intervals not exceeding 10 metres; or

(b) is fitted with a fall arrest system.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that any moving machinery at the mine which creates a risk of injury to an employee through inadvertent contact is screened or guarded to prevent such contact.

Penalty: See regulation 17.1.

4.5. Fall arrest equipment

(1) The manager of, and each employer at, a mine must ensure that —

(a) fall arrest equipment is provided to employees at a workplace if the risk of injury to employees from falling cannot be eliminated from the workplace or the system of work at the workplace; and

(b) the equipment referred to in paragraph (a) is —

(i) appropriately designed for the task for which it is to be used;

(ii) used in such a way as to reduce, so as far as is practicable, the possibility of injury to the user; and

(iii) properly maintained.

Penalty: See regulation 17.1.

(2) If any fall arrest equipment is used to arrest a fall, the manager and each employer must ensure that the equipment is checked by a competent person and is serviced or discarded in accordance with the manufacturer's specifications.

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Penalty: See regulation 17.1.

4.6. Conveyor haulage safety

(1) A person must not ride on a conveyor in a mine.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to a conveyor that is designed for the purpose of transporting persons.

(3) The manager of an underground mine must ensure that, so far as is practicable, a warning device, audible at all locations along the conveyor, is sounded each time before any conveyor belt at the mine is started to warn persons that the conveyor belt is about to start.

Penalty: See regulation 17.1.

(4) The manager of an underground mine must ensure that if any conveyor haulage at the mine is designed to start by remote or automatic control, the design includes an alarm, audible at all locations along the conveyor, which sounds for an appropriate period before the conveyor belt starts.

Penalty: See regulation 17.1.

(5) Subregulation (3) does not apply to short conveyor haulages at shaft load stations or transfer points if signs warning of automatic or remote (as the case may be) start operation are prominently displayed at each entry to, and in the vicinity of, the conveyor system.

(6) An inspector may direct that a means of stopping a conveyor belt by a device that is not capable of re-starting the conveyor belt must be provided at an underground mine so as to be available to each person along its course.

(7) The manager of an underground mine must ensure that a direction given under subregulation (6) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

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(8) A person must not go under or clean under a moving conveyor belt in an underground mine unless the person is protected from the belt by a screen guard.

Penalty: See regulation 17.1.

(9) The manager of an underground mine must ensure that each conveyor way underground in the mine is equipped with a suitable walkway or travelway to allow safe access for maintenance or other purposes.

Penalty: See regulation 17.1.

(10) The manager of an underground mine must ensure that each conveyor haulage way installed underground in the mine, or in a surface stockpile tunnel at the mine which incorporates combustible materials, is protected by a fixed fire suppression system which is designed for automatic operation, but which has provision for manual operation.

Penalty: See regulation 17.1.

(11) The manager of an underground coal mine must ensure that conveyor belts in the mine are constructed of flame resistant material that complies with AS 1332, AS 1333 and AS 1334.

Penalty: See regulation 17.1.

4.7. Intoxicating liquor or drugs

(1) A person (whether or not an employee) must not be in or on any mine while the person is adversely affected by intoxicating liquor or drugs.

Penalty: See regulation 17.1.

(2) The principal employer at, or the manager or supervisor of, a mine may direct an employee reporting for duty to immediately leave the mine if in the opinion of the principal employer, manager or supervisor the employee is adversely affected by intoxicating liquor or drugs.

(3) An employee must not refuse or fail to comply with a direction given under subregulation (2).

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Penalty: See regulation 17.1.

(4) A person must not, without the knowledge and permission of the manager of the mine —

(a) have any intoxicating liquor or deleterious drug in his or her possession in or on a mine; or

(b) consume any intoxicating liquor or deleterious drug while in or on a mine.

Penalty: See regulation 17.1.

4.8. Weather protection

(1) Each responsible person at a mine must ensure that adequate shelter is provided for employees waiting to go underground during inclement weather.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that suitable wet weather clothing is provided for employees required to work in exposed places at the mine.

Penalty: See regulation 17.1.

4.9. Debris in open cut working

A person must not place in any open cut working (whether in use or abandoned) any debris, refuse or other material that is likely to create a hazard for any person.

Penalty: See regulation 17.1.

4.10. Safety signs

(1) Each responsible person at a mine must ensure that sufficient safety signs are posted in workplaces and travelways to —

(a) prevent accidents;

(b) identify hazards;

(c) indicate the location of safety and fire protection equipment; and

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(d) provide guidance and instruction in emergency procedures.

Penalty: See regulation 17.1.

(2) Safety signs referred to in subregulation (1) must, so far as is practicable, use the text, colours, shapes, symbols and sizes specified in AS 1319, or AS 1614, as applicable.

(3) The manager of, and each employer at, a mine must ensure that safety signs referred to in subregulation (1) are at all times —

(a) placed so that they can be readily seen; and

(b) maintained in a clean and readable condition.

Penalty: See regulation 17.1.

(4) A person must not —

(a) damage, deface or obscure a safety sign at a mine; or

(b) remove a safety sign at a mine unless the person is authorised to do so by the manager of the mine.

Penalty: See regulation 17.1.

4.11. Flood protection

The manager of a mine must ensure that —

(a) the risk of flooding at the mine from all sources has been evaluated; and

(b) adequate precautions have been taken to prevent danger to employees from flooding.

Penalty: See regulation 17.1.

4.12. Use of compressed air

(1) Before using a hose to transfer any compressed air, the person using that hose must ensure that all connections in the hose length are coupled and secured so as to prevent accidental disconnection.

Penalty: See regulation 17.1.

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(2) A person must not use compressed air for cleaning purposes in a workplace if the use of the compressed air is likely to generate dust in the workplace.

Penalty: See regulation 17.1.

(3) Subregulation (2) does not apply if —

(a) a combination of compressed air and water is being used; or

(b) the compressed air is being used in an underground mine to clean any shaft or winze door or any bench, stope or development heading floor for inspection before drilling and the person using the compressed air is wearing suitable protective clothing.

(4) A person must not use compressed air for the purpose of cleaning the person's body or clothing, or the body or clothing of another person.

Penalty: See regulation 17.1.

4.13. Induction and training of employees

(1) Each responsible person at a mine must ensure that every employee is —

(a) given adequate instruction and training in safety procedures and systems of work and in the tasks required of the employee;

(b) assessed before commencing work at the mine to ensure that the employee is competent to perform the tasks he or she will be assigned and to operate any plant and equipment the employee will be required to operate; and

(c) retrained and reassessed whenever systems of work or plant and equipment are changed, or new systems of work or plant and equipment are introduced.

Penalty: See regulation 17.1.

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(2) Each responsible person at a mine must ensure that —

(a) a record is made of any instruction, training, retraining, assessment or reassessment given as required under this regulation; and

(b) the record is kept for a minimum of 2 years after it is made.

Penalty: See regulation 17.1.

4.14. Training in safety procedures relating to the use of helicopters

In addition to regulation 4.13, an employer must ensure that, if any mining operation involves the use of a helicopter, employees engaged in that operation have been adequately trained in safety procedures relating to the use of helicopters.

Penalty: See regulation 17.1.

4.15. Roll over protection for surface earth moving machinery

(1) A reference in this regulation to ***earth moving machinery*** includes any unit of earth moving equipment that has been modified to perform other service functions (including operation as a road watering tanker truck), but does not include earth moving machinery that is only used underground.

(2) The principal employer at, and the manager of, a mine must ensure that —

(a) each earth moving machinery unit used at the mine is fitted with a roll over protective structure that conforms with AS 2294;

(b) each agricultural tractor used at the mine is fitted with a roll over protective structure that conforms with AS 1636; and

(c) if any roll over protective structure fitted to a vehicle referred to in paragraph (a) or (b) is structurally damaged, the vehicle is withdrawn from service until the

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structure is repaired, replaced or restored to a fully functional condition.

Penalty: See regulation 17.1.

(3) This regulation does not apply to any vehicle that, immediately before the commencement day, was being used at a mine and was not fitted with the roll over protective structure required under this regulation, until the expiration of 24 months from the commencement day.

4.16. Seat belts for vehicles

(1) The principal employer at, and the manager of, a mine must ensure that —

(a) each vehicle used at the mine is fitted with seat belts and seat belt anchorage points that conform with AS 2664 or the Australian Design Rules; and

(b) if any seat position is added to a vehicle used at the mine, the seat is fitted with a seat belt and seat belt anchorage point that conforms with AS 2664 or the Australian Design Rules.

Penalty: See regulation 17.1.

(2) If a seat referred to in subregulation (1) is a suspension seat, the seat belt anchorage must be attached to the seat assembly and the seat belt fitted with the appropriate retractor.

(3) A person must not, while occupying a seat position in a vehicle to which a seat belt has been fitted for that seat position, drive or travel in that vehicle at a mine unless the person is wearing that seat belt and the seat belt is properly adjusted and securely fastened.

Penalty: See regulation 17.1.

4.17. English language requirements

(1) Each responsible person at a mine must ensure that a person is not employed to work in or about the mine in a position of

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responsibility unless the person is able to speak the English language readily and intelligibly and is able to read and write the English language competently.

Penalty: See regulation 17.1.

(2) For the purposes of subregulation (1), a person is employed to work in or about a mine in a position of responsibility if the person is employed to work —

(a) as a mine surveyor;

(b) as a member of the emergency services personnel;

(c) as a winding engine driver;

(d) in any position if the person operates, or controls the movement of, any conveyance in a shaft; or

(e) in any other position if the person's acts or omissions might reasonably be expected to affect the safety of other persons in or about the mine.

Division 2 — Construction work

4.18. Meaning of "construction work"

In this Division —

construction work means —

(a) the construction, erection, installation, alteration, repair, maintenance, cleaning, painting, renewal, removal, excavation, dismantling or demolition of, or addition to, any building or structure, or any work in connection with any of those things, that is done at or adjacent to the place where the building or structure is located;

(b) work on which a hoisting appliance or any scaffolding or shoring is used or intended to be used;

(c) work in driving or extracting piles, sheet piles or trench sheet;

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(d) work in laying any pipe or work in lining pipe that is carried out at or adjacent to the place where the pipe is laid or is to be laid;

(e) work in sinking or lining or altering, repairing, maintaining, renewing, removing, or dismantling a well or borehole; or

(f) roadworks, earthworks or reclamation,

but does not include any activity referred to in paragraph (a), (b), (c), (d), (e) or (f) that is carried out in the normal course of development, production, servicing or maintenance of ongoing mining operations.

4.19. Division does not apply to underground construction work

This Division does not apply to or in relation to construction work carried out underground in a mine.

4.20. Construction work to be carried out by competent persons

Each responsible person at a mine must ensure that construction work at the mine is carried out by competent persons.

Penalty: See regulation 17.1.

4.21. Appointment of responsible person and supervisors

The principal employer at, and the manager of, a mine must ensure that —

(a) a person is appointed to be responsible for the general control of construction work at the mine; and

(b) sufficient additional competent persons are appointed to help supervise such work.

Penalty: See regulation 17.1.

4.22. Compliance with Australian Standards

The principal employer at, and the manager of, a mine must ensure that construction work at the mine is carried out in

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accordance with the applicable Australian Standards set out in the Table to this regulation.

Penalty: See regulation 17.1.

Table

AS 1576	(Scaffolding)
AS 1674	(Safety in welding and allied processes)
AS 1801	(Industrial safety helmets)
AS 1873	(Power-activated (PA) hand-held fastening tools)
AS 1891	(Industrial safety belts and harnesses)
AS 1892	(Portable ladders)
AS 1981.3	(Fall-arrest devices)
AS 2424	(Plastic building sheets — General installation requirements and design of roofing systems)
AS 2601	(The demolition of structures)
AS 2626	(Industrial safety belts and harnesses — Selection, use and maintenance)
AS 2865	(Safe working in a confined space)
AS 3012	(Electrical installations — Construction and demolition sites)
AS 4626	(Industrial fall-arrest devices — Selection, use and maintenance)

Division 3 — Emergency preparation

4.23. Terms used in this Division

In this Division, unless the contrary intention appears —

emergency exit means an exit other than the usual means of access to or egress from a place;

filter self rescuer means a unit of personal respiratory protective equipment which, when worn by the user, filters out carbon monoxide from the ambient air breathed through the filter;

self contained self rescuer means a unit of personal respiratory protective equipment which provides the user with an independent source of respirable air, protecting the user from toxic or asphyxiant atmospheres.

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4.24. First aid equipment to be provided

(1) The principal employer at, and the manager of, a mine must ensure that appropriate first aid equipment, facilities and services are provided at the mine at all times when persons are working at the mine.

Penalty: See regulation 17.1.

(2) For the purpose of determining what first aid equipment, facilities and services are appropriate under subregulation (1), regard must be had to —

(a) the nature of the hazards associated with mining operations at the mine;

(b) the risk level of those hazards;

(c) whether a doctor or medical officer is available at, or near, the mine; and

(d) the proximity of the mine to hospital facilities and services.

4.25. Resuscitation equipment

The principal employer at, and the manager of —

(a) a mine where hazardous substances are produced, used or stored; and

(b) every underground mine,

must ensure that —

(c) suitable resuscitation equipment is provided at the mine; and

(d) a person trained and qualified to use the resuscitation equipment is available at the mine at all times when persons are working at the mine.

Penalty: See regulation 17.1.

4.26. First aid personnel

The principal employer at, and the manager of, a mine must ensure that —

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(a) a person qualified in first aid is available at the mine at all times when persons are working at the mine; and

(b) so far as is practicable, a person qualified and experienced in advanced first aid is available, or on call, at the mine at all times while persons are working at the mine.

Penalty: See regulation 17.1.

4.27. First aid vehicles

The principal employer at, and the manager of, a mine must ensure that a vehicle equipped to transport injured or sick persons is available at the mine at all times while persons are working at the mine.

Penalty: See regulation 17.1.

4.28. Information about first aid

The manager of, and each employer at, a mine must ensure that all persons employed at the mine are informed of —

(a) what first aid equipment, facilities and services are provided at the mine;

(b) the location of the equipment, facilities and services at the mine; and

(c) the procedures for obtaining first aid at the mine.

Penalty: See regulation 17.1.

4.29. Additional first aid equipment

(1) The district inspector may, by notice in writing given to the manager of a mine, require specified additional first aid equipment, facilities or services to be provided at the mine (either at all times or during any specified period or periods).

(2) The manager of a mine must ensure that a requirement made under subregulation (1) is complied with as soon as is practicable.

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Penalty: See regulation 17.1.

4.30. Preparation of emergency plan

(1) The principal employer at, and the manager of, a mine must ensure that a plan for dealing with emergencies at the mine is prepared —

(a) in the case of an existing mine, as soon as is practicable after the commencement day; or

(b) in any other case, before mining operations commence at the mine.

Penalty: See regulation 17.1.

(2) The plan referred to in subregulation (1) must —

(a) identify hazards that might cause an emergency at the mine;

(b) assess the risk of such an emergency occurring; and

(c) consider means by which any such emergency may be prevented or dealt with, including by —

(i) the provision of appropriate facilities and equipment;

(ii) the provision of effective alarm systems;

(iii) the testing of alarm systems;

(iv) the development of procedures to deal with emergencies;

(v) the training of employees in emergency procedures;

(vi) the training of employees in fire fighting, mine rescue and other relevant emergency response functions; and

(vii) the review of facilities, equipment and procedures.

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(3) The principal employer at, and the manager of, a mine must ensure that the plan is updated and revised whenever it is necessary to do so due to any change in mining operations, equipment, systems or procedures at the mine.

Penalty: See regulation 17.1.

4.31. Emergency exits to be provided for surface operations

(1) Each responsible person at a mine must ensure that —

(a) so far as is practicable, an emergency exit is provided from each treatment plant and building on the surface of the mine; and

(b) the emergency exit is clearly identified and kept free from obstruction.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not require the provision of an emergency exit in an explosives magazine.

4.32. Emergency lighting

(1) If failure of artificial lighting at a workplace is likely to result in a hazard to any person in the workplace, the manager of the mine must ensure that a system of emergency lighting is provided at the workplace that —

(a) is independent of the regular lighting system;

(b) operates automatically when the regular lighting system fails; and

(c) provides sufficient light to enable safe evacuation of the workplace.

Penalty: See regulation 17.1.

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(2) The manager of a mine must ensure that any system of emergency lighting referred to in subregulation (1) is tested as often as is required to comply with the manufacturer's specifications for testing the system.

Penalty: See regulation 17.1.

(3) This regulation does not apply to a workplace where miner's cap lamps are the sole source of artificial lighting.

4.33. Mine rescue equipment for underground mines

(1) The principal employer at, and the manager of, an underground mine must ensure that —

(a) adequate rescue equipment and breathing apparatus are provided at the mine; and

(b) persons trained in the use of that equipment and apparatus are available or on call at the mine at all times while persons are working in the mine.

Penalty: See regulation 17.1.

(2) In subregulation (1)(a) —

adequate means adequate having regard to the nature and extent of mining operations conducted at the mine the degree of risk to persons working at the mine and the availability of other rescue equipment and personnel outside the mine.

4.34. Self rescuers in underground mines

(1) The manager of an underground mine must ensure that any person who goes underground in the mine —

(a) is provided with (at least) a filter self rescuer or (preferably) a self contained self rescuer; and

(b) is fully trained in the use and limitations of the self rescuer provided.

Penalty: See regulation 17.1.

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(2) If there is a risk of a dust explosion or an identified risk from naturally occurring noxious or asphyxiant gases in an underground mine, the manager of the mine must ensure that all persons who go underground in the mine are provided with self contained self rescuers.

Penalty: See regulation 17.1.

(3) A person in an underground mine must not —

(a) wilfully damage a self rescuer; or

(b) use a self rescuer for a purpose other than the preservation of life or to demonstrate how it works.

Penalty: See regulation 17.1.

4.35. Procedures for accounting for persons in underground mines

The manager of an underground mine must ensure that adequate procedures are in place at the mine to enable all persons who are working underground in the mine to be promptly accounted for in the event of an emergency.

Penalty: See regulation 17.1.

4.36. Specific emergency precautions required to be taken for underground mines

(1) This regulation applies to any of the following potential incidents —

(a) a fire;

(b) an accidental explosion (including a sulphide dust or coal dust explosion);

(c) a failure of the primary ventilation system;

(d) flooding;

(e) an inrush of mud or tailings;

(f) an inrush or outburst of gas; or

(g) the extensive collapse of workings.

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(2) The principal employer at, and the manager of, an underground mine must ensure that, so far as is practicable, the following things have been done to ensure the safety of persons working underground in the mine in the event of a potential incident to which this regulation applies —

(a) an alarm system has been installed and a procedure has been established for activating the system;

(b) a procedure has been established for the prompt notification of rescue and fire fighting teams;

(c) a procedure has been established for evacuating persons working underground;

(d) fire refuge chambers and fresh air bases are provided for persons working underground;

(e) provision has been made for the safety of drivers of winding engines at underground shafts;

(f) all employees are adequately trained and retrained in emergency procedures and the use of emergency equipment and facilities; and

(g) emergency drills have been conducted on a regular basis.

Penalty: See regulation 17.1.

4.37. Flammable materials or explosives not to be stored near mine openings

The manager of an underground mine must ensure that flammable liquids, flammable materials or explosives are not stored within 50 metres of any entrance to the mine.

Penalty: See regulation 17.1.

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Part 5 — Electricity in mines

5.1. Terms used in this Part

In this Part, unless the contrary intention appears —

cable means an electrical cable within the meaning of AS 3000;

electrical inspector means a special inspector designated as an electrical inspector;

electrical log book means the book referred to in regulation 5.13;

electrical supervisor, in relation to a mine, means a person appointed to be an electrical supervisor for that mine under regulation 5.10;

electrical work has the same meaning as in the *Electricity (Licensing) Regulations 1991*;

extra-low voltage means a voltage normally not exceeding —

(a) 32 volts alternating current; or

(b) 115 volts direct current;

hazardous area has the same meaning as in AS 3000;

high voltage means a voltage normally exceeding low voltage;

low voltage means a voltage normally exceeding extra-low voltage but not normally exceeding 1 000 volts alternating current or 1 500 volts direct current;

mobile apparatus means any apparatus or assembly of apparatus that is too heavy to be portable apparatus but is capable of being moved without discontinuing its electric power supply during its use;

moveable apparatus means any apparatus or assembly of apparatus that is too heavy to be portable apparatus but that is moved about between periods of use with its electric power supply disconnected;

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portable apparatus means any apparatus or assembly of apparatus that is intended to be normally held in the hand during use or which can be carried by a person;

reeling cable means a cable specifically designed to be frequently reeled on and off a cable drum or reeler on mobile apparatus;

trailing cable means a cable specifically designed to be moved in conjunction with mobile apparatus.

5.2. Notice of intention to install electricity supply

The manager of a mine must ensure that, before any electricity supply is introduced or re-introduced at a mine, notice of intention to introduce or re-introduce (as the case may be) that electricity supply is given to the electrical inspector.

Penalty: See regulation 17.1.

5.3. Installations and equipment to be in accordance with Australian Standard

Each responsible person at a mine must ensure that electrical installations and equipment are in accordance with AS 3000.

Penalty: See regulation 17.1.

5.4. Hazardous areas

Each responsible person at a mine must ensure that the design, construction and testing of any electrical equipment to be installed or used in a hazardous area has been certified by the manufacturer as being in accordance with —

(a) AS 2380; or

(b) an equivalent standard in another country that has been approved in writing by the State mining engineer for the purposes of this regulation.

Penalty: See regulation 17.1.

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5.5. Unauthorised access

Each responsible person at a mine must ensure that any room, enclosure or other place used principally for the installation of electrical equipment is designed to restrict access by unauthorised persons.

Penalty: See regulation 17.1.

5.6. Interference or damage

A person must not wilfully or negligently damage, interfere with, or, without the authority of the manager, render unserviceable any electric cable, electrical appliance or electrical equipment, or any part thereof, used in connection with the supply or use of electricity in a mine.

Penalty: See regulation 17.1.

5.7. Switching on or cutting off of electrical supply

A person must not switch on or cut off the electricity supply to or at a mine unless the person —

(a) has been authorised to do so by the manager of the mine; and

(b) has ensured that it is safe to do so.

Penalty: See regulation 17.1.

5.8. Working space

Each responsible person at a mine must ensure that adequate working space and adequate means of access to that working space are provided for persons to carry out work on electrical equipment at the mine.

Penalty: See regulation 17.1.

5.9. Electrical work to be carried out by licensed persons

Each responsible person at a mine must ensure that a person is not engaged or permitted to carry out electrical work at the mine

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unless the person is authorised to carry out that work by a licence or permit under the *Electricity (Licensing) Regulations 1991*.

Penalty: See regulation 17.1.

5.10. Electrical supervisors

(1) The principal employer at, and the manager of, a mine must ensure that sufficient electrical supervisors are appointed in writing by the principal employer or manager —

(a) to ensure the efficient supervision of the installation, maintenance and testing of electrical equipment; and

(b) to be responsible to the manager for the electrical equipment at the mine.

Penalty: See regulation 17.1.

(2) To be eligible for appointment as an electrical supervisor a person must —

(a) hold —

(i) electrical engineering qualifications acceptable for corporate membership of the Institution of Engineers Australia; or

(ii) an A grade electrical worker's licence endorsed "electrical fitter and electrical mechanic" issued under the *Electricity (Licensing) Regulations 1991*;

and

(b) have not less than 2 years relevant experience of electrical work in the mining industry, or in other heavy industry.

(3) The principal employer at, or the manager of, a mine may in writing revoke any appointment made under subregulation (1).

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(4) The manager of a mine must ensure that the following things are recorded in the record book for the mine —

(a) the appointment of any person as an electrical supervisor or the revocation of any such appointment; and

(b) the electrical supervisor's areas of responsibility.

Penalty: See regulation 17.1.

5.11. Duties of electrical supervisor

An electrical supervisor at a mine is responsible for —

(a) ensuring that all work carried out by persons in relation to electrical equipment and installations at the mine is adequately supervised;

(b) ensuring that electrical equipment and installations at the mine are installed and tested in accordance with these regulations, and maintained in a safe working condition;

(c) stopping the use of any electrical equipment or installation at the mine considered to be dangerous and reporting to the manager any situation which may affect the safe use of electricity or contravene these regulations;

(d) investigating, recording in the electrical log book and reporting to the manager details of —

(i) any electric shock or burn received by a person;

(ii) any fire suspected to be caused by electricity; and

(iii) any dangerous occurrence involving electricity which could have caused injury to a person;

and

(e) recording in the electrical log book any information required under this Part to be recorded in that book.

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5.12. Defects to be reported

An employee at a mine must immediately report to the manager or electrical supervisor any defect or damage to electrical equipment which may render the equipment unsafe for use.

Penalty: See regulation 17.1.

5.13. Records to be kept

(1) The manager of a mine must cause to be kept at the mine —

(a) an electrical log book in which the information required by this Part must be recorded;

(b) plans showing the location and details of all —

(i) high voltage cabling and equipment installed at the mine;

(ii) main switches provided at the mine; and

(iii) low voltage and high voltage cables installed in the ground at the mine;

and

(c) copies of any compliance and test certificates relating to equipment used or installed in hazardous areas.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the plans referred to in subregulation (1)(b) are immediately revised or replaced if necessary to reflect any changes to electrical equipment at the mine.

Penalty: See regulation 17.1.

5.14. Details of electrical installing work

The manager of a mine must ensure that details of all electrical installing work carried out at the mine is recorded in the electrical log book.

Penalty: See regulation 17.1.

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5.15. Fire extinguishers

The manager of, and each employer at, a mine must ensure that fire extinguishers of an appropriate type and size are kept ready for use —

(a) near main switchboards and substations; and

(b) at any other place that an inspector requires.

Penalty: See regulation 17.1.

5.16. Main switches

The manager of a mine must ensure that main switches are provided in readily accessible positions to control the supply of electricity to each of the following places at the mine —

(a) a quarry operation;

(b) a dredge;

(c) a construction site; and

(d) an underground mine.

Penalty: See regulation 17.1.

5.17. Notices to be displayed

The manager of a mine must ensure that a notice providing instructions for the resuscitation of persons suffering from electric shock is displayed near the entrance to each room, enclosure or other place at the mine that is used principally for the installation or maintenance of electrical equipment.

Penalty: See regulation 17.1.

5.18. High voltage installations

(1) The manager of a mine where high voltage equipment is installed must appoint in writing one or more competent persons (in this regulation referred to as ***high voltage operators***) to be responsible for high voltage installations at the mine.

Penalty: See regulation 17.1.

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(2) Each responsible person at a mine must ensure that —

(a) before any high voltage installation is installed at the mine, complete details of the proposed installation are provided to an electrical inspector;

(b) the isolation of any high voltage equipment at the mine for access, maintenance or repair purposes is only carried out by a high voltage operator;

(c) the appointment of any person as a high voltage operator at the mine is recorded in the record book;

(d) any safety equipment required to be provided under the *Electricity Regulations 1947* is provided in respect of any high voltage installation at the mine;

(e) any methods of work required to be complied with under the *Electricity Regulations 1947* are complied with in respect of any high voltage installation at the mine; and

(f) a person does not work, or operate any plant, in close proximity to exposed high voltage conductors or components unless authorised to do so by a permit issued by a high voltage operator.

Penalty: See regulation 17.1.

(3) A high voltage operator must not issue a permit referred to in subregulation (2)(f) to any person unless the high voltage operator has ensured that all relevant safety measures have been detailed on the permit and have been given effect to.

Penalty: See regulation 17.1.

5.19. Installation of cables

Each responsible person at a mine must ensure that cables are installed, located, supported and protected in a way that —

(a) minimizes the risk of damage to the cable;

(b) does not obstruct any accessway; and

(c) separates the cable from other services at the mine.

Penalty: See regulation 17.1.

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5.20. Cable coverings

(1) Each responsible person at a mine must ensure that any cables installed in a quarry operation, on a dredge or in an underground mine are protected by a metallic covering that complies with subregulation (2) and encloses all of the conductors of the cable (including the earthing conductor).

Penalty: See regulation 17.1.

(2) The metallic covering must be —

(a) electrically continuous;

(b) connected to earth;

(c) protected against corrosion; and

(d) securely attached to equipment at each end.

(3) Subregulation (1) does not apply to —

(a) a trailing cable, or a reeling cable, that complies with regulation 5.21;

(b) a cable or conductor energized at extra-low voltage;

(c) a flexible cord not exceeding 3 metres in length that is permanently connected to a portable apparatus;

(d) a cable used in a floating treatment plant which is part of a dredging operation; or

(e) a cable used for telephone or signalling purposes.

5.21. Trailing cables and reeling cables

Each responsible person at a mine must ensure that any trailing cable and reeling cable at the mine —

(a) conforms to AS 1802 if the mine is an underground coal mine or AS 2802 in any other case;

(b) incorporates a pilot core arranged to cut off the supply of electricity in the event of a break in the earthing circuit;

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(c) is installed, located and used in a way that minimizes the risk of damage to the cable and to any connecting or coupling device; and

(d) is repaired and tested in accordance with AS 1747.

Penalty: See regulation 17.1.

5.22. Signals and telephones

Each responsible person at a mine must ensure that any cable and apparatus used for telephone or signalling systems that is installed in quarry operations, on a dredge, or in an underground mine is of substantial and reliable construction.

Penalty: See regulation 17.1.

5.23. Earthing systems

(1) Each responsible person at a mine must ensure that —

(a) any earthing system installed in a quarry operation or an underground mine is connected to the earthing system established at the surface of the mine by means of a continuous earthing conductor;

(b) no earthing electrode is installed in a quarry operation or an underground mine;

(c) the neutral point of an alternating current electrical system is effectively earthed to the main earthing system;

(d) an earthing system that incorporates an impedance complies with the requirements for protection against indirect contact in AS 3007.2; and

(e) any single phase alternating current apparatus that is installed in a quarry operation or an underground mine is supplied from a double wound transformer having one pole of the secondary winding connected to earth.

Penalty: See regulation 17.1.

(2) The requirements in subregulation (1)(a), (b) and (e) do not apply to installations in any parts of quarry operations that are

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safe distances from places where electrical shot firing methods are employed.

5.24. Earth leakage protection

(1) Each responsible person at a mine must ensure that an earth leakage protection device that complies with subregulation (2) is provided for —

(a) all alternating current circuits installed in a quarry operation, on a part of a dredge other than a floating treatment plant, and in an underground mine; and

(b) all circuits providing alternating current supply to portable, mobile or moveable apparatus.

Penalty: See regulation 17.1.

(2) The earth leakage protection device must —

(a) be set to operate immediately so far as is practicable;

(b) incorporate a readily accessible means for testing the operation of the device; and

(c) operate at a leakage current not exceeding —

(i) 30 milliamperes and comply with AS 3190 (Type II) for circuits supplying portable apparatus;

(ii) 1 ampere for low voltage circuits; or

(iii) 2 amperes for high voltage circuits.

(3) This regulation does not apply to electrical systems operated at extra-low voltage.

5.25. Electric trolley wire systems

The manager of a mine must ensure that an electric trolley overhead wire system is not installed or used in a quarry or in an underground mine without the prior written approval of the district inspector.

Penalty: See regulation 17.1.

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5.26. Lightning protection

Each responsible person at a mine must ensure that adequate protection is provided for installations, buildings and structures at the mine that are at risk from the effects of atmospheric electricity.

Penalty: See regulation 17.1.

5.27. Maintenance of electrical equipment

(1) Each responsible person at a mine must ensure that a maintenance system that complies with subregulation (2) is in place at the mine to ensure that electrical equipment and installations are maintained in safe working order.

Penalty: See regulation 17.1.

(2) The maintenance system must include —

(a) periodic examination and testing of all equipment and cables at such intervals as may be necessary to ensure safety;

(b) quarterly examination, testing and tagging of any portable apparatus that is normally used in heavy operating environments such as workshops, mining areas, processing areas, construction sites and similar places;

(c) routine testing of the effectiveness of the earthing system, the continuity of earthing conductors and the adequacy of electrical insulation; and

(d) monthly testing of earth leakage protection devices and earth continuity protection devices required to be installed in a quarry operation, on a part of a dredge other than a floating treatment plant, or in an underground mine.

(3) A tag referred to in subregulation (2)(b) must identify the date of examination and testing and the person who carried out the examination and testing.

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(4) When any examination or test is carried out in accordance with this regulation, the electrical supervisor at a mine must ensure that either —

(a) the results are recorded in the electrical log book; or

(b) an entry is made in the electrical log book describing where the results can be found.

Penalty: See regulation 17.1.

5.28. Overhead powerlines

(1) Each responsible person at a mine must ensure that —

(a) overhead powerlines are located, installed and identified in a way that minimizes the risk of inadvertent contact by vehicles and machinery;

(b) any high voltage overhead powerlines are designed and constructed in accordance with code of practice C(b)1-1991 published by the Electricity Supply Association of Australia;

(c) minimum clearances for the movement of vehicles and machinery under and in the vicinity of overhead powerlines are in accordance with AS 3007.5; and

(d) the following activities are not carried out in any powerline corridor unless the minimum clearances required under paragraph (c) can be assured —

(i) drilling, excavating, loading, hauling or dumping;

(ii) the construction, fabrication, maintenance or storage of buildings, structures, machinery and equipment;

(iii) operation of vehicles or machinery with elevating parts that do not afford the required clearance when fully raised.

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(2) In subregulation (1) —

powerline corridor means —

(a) the area under any overhead powerline that has not been properly isolated; and

(b) the area of 10 metres on each side of the area referred to in paragraph (a).

5.29. Isolation of equipment

Each responsible person at a mine must ensure that —

(a) electrical equipment at the mine is provided with full current isolating devices capable of being secured in the isolating position;

(b) the means referred to in paragraph (a) are used whenever it is necessary to isolate any electrical equipment;

(c) switches provided for earthing have facilities that allow the switch to be locked in either the on or off positions; and

(d) if it is not practicable to avoid work in close proximity to exposed live parts of electrical equipment, effective measures are taken to safeguard persons against that hazard.

Penalty: See regulation 17.1.

5.30. Labelling of equipment

Each responsible person at a mine must ensure that if any distribution cable and switchgear are installed at a quarry, on a dredge or in an underground mine, the distribution cable and switchgear are labelled in a way that clearly identifies the source and destination of the electricity supply.

Penalty: See regulation 17.1.

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5.31. Cables installed in the ground

(1) Each responsible person at a mine must ensure that any low voltage or high voltage cables installed in the ground at the mine —

(a) are installed in accordance with AS 3000;

(b) are installed with orange cable marker tape and surface cable route indicators; and

(c) are protected by either —

(i) steel wire armouring, if buried directly in the ground; or

(ii) a substantial heavy duty wiring enclosure.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that excavation work is not commenced within the vicinity of buried cables unless a permit to do so has been issued by an authorised person.

Penalty: See regulation 17.1.

(3) An authorised person must not issue a permit referred to in subregulation (2) unless the person has —

(a) specifically identified the location of the excavation work;

(b) consulted the plans referred to in regulation 5.13(1)(b); and

(c) detailed on the permit to the persons carrying out the work any precautionary measures that need to be taken.

(4) In subregulations (2) and (3) —

authorised person means a person authorised by the manager of the mine for the purposes of this regulation.

5.32. Earth continuity protection and monitoring

(1) This regulation applies to the following equipment —

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(a) any mobile equipment operating from either trailing cables or reeling cables;

(b) any other equipment where the supply cable may be exposed to the risk of damage due to tension; and

(c) any equipment connected by restrained plugs and receptacles complying with AS 1299.

(2) Each responsible person at a mine must ensure that, in respect of any equipment to which this regulation applies, a system of monitoring of the earth continuity is provided that automatically disconnects the electricity supply to a cable in the event of a break in the earth conductor.

Penalty: See regulation 17.1.

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Part 6 — Safety in using certain types of plant in mines

Division 1 — Preliminary

6.1. Terms used in this Part

In this Part, unless the contrary intention appears —

alter, in relation to plant, means to change the design of, add to or take away from the plant where the change may affect safety or health, but does not include routine maintenance, repairs or replacement;

boiler means a vessel or an arrangement of vessels and their interconnecting parts in which steam or other vapour is generated or in which water or other liquid is heated at a pressure above that of the atmosphere by the application of fire, the products of combustion, electrical power or by similar high temperature means and —

(a) includes superheaters, reheaters, economisers, boiler piping, supports, mountings, valves, gauges, fittings, controls, the boiler setting and other equipment directly associated equipment with the boiler;

(b) does not include a fully flooded or pressurized system where water or other liquid is heated to a temperature lower than the normal atmospheric boiling temperature of the liquid;

boom-type elevating work platform means a telescoping device, hinged device, articulated device or any combination of these used to support a platform on which personnel, equipment and materials may be elevated;

bridge crane means a crane comprising a bridge beam mounted at each end to an end carriage and capable of travelling along elevated runways and having one or more hoisting mechanisms arranged to traverse the bridge;

building maintenance equipment means a suspended platform and associated equipment (including a building maintenance

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unit or a swing stage) which incorporates permanently installed overhead supports to provide access to the faces of a building for maintenance, but does not include a suspended scaffold;

building maintenance unit means a power operated suspended platform and associated equipment on a building specifically designed to provide permanent access to the faces of the building for maintenance or cleaning;

classified plant means any —

(a) boiler;

(b) crane;

(c) hoist;

(d) lift; or

(e) pressure vessel;

commissioning means performing the necessary adjustments, tests and inspections to ensure plant is in full working order to specified requirements (if any) before the plant is used and includes recommissioning;

crane means an appliance intended for raising or lowering a load and moving it horizontally and —

(a) includes the supporting structure of the crane and its foundations;

(b) does not include industrial lift trucks, earthmoving machinery, tractors, industrial robots, conveyors, building maintenance equipment, suspended scaffolds or lifts;

danger tag means an accident prevention tag as referred to in section 5 of AS 1319 that is in the form of a danger sign within the meaning of that Standard;

designer means a person who designs plant for use in a mine or intended for use in a mine or is responsible for the design of that plant;

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electrical installation means all the electrical wiring, accessories, fittings, consuming devices, control and protective gear and other equipment associate with the installation situated in or on mines;

electrical plant means plant which consumes, converts or generates electricity;

elevating work platform means a telescoping device, scissor device or articulating device or any combination of those devices used to position personnel, equipment and materials to and from workplaces located above the support surface;

erector means a person who erects, dismantles or alters the structure of plant in a mine;

fault means a break or defect which may cause plant to present an increased risk to safety and health and, in the case of a fault in design, means an aspect of the plant design which may cause the plant to be a risk to safety and health if manufactured in accordance with that plant's design specifications;

fired heater means a pressure vessel in which a liquid is heated below its atmospheric boiling temperature or a process in which fluid is heated in tubes above or below its atmospheric boiling temperature by the application of fire, the products of combustion or electric power or by similar high temperature means;

gantry crane means a crane comprising a bridge beam supported at each end by legs mounted on end carriages which is capable of travelling on supporting surfaces or deck levels (whether fixed or not) and which has a crab with one or more hoisting units arranged to travel across the bridge;

gas cylinder means a rigid pressure vessel designed for the storage and transport of gas under pressure and to which AS 2030 applies that does not have more than 3 000 litres water capacity and is without openings or integral attachments on the shell other than at the ends;

guard means a device that prevents or reduces access to a danger point;

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hoist means an appliance intended for raising or lowering a load or persons and —

(a) includes an elevating work platform, a mast-climbing work platform, a people and materials hoist, a scaffold hoist and a serial hoist;

(b) does not include a lift or building maintenance equipment;

importer means a person who imports plant for use in a mine or intended for use in a mine;

industrial lift truck means powered mobile plant designed to move goods, materials or equipment and which is equipped with an elevating load carriage and which usually has a load-holding attachment, but does not include a mobile crane or earthmoving machinery;

industrial robot means a multifunctional manipulator and its controllers, capable of handling materials, parts, tools or specialized devices, through variable programmed motions for the performance of a variety of tasks;

installer means a person who installs plant in a mine;

interlocked describes a connection between a guard or a machine element with the control system or the power system of the plant that has been made to allow access to the moving parts of plant at times when those parts are not moving, and to prevent moving parts from starting up or operating when access is available to those moving parts;

laser means any device than can produce or amplify electromagnetic radiation in the wave length range from 100 nanometres to one millimetre by the process of controlled stimulated emission but does not include electric light globes, fluorescent light tubes, electric radiators used for heating, radio or video communication equipment, domestic cooking appliances using high powered lamps or navigation and search lights;

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laser product means any product or assembly of components which constitutes, incorporates or is intended to incorporate a laser;

lift means any permanent plant (or plant that is intended to be permanent) which is in, or attached to, a building or structure and by means of which persons, goods or materials may be raised or lowered within or on a car cage, or platform and the movement of which is restricted by a guide or guides and includes an apparatus in the nature of a chair lift, escalator, moving walk or stairway lift and any supporting structure, machinery, equipment, gear, lift well shaft, enclosures and entrances;

manufacturer means a person who manufactures plant for use in a mine or intended for use in a mine;

mast climbing work platform means a hoist having a working platform and which is used for temporary purposes to raise personnel and materials to the working position by means of a drive system mounted on an extendable mast which may be tied to a building;

mobile crane means a crane capable of running over a supporting surface without the need for fixed runways (including railway tracks) and relying only on gravity for stability, rather than using —

(a) a vertical restraining connection between itself and the supporting surface; or

(b) a horizontal restraining connection (other than frictional forces at the supporting surface level),

as an aid to stability;

operator protective devices includes roll-over protective structures, falling object protective structures, operator restraining devices and seat belts;

out-of-service tag means an accident prevention tag as referred to in Part 5 of AS 1319 in the form of a warning sign, within the meaning of that Standard, bearing the words “out-of-service”;

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prefabricated scaffolding means an integrated system of prefabricated components manufactured in such a way that the geometry of assembled scaffolds is predetermined;

presence sensing safeguarding system includes —

(a) a sensing system employing one or more forms of radiation which can be either self-generated or generated by pressure;

(b) the interface between the final switching devices of the sensing system and the machine primary control elements; and

(c) the capacity of a machine to stop when the presence of a person or part of a person within the sensing field will cause the dangerous parts of a machine to be brought to a safe state;

pressure equipment means boilers, pressure vessels and pressure piping to which AS 1200 applies and having a hazard level of A, B, C or D according to the criteria set out in Part 1 of AS 3920;

pressure piping means an assembly of pipes, pipe fittings, valves and pipe accessories subject to internal or external pressure and used to contain or convey fluid or to transmit fluid pressure and —

(a) includes distribution headers, bolting, gaskets, pipe supports and pressure retaining accessories;

(b) does not include any boiler or pressure vessel or a pipeline to which any other written law applies;

pressure vessel means a vessel subject to internal or external pressure and —

(a) includes interconnected parts and components, valves, gauges and other fittings up to the first point of connection to connecting piping, fired heaters and gas cylinder;

(b) does not include any boiler or pressure piping;

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repair means to restore plant to an operational condition, but does not include maintenance, replacement or alteration;

scaffold means a temporary structure, specifically erected to support access or working platforms;

scaffolding equipment means any component, assembly or machine used or intended to be used in the construction of a scaffold;

tower crane means a boom or jib crane mounted on a tower structure;

vehicle hoist means a vehicle-hoisting device, the purpose of which is to provide accessibility for convenient under-chassis examination or service;

work box means a personnel carrying device designed to be suspended from a crane for the purpose of providing a working area for persons elevated by and working from the box.

Division 2 — General duties relating to items of plant

6.2. Plant to be maintained and operated in a safe manner

(1) The principal employer, and every other employer, at a mine must ensure that, in respect to any plant in the mine —

(a) a system is implemented to identify any hazards associated with the plant, and assess the risks of an employee being exposed to those hazards; and

(b) all practical measures are taken to reduce those risks,

in order to ensure that the duties of employers under Part 2 of the Act to provide and maintain a safe working environment in relation to plant is carried out successfully and effectively.

(2) As a minimum, consideration should be given to the following methods of risk reduction —

(a) ensuring that the plant is manufactured, inspected and, where required, tested according to the relevant Australian Standards and having regard to the designer's specifications;

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(b) ensuring that if after supply to a mine, any plant is found to have a fault that may affect safety or health, as far as is practicable, the person to whom the plant was supplied is advised of the fault and what is required to rectify it;

(c) ensuring that there is sufficient access and egress to the parts of the plant that require cleaning or maintenance, and to the operator's workstation for normal and emergency conditions;

(d) providing emergency lighting, safety doors and alarm systems, if access to the plant is required as part of its normal operation and persons may become entrapped and at risk of being exposed to hazards due to heat, cold or lack of oxygen;

(e) attempting to reduce, as far as is practicable, any risk of exposure to a hazard created by dangerous parts during operation, lubrication, adjustment or maintenance;

(f) ensuring that any guarding provided for plant and its operation comprises —

(i) a permanently fixed physical barrier — where no person requires complete or partial access to the dangerous area during normal operation, maintenance or cleaning;

(ii) an interlocked physical barrier — where a person may require complete or partial access to the dangerous area during normal operation, maintenance or cleaning; or

(iii) a physical barrier securely fixed in position by means of fasteners or other suitable devices, sufficient to ensure that the guard cannot be altered or removed without the aid of a tool or key (but only where a guard in accordance with subparagraphs (i) or (ii) is not practicable),

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but, if none of the guards described in subparagraphs (i), (ii), or (iii) are practicable, by providing a presence sensing safeguard system;

(g) ensuring that operational controls are —

(i) suitably identified on plant so as to indicate their nature and function;

(ii) located so as to be readily and conveniently operated by each person using the plant;

(iii) located or guarded to prevent unintentional activation; and

(iv) able to be locked into the "off" position to enable the disconnection of all motive power and forces;

(h) ensuring that —

(i) if practicable, the plant does not need to be operating while maintenance and cleaning is taking place; or

(ii) operational controls which permit controlled operation of the plant are provided, if it is not practical to eliminate the need for plant to be operating while maintenance and cleaning is taking place;

(i) ensuring that plant that is designed to be operated or attended by more than one person, and which has more than one control fitted, has multiple controls of the "stop and lock-off" type, so that the plant cannot be restarted after a stop control has been used unless each stop control has been reset; and

(j) ensuring that emergency stop devices —

(i) are prominent, clearly and durably marked, and immediately accessible to each operator of the plant;

(ii) have handles, bars or push buttons that are coloured red; and

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(iii) will not be affected by electrical or electronic circuit malfunction,

as may be appropriate to the particular case.

6.3. Designer to identify hazards associated with plant and to assess risks

A designer must —

(a) identify any hazard associated with plant, during the design process, if the plant is intended for use at a mine; and

(b) assess the risk of exposure of a person to a hazard, if any, identified under paragraph (a).

Penalty: See regulation 17.1.

6.4. Designer to reduce identified risk of exposure

(1) If a designer has identified a hazard under regulation 6.3, and has assessed any risk of exposure of a person to that hazard, the designer must consider whether the risk of exposure may be reduced by any of the means referred to in subregulation (2).

Penalty: See regulation 17.1.

(2) The means referred to in subregulation (1) include reducing the risk of exposure, in an appropriate case, by —

(a) ensuring the plant is designed according to the relevant Australian Standard;

(b) ensuring that any powered mobile plant is designed to reduce, as far as is practicable, the risk of overturning, or of a falling object coming into contact with the operator; and

(c) ensuring that where, despite reduction measures, there is a risk of exposure to a situation where —

(i) a powered mobile plant may overturn;

(ii) a falling object may come into contact with the operator of a powered mobile plant; or

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(iii) the operator of a powered mobile plant may be ejected from the seat,

the risk of exposure to a hazard in that type of situation is limited by the provision of an appropriate combination of operator protective devices.

Penalty: See regulation 17.1.

6.5. Designer to provide information

A designer must ensure that the manufacturer of plant, designed by that designer, is provided with sufficient information to allow the plant to be manufactured in accordance with the design specifications and, as far as practicable, provide information relating to —

(a) the purpose for which the plant is designed;

(b) testing or inspections to be carried out on the plant;

(c) installation, commissioning, operation, maintenance, cleaning, transport, storage and (where plant is capable of being dismantled) dismantling of the plant;

(d) systems of work necessary for the safe use of the plant;

(e) knowledge, training or skill necessary for persons undertaking inspection and testing of the plant; and

(f) emergency procedures relating to the plant.

Penalty: See regulation 17.1.

6.6. Manufacturer to identify hazards and to assess and reduce risks if designer is outside jurisdiction

If the designer of plant is not within the jurisdiction of the State, the manufacturer of the plant must carry out the designer's duties under regulations 6.3 and 6.4.

Penalty: See regulation 17.1.

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6.7. Hazard identification during manufacturing process

(1) If a hazard arising from the design of plant being manufactured is identified during the manufacturing process, the manufacturer must ensure that an assessment is made of that hazard, in accordance with subregulation (2).

Penalty: See regulation 17.1.

(2) An assessment under subregulation (1) must adequately address any hazard identified, and include one, or a combination of the following —

(a) a visual inspection of the plant and its associated environment;

(b) auditing;

(c) testing;

(d) a technical or scientific evaluation;

(e) an analysis of injury or near-miss data;

(f) discussions with designers, suppliers, importers, employers, employees or any other relevant party;

(g) a quantitative hazard analysis.

6.8. Manufacturer to reduce risk of exposure to identified hazards

If a manufacturer has assessed a hazard under regulation 6.7 and concluded that there may be the risk of exposure of a person to that hazard, the manufacturer must —

(a) consider whether the risk may be reduced by any of the means referred to in regulation 6.2; or

(b) arrange with the designer to alter the design to reduce the risk.

Penalty: See regulation 17.1.

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6.9. Importer to identify hazards and to assess and reduce risks if both designer and manufacturer are outside the jurisdiction

If the designer and the manufacturer of plant are both outside the jurisdiction of the State, the importer of the plant must carry out the designer's duties, and the manufacturer's duties under regulations 6.3, 6.4, 6.7 and 6.8.

Penalty: See regulation 17.1.

6.10. Importer to reduce risk of exposure to hazards

An importer must consider whether any risk of exposure to a hazard arising from plant being imported, and intended for use in a workplace may be reduced by any of the means referred to in regulation 6.2.

Penalty: See regulation 17.1.

6.11. Importer to provide information as to intended use and other safety information

(1) An importer of plant intended for use as scrap or spare parts for other plant must advise the purchaser or owner, either in writing or by marking the plant before its supply, of the intended purpose for that plant and that the plant in its current form is not to be placed in service but is to be used only as scrap or as spare parts.

Penalty: See regulation 17.1.

(2) An importer of used plant must provide the purchaser or owner with all available, relevant, safety and health information provided by the designer or manufacturer, and any additional available information required to enable the plant to be used safely.

Penalty: See regulation 17.1.

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6.12. Supplier's duties

(1) A supplier must consider whether any risk of exposure to a hazard arising from plant under his or her control or management, and intended for use in a workplace, may be reduced by any of the means in regulation 6.2.

Penalty: See regulation 17.1.

(2) A supplier must ensure, where plant is not under his or her control or management, that —

(a) any faults that may exist in that plant are identified; and

(b) the owner or purchaser is advised, in writing, before the plant is supplied, of the faults and, where appropriate, that the plant is not to be used until the faults are rectified.

Penalty: See regulation 17.1.

(3) A supplier of plant intended for use as scrap or spare parts for other plant must advise the purchaser or owner, either in writing or by marking the plant before its supply, of the intended purpose for that plant and that the plant in its current form is not to be placed in service but is to be used only as scrap or as spare parts.

Penalty: See regulation 17.1.

6.13. Supplier to provide safety information

(1) A supplier of plant must provide the purchaser or owner with any available information, data or certificate specified by the relevant Australian Standards.

Penalty: See regulation 17.1.

(2) A supplier of used plant must provide the purchaser or owner with —

(a) all available, relevant safety and health information provided by the designer or manufacturer, and any

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additional available information required to enable the plant to be used safely; and

(b) where available, any record kept by a previous owner of the plant in accordance with these regulations.

Penalty: See regulation 17.1.

6.14. Duties of person becoming supplier through hiring or leasing arrangement

A person who becomes a supplier as a result of hiring or leasing plant to a mine must —

(a) ensure that the plant is inspected between hirings or leasings so as to reduce any risks of exposure to hazards arising from the plant;

(b) ensure that an assessment is carried out to determine the need for testing plant, to check whether new or increased hazards to safety and health have developed, and determine the frequency of such testing; and

(c) ensure that any testing determined to be necessary under paragraph (b) is carried out and recorded, and that the records are maintained, for the operating life of the plant.

Penalty: See regulation 17.1.

[Regulation 6.14 amended in Gazette 28 Feb 2003 p. 668.]

6.15. Installer or erector to identify hazards associated with plant and to assess risks

(1) An installer or erector must —

(a) identify any hazard associated with the installation or erection of plant both before and during the installation or erection of that plant at a mine; and

(b) assess the risk of exposure of a person to a hazard, if any, identified under paragraph (a).

Penalty: See regulation 17.1.

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(2) An assessment under subregulation (1) must adequately address any hazard identified, and include one, or a combination of the following —

(a) a visual inspection of the plant and its associated environment;

(b) auditing;

(c) testing;

(d) a technical or scientific evaluation;

(e) an analysis of injury or near-miss data;

(f) discussions with designers, manufacturers, suppliers, importers, employers, employees or any other relevant party;

(g) a quantitative hazard analysis.

(3) An assessment undertaken under subregulation (1) may be carried out either on individual items of plant or, where multiple items of plant of the same design are installed and are intended for use under conditions that are the same for all practical purposes, the assessment may be carried out on a representative sample, but if the risk associated with the plant may vary from operator to operator, a separate assessment of the risk to each operator of the particular plant is to be carried out on each item of plant.

6.16. Installer or erector to reduce risks identified

(1) Where an assessment under regulation 6.15 identifies a risk of exposure of a person to a hazard arising from the installation or erection of plant, the installer or erector must consider whether any risk of exposure to a hazard arising from plant, intended for use in a mine, may be reduced by any of the means in regulation 6.2 and subregulation (2).

Penalty: See regulation 17.1.

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(2) Without limiting subregulation (1), an installer or erector of plant must ensure that all electrical installations associated with plant to which AS 3000 applies comply with AS 3000.

Penalty: See regulation 17.1.

6.17. Employer to identify hazards associated with plant and to assess risks

(1) An employer must identify all reasonably foreseeable hazards associated with plant —

(a) both before and during the introduction of plant at a mine;

(b) both before and during —

(i) any alteration to the plant;

(ii) any change in the way the plant is used;

(iii) any change in a system of work associated with the plant,

(including, where appropriate, a change in the location of the plant), which is likely to involve a risk of a person being exposed to a hazard;

(c) that may become apparent as a result of new or further safety or health information relating to the plant or its associated systems of work becoming available to the employer; and

(d) assess the risk of exposure of a person to each hazard, if any, identified.

Penalty: See regulation 17.1.

(2) An assessment under subregulation (1)(d) must adequately address any hazard identified, and include one, or a combination of the following —

(a) a visual inspection of the plant and its associated environment;

(b) auditing;

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(c) testing;

(d) a technical or scientific evaluation;

(e) an analysis of injury or near-miss data;

(f) discussions with designers, manufacturers, suppliers, importers, employers, employees or any other relevant party;

(g) a quantitative hazard analysis.

(3) An assessment undertaken under subregulation (1)(d) may be carried out either on individual items of plant or, where multiple items of plant of the same design are installed and are intended for use under conditions that are the same for all practical purposes, the assessment may be carried out on a representative sample, but if the risk associated with the plant may vary from operator to operator, a separate assessment of the risk to each operator of the particular plant is to be carried out on each item of plant.

6.18. Employer to reduce risks identified

(1) Where an assessment under regulation 6.17 identifies a risk of exposure to a hazard identified as arising from plant, the employer must consider whether any risk of exposure to that hazard may be reduced by any of the means in regulation 6.2 and subregulation (2).

Penalty: See regulation 17.1.

(2) Without limiting subregulation (1), an employer must ensure that —

(a) control measures are maintained and systems of work implemented and effectively supervised so as to reduce risks of exposure to hazards associated with plant;

(b) where personal protective equipment is required, it is provided and properly maintained; and

(c) where a hazardous situation is reported in accordance with section 11(1) of the Act, persons are not placed so

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as to risk being exposed to that situation until the hazardous situation is rectified.

Penalty: See regulation 17.1.

6.19. Person to provide design information to design contractor

An employer who engages a contractor to design plant for use in a mine must ensure that the person contracted to design the plant is provided with all available, relevant safety and health information about matters relating to the plant that may affect safety and health in the mine.

Penalty: See regulation 17.1.

6.20. Employer's duties in relation to installation, maintenance etc. of plant

An employer must ensure —

(a) that a competent person undertakes the installation, erection or commissioning of plant, and is provided with the information necessary to enable that plant to be installed, erected or commissioned so as to reduce, as far as is practicable, the risk of exposure of persons to any hazard arising as a result of the installation, erection or commissioning of the plant;

(b) that plant is installed or erected in a location that is suitable for the operation being undertaken, and for the type of plant;

(c) that there is sufficient space around the plant to allow the plant to be used and repaired so as to reduce, as far as is practicable, the risk of exposure of persons to any hazard arising as a result of the use or repair of the plant;

(d) during testing and startup, if the final means of safeguarding is not in place, that interim safeguards are used; and

(e) that the plant is not transferred into active service unless the adjustments, inspections and testing undertaken

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during the commissioning process indicate that the plant is in full working order and is appropriate for its intended purpose.

Penalty: See regulation 17.1.

6.21. Employer to prevent unsafe use of plant

An employer must ensure that —

(a) plant at the mine is used only for the purpose for which it was designed, unless the employer has determined, and a competent person has assessed, that a proposed change in use does not present an increased risk of exposure to any hazard;

(b) measures are provided to prevent (as far as practicable) unauthorised interference, alteration or use of plant which is capable of making the plant hazardous or a greater hazard;

(c) subject to paragraph (d), where access to plant is required for the purpose of maintenance, cleaning or repair, the plant is stopped and one or more of the following are used to reduce the risks of exposure to any hazards —

(i) lockout or isolation devices;

(ii) danger tags;

(iii) permit-to-work systems;

(iv) other control measures approved by the State mining engineer;

and

(d) where it is not practicable to carry out cleaning or maintenance with the plant stopped, operational controls that permit controlled movement of the plant are fitted.

Penalty: See regulation 17.1.

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6.22. Employer's duties when plant is damaged or repaired

An employer must ensure —

(a) when plant has been damaged to the extent that its function or condition is impaired in a manner that increases any hazard associated with that plant or increases the risk of exposure of a person to a hazard, that a competent person assesses the damage and advises the employer —

(i) of the nature of the damage; and

(ii) whether the plant can be repaired and, if so, what repairs are to be carried out to reduce risks of exposure to any hazard associated with the plant;

(b) that any repair, inspection and, where necessary, testing is carried out by a competent person; and

(c) that repairs to plant are carried out so that the plant does not exceed its original design limits.

Penalty: See regulation 17.1.

[Regulation 6.22 amended in Gazette 28 Feb 2003 p. 668.]

6.23. Employer's duties when design of plant is altered

Where the design of existing plant is altered, an employer must ensure that —

(a) the design of the alteration is assessed for hazards and the risks of exposure to those hazards as if it were an original design;

(b) that the plant is altered, inspected and tested by a competent person having regard to the design specifications for the altered design, before the plant is returned to service.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

6.24. Employer's duties when dismantling, storing or disposing of plant

(1) Where plant is dismantled, an employer must ensure that —

(a) dismantling is carried out by a competent person; and

(b) where available, any relevant information provided by the designer and manufacturer is made available to the competent person.

Penalty: See regulation 17.1.

(2) Where plant, including plant that is dismantled, is to be stored rather than disposed of, an employer must ensure that both the preparation for storage and the storage of the plant is carried out by a competent person.

Penalty: See regulation 17.1.

(3) Where plant to be disposed of contains materials constituting a hazard and presenting a risk of exposure of a person to that hazard, an employer must ensure that disposal is carried out by a competent person.

Penalty: See regulation 17.1.

6.25. Employer's duties to keep records

(1) An employer must ensure, in relation to —

(a) plant specified in subregulation (2); or

(b) plant identified by an assessment carried out under regulation 6.17,

that records are made of any relevant tests, maintenance inspection, commissioning or alteration of the plant, during the period that the plant is operable and under the employer's control, and kept for such period as is identified by an assessment carried out under regulation 6.17.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(2) The following plant is specified for the purposes of subregulation (1) —

(a) registered classified plant listed in regulation 6.34(5);

(b) any of the following items of plant —

(i) industrial lift trucks;

(ii) presence-sensing safeguarding systems;

(iii) vehicle hoists;

and

(c) plant requiring records as a result of an assessment carried out under regulation 6.17.

(3) The employer is to make the records made and kept under this regulation available to any employee or safety and health representative.

(4) An employer must ensure that records relating to safety and health are transferred on sale of the plant, unless the plant is sold as scrap or as spare parts for other plant.

Penalty: See regulation 17.1.

6.26. Plant under pressure

(1) An employer must ensure that —

(a) gas cylinders comply with AS 2030; and

(b) pressure equipment (other than gas cylinders) that is covered by AS 1200 and is in use is inspected, operated and maintained in accordance with AS 3788, AS 3873 or AS 2593, where applicable.

Penalty: See regulation 17.1.

(2) An employer who owns a gas cylinder must ensure that it is inspected and maintained in accordance with AS 2030.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

6.27. Plant with moving parts

(1) Where an assessment under this Part in relation to plant with moving parts identifies a hazard arising as a result of those moving parts and identifies a risk to a person of exposure to that hazard, an employer must ensure that —

(a) cleaning, maintenance and repair of plant with moving parts is not undertaken while that plant is operating, unless there is no practicable alternative approach; and

(b) where guarding of moving parts does not completely eliminate the risk of entanglement, persons do not operate or pass in close proximity to the plant, unless a system of work is introduced under section 9 of the Act to reduce that risk.

Penalty: See regulation 17.1.

(2) An employer must ensure that a procedure is developed, and maintenance persons are trained in the procedure, that ensures that —

(a) the de-energizing or locking-out of plant with moving parts is carried out by a person carrying out the proposed cleaning, maintenance or repair work on that plant, or by a person or persons authorised by the employer or manager for that purpose;

(b) once the plant is de-energized or locked-out the same person signs and fixes a danger tag to the plant;

(c) after the cleaning, maintenance or repair work on that plant has been completed, the same person removes the danger tag; and

(d) the re-energizing or unlocking of plant with moving parts is carried out by the same person after the cleaning, maintenance or repair work on that plant has been completed.

Penalty: See regulation 17.1.

[Regulation 6.27 amended in Gazette 19 Jan 1996 p. 235.]

Extract from www.slp.wa.gov.au, see that website for further information

6.28. Plant with hot or cold parts

(1) If plant has either hot or cold parts and persons are exposed to that hot or cold plant, the employer must ensure that the exposure is monitored, and is appropriately managed to reduce the risks of exposure to any associated hazard.

Penalty: See regulation 17.1.

(2) Where hot plant involves the transportation of molten metal, the employer must ensure that arrangements are made to prevent access to any part of the transport route during the transportation.

Penalty: See regulation 17.1.

(3) If plant has either hot or cold pipes or other parts, the employer must ensure that those parts are adequately guarded or insulated to reduce, so far as is practicable, the risks of exposure to any hazard relating to those parts.

Penalty: See regulation 17.1.

6.29. Electrical plant and plant exposed to electrical hazards

(1) If plant is electrical plant or the plant itself is exposed to electrical hazards, the employer must ensure that —

(a) plant is not used under conditions likely to give rise to risk of exposure of a person to an electrical hazard;

(b) appropriate permit-to-work systems are provided to avoid inadvertent energizing of plant that has been isolated, but not physically disconnected, from the electricity supply;

(c) only competent persons carry out electrical work on plant;

(d) if excavations are to be carried out, all relevant available information relating to the position of any underground cables is obtained and work is carried out in accordance with regulation 5.31; and

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(e) control options for plant operating near overhead electrical power lines comply with the requirements of regulation 5.28.

Penalty: See regulation 17.1.

(2) If damage to plant presents an electrical hazard, the employer must ensure that —

(a) the plant is disconnected from the electricity supply and is not used until the damaged part is repaired or replaced; and

(b) an authorised person fixes an "out-of-service" tag to the plant and all the common isolation points for that plant, and only removes the tags when there is no longer a risk of exposure to that hazard.

Penalty: See regulation 17.1.

6.30. Industrial robots etc.

(1) If plant at a mine is an industrial robot or other type of remotely or automatically energized equipment, and the plant could start without warning and give rise to a risk that a person could be exposed to a hazard, an employer must ensure that an employee is not permitted to work in the immediate vicinity of that item of plant, unless appropriate controls and systems of work are in place.

Penalty: See regulation 17.1.

(2) Where an industrial robot or other type of remotely or automatically energized equipment could start without warning and that could lead to a risk of exposure to a hazard, an employer must ensure that the immediate area around that plant becomes a restricted space and access to that area is controlled at all times by positive isolation, or by the provision of interlocked guards or presence-sensing devices and permit-to-work systems.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

6.31. Lasers

An employer must ensure that —

(a) a laser or laser product is not operated unless it has been classified and labelled in accordance with AS 2211;

(b) Class 3 B or Class 4 lasers or laser products (as defined in AS 2211) are not used for construction work; and

(c) the use of lasers and laser products in construction work is in accordance with AS 2397.

Penalty: See regulation 17.1.

Division 3 — Classified plant

6.32. Application

The requirements of this Division are in addition to the requirements of Division 2.

6.33. Design, construction and testing of plant

A person who designs, manufactures, imports or supplies any classified plant for use at a mine must ensure that the plant is designed, constructed and tested in accordance with —

(a) in the case of a boiler, AS 1228 or AS 1787;

(b) in the case of a crane or hoist, AS 1418;

(c) in the case of a pressure vessel, AS 1210; and

(d) in the case of a lift, AS 1735.

Penalty: See regulation 17.1.

6.34. Registration of plant

(1) Each responsible person at a mine must ensure that before any classified plant of a type set out in subregulation (5) is used at a mine, the plant has been registered with the State mining engineer.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(2) The principal employer at, or the manager of, a mine or a person authorised by either of those persons may apply to the State mining engineer to have classified plant registered.

(3) An application for registration cannot be accepted by the State mining engineer unless it includes the following —

(a) detailed drawings of the plant design;

(b) design calculations; and

(c) verification by a person other than the person who prepared the design that the design complies with the Australian Standard applicable under regulation 6.33.

(4) Where a person applies in accordance with this regulation to have any classified plant registered, the State mining engineer may either register, or refuse to register, the plant.

(5) Subregulations (1), (2), (3), and (4) apply to the following plant —

(a) pressure equipment, other than pressure piping and equipment categorized as hazard level A, B, C or D according to the criteria identified in AS 3920: Part 1;

(b) gas cylinders covered by AS 2030;

(c) powered tower cranes;

(d) lifts;

(e) building maintenance units;

(f) powered hoists, with a platform movement in excess of 2.4 metres and designed to lift people;

(g) work boxes suspended from cranes;

(h) prefabricated scaffolding;

(i) boom-type elevating work platforms;

(j) gantry cranes with a safe working load greater than 5 tonnes, or bridge cranes with a safe working load greater than 10 tonnes, and any gantry crane or bridge crane which is designed to handle molten metal or dangerous goods;

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(k) powered vehicle hoists;

(l) powered mast climbing work platforms;

(m) mobile cranes with a safe working load greater than 10 tonnes.

6.35. Repair or modification of plant

A person who modifies or repairs any registered classified plant at a mine must ensure that, before the plant is used, it conforms with the Australian Standard applicable under regulation 6.33, unless the prior written approval of the State mining engineer is obtained.

Penalty: See regulation 17.1.

6.36. Reporting of incidents affecting registered plant

(1) If an incident causes or is suspected of causing breakage, distortion, damage or failure of registered classified plant the person who was operating or in charge of the plant at the time of the incident must immediately give particulars in writing of the incident —

(a) if the person is an employee, to the person's employer; or

(b) in any other case, to the State mining engineer.

Penalty: See regulation 17.1.

(2) An employer who has been given particulars of the incident under subregulation (1)(a) must immediately give particulars in writing of the incident to the State mining engineer.

Penalty: See regulation 17.1.

(3) The principal employer at, or the manager of, a mine upon becoming aware that breakage, distortion, damage or failure of any registered classified plant at the mine has been, or is suspected of having been, caused must ensure that it is not used until it has been found to conform, or made to conform, with the

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design for the plant that was accepted by the State mining engineer.

Penalty: See regulation 17.1.

6.37. Requirements for operators and drivers

(1) Subject to subregulation (2), a person must not operate or drive —

(a) a winding engine, a stationary steam engine or an engine including a steam turbine, a hoist (including an elevated work platform but not including a hoist or elevating platform that is underground), a crane or a boiler unless —

(i) the person holds a certificate under these regulations or under the *Occupational Safety and Health Act 1984* authorising or entitling the person to operate, take charge of, or drive that machinery; or

(ii) in the case of a winding engine, the person holds a written exemption granted by the State mining engineer under subregulation (3);

(b) a hoist for hoisting purposes unless the person has been authorised in writing to do so by the manager; or

(c) any plant, other than that specified in paragraph (a) or (b) unless the person has been trained and found to be competent by a practical trial in the operation of that plant by the manager or some other suitable person appointed for that purpose by the manager.

Penalty: See regulation 17.1.

(2) If plant that would otherwise be required to be operated or driven by a person qualified under these regulations is undergoing repair or adjustment that plant may be operated or driven for that purpose by the person carrying out the repair or adjustment if the person has been trained, and is competent, to do so.

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(3) The State mining engineer may exempt a person from the requirements of subregulation (1)(a) if the State mining engineer is satisfied that in the circumstances it is impracticable to employ a person who holds a relevant certificate.

(4) A person must not use or operate any plant unless the person has been authorised to do so by the manager or the manager's representative.

Penalty: See regulation 17.1.

6.38. Plant load or capacity not to exceed manufacturer's specifications

(1) For the purposes of this regulation, the safe working load or safe working capacity of any classified plant is —

(a) the maximum load or capacity specified by the manufacturer of the plant; or

(b) in relation to any plant for which a different load or capacity has been approved by the State mining engineer, such load or capacity as has been approved.

(2) Each responsible person at a mine must ensure that any classified plant at the mine is not operated in such a way as to exceed the safe working load or safe working capacity of the plant.

Penalty: See regulation 17.1.

6.39. Prohibition on damage or removal of guards etc.

A person must not wilfully or negligently damage, or without proper authority, remove or render unserviceable, any protective fence, guard, structure, or other device, used or erected in connection with any plant at a mine.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

6.40. Plant to be used only if inspected

(1) Each responsible person at a mine must ensure that classified plant at the mine registered under regulation 6.34 is not used by any person if the period of time set out in column 3 of Schedule 3 opposite the relevant type of plant set out in column 2 of that Schedule has elapsed since it was last inspected and found suitable for use by an inspector or by another person approved in writing by the State mining engineer as a fit person to inspect the plant.

Penalty: See regulation 17.1.

(2) After a person referred to in subregulation (1) has inspected any registered classified plant, the person must record details of the inspection, including the date of the inspection and whether or not the plant was found suitable for use, in a classified plant record book kept for that purpose at the mine.

Penalty: See regulation 17.1.

(3) Within 14 days of any registered classified plant being installed at a mine or removed permanently from a mine, the manager of the mine must inform the State mining engineer in writing of —

(a) the type of machinery installed or removed; and

(b) the date of the installation or removal.

Penalty: See regulation 17.1.

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Part 7 — Occupational health

Division 1 — Noise control

7.1. Terms used in this Division

In this Division, unless the contrary intention appears —

action level means an action level referred to in regulation 7.3;

approved, in relation to noise regulation in this Division, means approved by the State mining engineer;

dB(A) means decibels of A-weighted sound pressure level;

dB(lin) means decibels of unweighted sound pressure level;

noise exposure means the amount of sound energy a person is exposed to during a representative working day, ascertained as AS 1269 provides for LAeq,8h to be ascertained;

noise level means the A-weighted sound pressure level in decibels as read from approved sound measurement equipment;

noise report means a noise report prepared in accordance with regulation 7.8;

peak noise level means the unweighted peak hold sound pressure level (or L peak) in dB(lin) as read from approved sound measurement equipment.

[Regulation 7.1 amended in Gazette 13 Dec 1996 p. 6932.]

7.2. All measurements to be as if ear unprotected

If a person is wearing a personal hearing protector, that person is to be regarded for the purposes of this Division as receiving the noise that would be received if that personal hearing protector were not worn.

7.3. Action level for noise

In this Division, the action level is —

(a) for peak noise level, 140 dB(lin); or

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(b) for noise exposure, 85 dB(A).

7.4. Noise to be reduced as far as practicable

Each responsible person at a mine must ensure that the noise received by each person at a workplace in the mine is reduced so far as is practicable.

Penalty: See regulation 17.1.

7.5. Reduction of noise

Each responsible person at a mine must reduce, so far as is practicable, the noise received by each person at a workplace at the mine who is receiving, or is likely to receive, noise above the action level by the following means —

(a) so far as is practicable, by engineering noise control (that is reducing noise level or peak noise level); and

(b) to the extent that it is not practicable to comply fully with paragraph (a) by engineering noise control, by reducing the length of time the person receives noise.

Penalty: See regulation 17.1.

7.6. Personal hearing protectors

Without limiting any duty to reduce noise placed on a responsible person under this Division, if any person is receiving, or is likely to receive, at the workplace noise above the action level each responsible person at the mine must ensure that —

(a) a personal hearing protector, selected and maintained as approved, is provided to each of those persons; and

(b) safety warning signs are displayed about the wearing of personal hearing protectors.

Penalty: See regulation 17.1.

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7.7. Duty to inform, instruct and train persons about hearing risks

If this Division places a duty on a responsible person at a mine to —

(a) provide a person with a personal hearing protector; or

(b) reduce the length of time any person receives noise,

then the responsible person must also provide the person with appropriate information, instruction and training about risks to hearing, steps to be taken to reduce these risks, and the use and maintenance of personal hearing protectors.

Penalty: See regulation 17.1.

7.8. Noise report to be prepared

The manager of, and each employer at, a mine must cause a noise report relating to a workplace at the mine to be prepared as soon as is practicable but not in any case later than within 12 months of the commencement of mining operations.

Penalty: See regulation 17.1.

7.9. Additional noise report to be prepared

If a noise report relating to a workplace has been prepared each responsible person at the mine must cause another noise report to be prepared relating to the current noise situation at that workplace as soon as is practicable if —

(a) there is, or is likely to have been, an increase of 5 dB or more in the peak noise level or noise exposure received by a person at the workplace who was already receiving noise above the action level;

(b) at any time after 5 years from the date of the last noise report relating to the workplace, any person at the workplace is receiving, or is likely to be receiving, noise above the action level; or

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(c) required to do so by an inspector.

Penalty: See regulation 17.1.

7.10. Noise reports

(1) Each responsible person at a mine must ensure that a noise report is prepared in the manner and form approved in relation to the workplace or type of workplace.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that the noise data on which a noise report is based, or of which a noise report is comprised, is collected by a person approved to collect that data (in this regulation called a ***noise officer***).

Penalty: See regulation 17.1.

(3) A noise officer must use only approved procedures and approved sound measurement equipment to collect data which is to be used for a noise report.

Penalty: See regulation 17.1.

7.11. Duties after noise report is prepared

(1) As soon as is practicable after a noise report relating to a workplace at a mine has been prepared, the manager of, and each employer at, the mine must ensure that —

(a) the contents of the noise report are communicated to all persons at the workplace and to any other persons that the manager considers to be at risk;

(b) the State mining engineer is notified in the approved manner that the noise report has been prepared; and

(c) if requested to do so, a copy of the noise report is made available to an inspector or any person employed at the mine who may be exposed to the noise in that workplace.

Penalty: See regulation 17.1.

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(2) Each responsible person at a mine must ensure that there is retained at the workplace if practicable, or if that is not practicable, at another readily accessible place —

(a) if only one noise report relating to the workplace has been prepared, that report; or

(b) if more than one noise report relating to the workplace has been prepared, the last 2 of those reports prepared.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that within 6 months after a noise report relating to a workplace at the mine is prepared, a written plan setting out ways of reducing noise at the workplace is prepared and implemented.

Penalty: See regulation 17.1.

Division 2 — Hygiene and sanitation

7.12. Sanitation facilities

Each responsible person at a mine must ensure that suitable sanitation and hygiene facilities are provided at the mine and that those facilities are properly maintained.

Penalty: See regulation 17.1.

7.13. Toilet facilities

Each responsible person at a mine must ensure that appropriate toilet facilities are provided within a reasonable distance from each workplace at the mine.

Penalty: See regulation 17.1.

7.14. Prevention of pollution of workings

(1) Each responsible person at a mine must ensure that any sewage and septic tank systems at the mine, and any waste disposal sites on the surface of the mine, are located, operated and maintained so as to prevent pollution of underground workings in the mine.

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Penalty: See regulation 17.1.

(2) Each responsible person at an underground mine must ensure that any sanitation and hygiene facilities in the mine are located, used and maintained so as to prevent pollution of any workings in the mine.

Penalty: See regulation 17.1.

(3) A person must not —

(a) intentionally or recklessly pollute the workings of any mine; or

(b) misuse or damage any sanitation or hygiene facilities at any mine.

Penalty: See regulation 17.1.

7.15. Waste timber and other materials not to accumulate underground

(1) The manager of an underground mine must ensure that waste timber and any other combustible or perishable material is not allowed to accumulate underground in the mine but is removed from workings at regular intervals.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that debris, refuse or organic material likely to be harmful to the safety and health of persons working underground, is not placed in stopes to be backfilled.

Penalty: See regulation 17.1.

[Regulation 7.15 amended in Gazette 19 Jan 1996 p. 237.]

7.16. Stagnant water not to accumulate underground

The manager of an underground mine must ensure that —

(a) stagnant water is not allowed to accumulate in the mine in any place where employees work or travel but is drained or pumped away from that place; and

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(b) if any stagnant water in the mine is drained or pumped away as provided in paragraph (a), adequate precautions are taken to prevent employees from being placed at risk from the release of noxious gases, or the depletion of oxygen in the atmosphere, caused by that drainage or pumping.

Penalty: See regulation 17.1.

7.17. Eating places

(1) The principal employer at, and the manager of, a mine must ensure that suitable places are provided where employees can eat their meals.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that eating places at the mine —

(a) are maintained in a clean and dry condition;

(b) are well ventilated; and

(c) have adequate seating, tables, hand washing facilities and waste disposal facilities.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that waste disposal facilities in underground eating places are emptied daily and the contents removed to the surface daily for disposal.

Penalty: See regulation 17.1.

7.18. Drinking water

(1) The principal employer at, and the manager of, a mine must ensure that potable water supplies are readily available to all employees at the mine.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that, at surface mining operations, each supply point for potable water (other than

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supply points in regular eating places and purpose built drinking fountains) is clearly marked with a sign.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that —

(a) employees are informed if water reticulated for general use at the mine is not suitable for drinking; and

(b) each supply point for potable water at the mine is clearly marked.

Penalty: See regulation 17.1.

7.19. Change rooms

(1) Each responsible person at an underground mine must ensure that —

(a) a change room that complies with this regulation is provided at the mine; and

(b) the change room is properly maintained in accordance with this regulation.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply if arrangements are in place for the transport of employees at the mine to suitable ablution facilities elsewhere.

(3) The change room must —

(a) include —

(i) separate facilities and change areas for clean and dirty clothing;

(ii) adequate facilities for drying wet clothing (if appropriate); and

(iii) facilities for cleaning off boots before entering the change room;

and

(b) be constructed and equipped to meet an adequate standard of hygiene.

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(4) The change room must be maintained to an adequate standard of hygiene and must be regularly cleaned out and all clothing and equipment in the change room must be periodically removed and the change room must then be thoroughly cleansed.

Division 3 — Hazardous substances

7.20. Terms used in this Division

In this Division, unless the contrary intention appears —

ADG Code means the *Australian Code for the Transport of Dangerous Goods by Road and Rail*, Seventh edition, 2007, published by the Commonwealth of Australia (ISBN 1 921168 57 9) including (for the avoidance of doubt) its appendices;

container, in relation to a hazardous substance, means anything in or by which the substance is or has been cased, covered, enclosed, contained or packed, whether wholly or partially, but does not include a tank as defined in the ADG Code;

enclosed system means any system of pipes, or storage or processing vessels, that is enclosed so that persons cannot readily see what substances are contained in the pipes or vessels;

label, in relation to a container, means a label placed on the container that identifies the substance in the container and provides basic information about the safe use and handling of the substance;

material safety data sheet or ***MSDS***, in relation to a hazardous substance, means a document that, in accordance with the National Code of Practice for the Preparation of Material Safety Data Sheets —

(a) describes the identity, chemical and physical properties of the substance;

(b) provides information on the health hazards associated with the use and handling of the substance; and

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(c) provides information on precautions for the safe use and handling of the substance;

National Code of Practice for the Preparation of Material Safety Data Sheets means the publication of that name as at the commencement day, issued by Worksafe Australia;

register means the register of hazardous substances referred to in regulation 7.25.

[Regulation 7.20 amended in Gazette 29 Feb 2008 p. 686.]

7.21. Material Safety Data Sheets

Each responsible person at a mine must ensure that so far as is practicable —

(a) a MSDS is available for each hazardous substance used or produced in a workplace at the mine; and

(b) the MSDS is readily accessible to all employees potentially at risk from the hazardous substance.

Penalty: See regulation 17.1.

7.22. Containers to be appropriate

Each responsible person at a mine must ensure that, so far as is practicable, any container at the mine used to hold a hazardous substance is manufactured from a suitable material, and has a suitable design, having regard to the physical and chemical properties of the substance.

Penalty: See regulation 17.1.

7.23. Disposal of containers

(1) Each responsible person at a mine must ensure that, so far as is practicable, a safe means of disposal is provided for hazardous substance containers that are no longer needed, or are emptied.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(2) A person at a mine who disposes of a container (or former container) of hazardous substance must ensure that the container is disposed of using the safe means of disposal provided.

Penalty: See regulation 17.1.

7.24. Labels

Each responsible person at a mine must ensure that, so far as is practicable —

(a) each hazardous substance container at the mine has an appropriate label on it; and

(b) a person does not, without reasonable excuse, remove, deface, modify or alter the label on such a container.

Penalty: See regulation 17.1.

7.25. Register of hazardous substances

(1) Each responsible person at a mine must ensure that a register is kept and maintained at the mine of hazardous substances used or produced at the mine.

Penalty: See regulation 17.1.

(2) The register referred to in subregulation (1) must set out —

(a) details of all hazardous substances to which an employee may potentially be at risk of being exposed at each workplace at the mine; and

(b) in respect of each hazardous substance —

(i) the MSDS for that substance; and

(ii) details of any assessment and report under regulation 7.27.

(3) The details referred to in subregulation (2)(a) must, so far as is practicable, include the duties at the workplace that may potentially lead to the exposure of an employee to the hazardous substance.

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(4) Each responsible person at a mine must ensure that the register is readily accessible to all employees at the mine.

Penalty: See regulation 17.1.

7.26. Enclosed systems

Each responsible person at a mine must ensure that if any hazardous substance is contained in an enclosed system at the mine, the hazardous substance is identified to persons who are potentially at risk of being exposed to that substance.

Penalty: See regulation 17.1.

7.27. Risk assessment

Each responsible person at a mine must ensure that —

(a) a suitable assessment is made of the consequences to the health of any person if exposed to hazardous substances at the mine; and

(b) if the assessment indicates a significant risk of exposure to a hazardous substance, a written report is prepared outlining means by which that risk may be reduced.

Penalty: See regulation 17.1.

7.28. Means of reducing risk of exposure to hazardous substances

(1) Each responsible person at a mine must, as far as practicable, reduce the risk of a person being exposed to a hazardous substance at the mine by means of preventing exposure to the substance.

(2) To the extent that it is not practicable to employ the means referred to in subregulation (1), a responsible person must reduce, so far as is practicable, the risk to a person of exposure to hazards by any, or a combination of, the following —

(a) limiting the opportunity for potential exposure of the person to a hazardous substance;

(b) using appropriate engineering and ventilation controls;

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(c) adopting safe work practices.

(3) To the extent that it is not practicable to employ the means referred to in subregulation (2), a responsible person must reduce the risk of exposure to a hazard to the person by requiring, in addition to the means referred to in subregulation (2) where practicable, the person to use personal protective clothing or equipment.

Penalty: See regulation 17.1.

[Regulation 7.28 amended in Gazette 28 Feb 2003 p. 668.]

7.29. Workplace atmospheric contaminant monitoring to be provided

If a report under regulation 7.27 indicates the need for atmospheric contaminant monitoring at a workplace at a mine, each responsible person at the mine must ensure that —

(a) samples of atmospheric contaminants at the workplace are taken in accordance with Part 9; and

(b) the results of the samples are recorded and reported in accordance with Part 9.

Penalty: See regulation 17.1.

7.30. Health surveillance

If a report under regulation 7.27 indicates the need for surveillance of the health of employees at a mine, each responsible person at the mine must ensure that health surveillance (including biological monitoring) is provided in accordance with Division 4 of Part 3.

Penalty: See regulation 17.1.

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Part 8 — Explosives

Division 1 — Preliminary

8.1. Terms used in this Part

In this Part, unless the contrary intention appears —

booster means a priming charge used in association with a detonator or other initiating system to ensure that efficient and stable detonation in a column of explosive is reached and maintained;

bulk AN-based explosive has the meaning given to that term by the *Dangerous Goods Safety (Explosives) Regulations 2007* regulation 3;

butt or ***socket*** means the remaining or enlarged portion of a drill hole in rock remaining after a charge of explosives has been fired in that hole;

charge means explosive placed in a drill hole or other position for the purpose of producing an explosion;

detonator means a device containing high explosive which upon ignition will explode itself and which is used to initiate the explosion of a charge (whether directly or through a primer);

initiating system means a combination of detonators, detonating cord, signal tube, safety fuse, igniter cord or other devices designed to initiate the detonation of a charge or combination of charges in blasting;

primer means a packaged explosive charge which is prepared and designed to be used in conjunction with a detonator or other initiating system to ensure efficient detonation of an explosive charge in blasting operations;

to charge means the operation of placing a charge.

[Regulation 8.1 amended in Gazette 29 Feb 2008 p. 687.]

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Division 2 — General

8.1A. Explosives, requirements in relation to

Each responsible person at a mine must ensure that the manufacture, storage, transport, supply, use and disposal of any explosive at the mine is in accordance with the *Dangerous Goods Safety Act 2004* and regulations made under it.

Penalty: See regulation 17.1.

[Regulation 8.1A inserted in Gazette 29 Feb 2008 p. 687.]

8.2. Division does not apply to underground coal mining

This Division does not apply to or in relation to underground coal mining operations.

*[**8.3, 8.4.** Deleted in Gazette 29 Feb 2008 p. 687.]*

8.5. Underground magazines

(1) The manager of a mine must ensure that any underground magazine at the mine —

(a) is located as far as practicable from any shaft or other mine access, winder, electrical sub-station, pump station, primary or circuit fan or other important installation, but is readily accessible to any means of bulk transport; and

(b) is located and constructed so as to minimize or mitigate the effect that fumes resulting from any accidental explosion or fire in the magazine may have on persons in workplaces likely to be affected; and

(c) is constructed only after a careful check has been made of any existing boreholes which may intersect the magazine and any such boreholes have been securely plugged with a sufficient column of cement grout; and

(d) is adequately ventilated; and

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(e) is located and constructed so that every precaution has been taken to reduce the risk of fire in the magazine and its general vicinity.

Penalty: See regulation 17.1.

[(2), (3) deleted]

[Regulation 8.5 amended in Gazette 29 Feb 2008 p. 687.]

*[**8.6.** Deleted in Gazette 29 Feb 2008 p. 687.]*

8.7. Lights

(1) A person must not introduce a naked light into any magazine.

Penalty: See regulation 17.1.

(2) The principal employer at a mine must ensure that a fixed lighting system is installed in any underground magazine at the mine if the manager of the mine requests that such a system be installed.

Penalty: See regulation 17.1.

(3) The manager of a mine must not make a request referred to in subregulation (2) unless in the manager's opinion the system is essential to the safe working of the mine.

(4) If a fixed lighting system is installed in any underground magazine at a mine, the principal employer at the mine must ensure that —

(a) the system is designed and installed to minimize any risk of initiation of explosives or detonators by heat, electrical malfunction, or accidental damage to the system;

(b) switches for the system are external to the magazine; and

(c) light fixtures and fittings comply with the requirements for dust excluding ignition-proof enclosures in AS 2236.

Penalty: See regulation 17.1.

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[Regulation 8.7 amended in Gazette 29 Feb 2008 p. 688.]

*[**8.8, 8.9.** Deleted in Gazette 29 Feb 2008 p. 688.]*

8.10. Faulty explosive in a magazine

The manager of a mine must ensure that old or deteriorated explosives are not stored in a magazine at the mine and, if found in a magazine, are removed from the magazine and destroyed.

Penalty: See regulation 17.1.

[Regulation 8.10 amended in Gazette 29 Feb 2008 p. 688.]

8.11. Removal on closure of mine

The manager of a mine must ensure that, if the mine or any part of the mine is closed, any explosive stored in the mine or part of the mine is removed from the mine or part of the mine and disposed of in accordance with the manufacturer's recommendations.

Penalty: See regulation 17.1.

[Regulation 8.11 amended in Gazette 29 Feb 2008 p. 688.]

*[**8.12.** Deleted in Gazette 29 Feb 2008 p. 688.]*

8.13. Smoking prohibited

(1) A person must not smoke or use any naked light at a mine while carrying, handling or using any explosive or initiating system or while being within 8 metres of any such thing.

Penalty: See regulation 17.1.

[(2) deleted]

[Regulation 8.13 amended in Gazette 29 Feb 2008 p. 688.]

8.14. Handling and transport

[(1) deleted]

(2) A person must not take —

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(a) into any underground workplace any explosive in excess of the quantity required for use during one shift in that workplace; or

(b) into any workplace in a quarry any explosive in excess of the quantity required for immediate use,

and any quantity in excess of that used must be accounted for and returned to the magazine.

Penalty: See regulation 17.1.

(3) A person who takes any explosive or blasting agent into any underground workplace for use in that workplace must ensure that the explosive is safely stored before it is used.

Penalty: See regulation 17.1.

[(4) deleted]

(5) A person at a mine must not place any detonator, or any fuse which has a detonator attached to it, in a container that contains any other explosive.

Penalty: See regulation 17.1.

(6) A person at a mine —

(a) must, so far as is practicable, ensure that a primer assembled with a detonator is not made up until the point of use in charging; and

(b) must not transport a primer assembled with a detonator with any other explosive.

Penalty: See regulation 17.1.

(7) Subregulation (6)(a) does not apply to the assembly and transport of a primer and a detonator before the point of use in charging if the assembly and transport has been approved in writing by the manager of the mine.

(8) Subregulation (6)(b) does not apply to the transport of pre-assembled priming charges supplied by the manufacturer

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that consist of a booster and fitted detonating cord only and do not contain a detonator.

[Regulation 8.14 amended in Gazette 29 Feb 2008 p. 688.]

*[**8.15.** Deleted in Gazette 29 Feb 2008 p. 688.]*

8.16. Storage of detonators

Each responsible person at a mine must ensure that —

(a) so far as is practicable, detonators are stored in a magazine that is separate from the magazine in which explosives are stored; and

(b) no detonator or detonating accessory of any kind is stored in an underground magazine underground unless it is contained and separated from any explosive in the magazine so that any explosion of the detonator will not detonate the explosive.

Penalty: See regulation 17.1.

[Regulation 8.16 amended in Gazette 29 Feb 2008 p. 688-9.]

8.17. Detonator capping station

(1) A person at a mine who caps any safety fuse with detonators must ensure that —

(a) the capping occurs above ground and does not occur in a magazine;

(b) fuses are not capped in any workplace where primers are being made up or charging is taking place;

(c) any capped fuses are prepared in daylight, or by electric light, in a location approved for that purpose by the manager of the mine;

(d) the fuse is cut into required lengths with a sharp instrument;

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(e) detonators are placed on the fuse and crimped by the use of an appliance of a type specifically designed for that purpose; and

(f) the doors of any place used for the capping are such that they open only outwards.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply if —

(a) an underground manager determines that the nature and circumstances of a particular job requires the capping of a small number of fuses for a limited application;

(b) the underground manager designates in writing the location and the procedure to be followed in carrying out that capping; and

(c) the person carries out the capping at the designated location and in accordance with the designated procedure.

*[**8.18.** Deleted in Gazette 29 Feb 2008 p. 689.]*

8.19. Safety fuse — burning rate

(1) The manager of a mine must ensure that for each type of fuse used at the mine —

(a) the burning rate of the fuse has been ascertained from its manufacturer or supplier;

(b) all necessary steps have been taken to make that burning rate known to persons using the fuse at the mine; and

(c) a notice is posted on a notice board in a conspicuous place specifying the burning rate of the fuse.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the burning rate of a fuse ascertained from a manufacturer or supplier under subregulation (1) is verified by —

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(a) having sufficient samples of the fuse taken from each case or package of the fuses brought on to the mine; and

(b) having those samples tested by burning them before any of the contents of the case or package are used for mining purposes.

Penalty: See regulation 17.1.

8.20. Safety fuse — length

The manager of a mine must ensure that the length of any safety fuse used for firing any charge at the mine —

(a) is not less than one metre; and

(b) is long enough so that the person firing the charge will have sufficient time after lighting the fuse to reach a place of safety without undue haste.

Penalty: See regulation 17.1.

8.21. Drilling precautions — underground

(1) A person must not carry out drilling in the floor, walls, face or back of any development or stope heading, or in any bench or shaft bottom, in any underground mine until the area to be drilled has been washed down and the butts washed and cleaned and examined for misfires, except that a floor, bench or shaft bottom may be blown clean with compressed air and water for examination.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to —

(a) drilling in an excavation produced by mechanical means (rather than by drilling and blasting);

(b) drilling of the back and shoulder holes from the muck pile in any development heading after blasting if —

(i) normal face preparation of the exposed face has been carried out; and

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(ii) no hole is drilled within one metre of the muck pile;

or

(c) the drilling of holes for ground support in the back and the sides of an excavation.

(3) A person in an underground mine must not drill a hole in any butt or within 15 centimetres of the edge of any butt.

Penalty: See regulation 17.1.

(4) For the purposes of subregulation (3), a butt includes the shattered area left in the face from a burn cut.

(5) A person must not carry out drilling in any face in an underground mine containing a charged hole or a misfire unless instructed by an authorised person to do so and, in the case of a misfire, after such interval of time after firing as is instructed by the authorised person.

Penalty: See regulation 17.1.

(6) In subregulation (5) —

authorised person means the underground manager of the mine or a representative of the underground manager.

8.22. Drilling precautions — surface mining operations

(1) A person must not carry out drilling in any face or bench in a quarry operation until it has been examined for misfires.

Penalty: See regulation 17.1.

(2) A person must not drill a drill hole in any face or bench in a quarry operation so that any portion of the hole is closer than 6 metres to a hole containing explosive except —

(a) when clearing a misfire after repriming and refiring in accordance with these regulations; or

(b) in accordance with the approval in writing of the quarry manager.

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Penalty: See regulation 17.1.

(3) The approval of the quarry manager referred to in subregulation (2)(b) may be subject to specified precautions being taken.

(4) If approval is given by the quarry manager to redrill a hole in a pattern with adjacent holes already charged, the approval must be subject to specified precautions including the protection of initiating systems at the collars of the charged holes.

[Regulation 8.22 amended in Gazette 29 Feb 2008 p. 689.]

8.23. Charging operations — underground

(1) This regulation only applies to charging operations in an underground mine.

(2) A person must not charge a hole unless it has been blown out or otherwise cleaned of cuttings and sludge.

Penalty: See regulation 17.1.

(3) A person must use tamping rods of either wood, or a suitable non-metallic material, when charging holes for blasting.

Penalty: See regulation 17.1.

(4) A person must not use metal ferrules, tips or connectors on tamping rods.

Penalty: See regulation 17.1.

(5) Each responsible person at an underground mine must ensure that an adequate supply of tamping rods of a type appropriate for the purposes of the mine are provided at the mine.

Penalty: See regulation 17.1.

(6) A person must not —

(a) charge any nitroglycerine based explosive into a hole except in the form of a cartridge; or

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(b) forcibly press any such cartridge into any hole of insufficient diameter.

Penalty: See regulation 17.1.

(7) A person must not charge more holes in any one working face than are intended to be fired in one blasting.

Penalty: See regulation 17.1.

(8) A person must treat any charge which has not fired or exploded in any face or heading which has been blasted, as a misfire.

Penalty: See regulation 17.1.

8.24. Charging operations — surface mining operations

(1) This regulation only applies to charging operations in surface mining operations.

(2) A person must not —

(a) charge any nitroglycerine based explosive into a hole except in the form of a cartridge; or

(b) forcibly press any such cartridge into any hole of insufficient diameter.

Penalty: See regulation 17.1.

(3) A person must not drop any explosive in cartridge form into any down hole but must place the explosive in the hole in accordance with the supplier's or manufacturer's recommendation.

Penalty: See regulation 17.1.

(4) A person must not charge more holes in any one designated blast than are intended to be fired in the one blasting.

Penalty: See regulation 17.1.

(5) A person must treat any charge in a designated blast which has not fired or exploded as a misfire.

Penalty: See regulation 17.1.

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(6) A person must not operate, drive or repair any rockdrill, shovel, machine or vehicle within a distance of 6 metres from any hole which is being, or has been, charged for blasting on the same bench.

Penalty: See regulation 17.1.

(7) Subregulation (6) does not apply to any —

(a) vehicle or machine used in the charging operation; or

(b) drill rig used to redrill holes if —

(i) the structure of the rig is in close proximity to the charged holes; and

(ii) any precautions specified by the quarry manager are observed.

8.25. Firing warnings — underground

(1) A person intending to fire a charge in an underground mine must —

(a) give a complete and definite warning to all persons in adjacent workings before the person fires; and

(b) ensure that —

(i) all means of entry to the place of firing are guarded against entry by any person; or

(ii) firing warning notices are erected across each place of entry.

Penalty: See regulation 17.1.

(2) The person referred to in subregulation (1) must ensure that any warning notices are removed when work at that place is resumed.

Penalty: See regulation 17.1.

(3) A person must not fire a charge unless all persons have been removed to the ventilation intake side of the place where firing is to take place and where the resultant fumes and dust will not affect them.

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Penalty: See regulation 17.1.

[Regulation 8.25 amended in Gazette 29 Feb 2008 p. 689.]

8.26. Firing warnings — surface mining operations

(1) A person intending to fire a charge in a surface mining operation must ensure that —

(a) proper warning has been given in all adjacent areas from which any person might approach and be at risk from the explosion;

(b) all persons who are in places where they might be injured by the blasting have been warned of the intended blasting;

(c) all persons referred to in paragraph (b) have taken adequate shelter or left the area; and

(d) all means of entry to the place of blasting are securely guarded against entry by any person or firing warning notices are erected if necessary to prevent entry.

Penalty: See regulation 17.1.

(2) The person referred to in subregulation (1) must ensure that any firing warning notices are removed when work at that place is resumed.

Penalty: See regulation 17.1.

(3) If blasting in a surface mining operation could constitute a public nuisance or danger, the principal employer at, and the manager of, the mine must ensure that an audible warning device is provided and installed at the mine.

Penalty: See regulation 17.1.

(4) If an audible warning device is installed under subregulation (3), the principal employer at, and the manager of, the mine must ensure that —

(a) at all entrances leading to the blasting area, sufficient and suitable notices are erected warning persons that the

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noise of the warning device is a signal that blasting is to take place; and

(b) any person engaged in blasting —

(i) before firing causes audible signals to be made of the kind designated as the firing warning described in the notice; and

(ii) continues those signals throughout the danger period.

Penalty: See regulation 17.1.

[Regulation 8.26 amended in Gazette 29 Feb 2008 p. 689.]

8.27. Firing times — underground

(1) This regulation only applies to the firing of a charge underground.

(2) Except as otherwise provided in this regulation, a person must not fire a charge except at the times designated by the underground manager.

Penalty: See regulation 17.1.

(3) The underground manager of a mine must ensure that the firing times designated for the purposes of subregulation (2) are —

(a) set to ensure that persons are not exposed to hazards in firing blasts; and

(b) posted in appropriate places, and are understood and enforced by persons at the mine.

Penalty: See regulation 17.1.

(4) For the purposes of removing obstructions in ore passes, chutes, mill holes or rock crushers, or making the working safe, or firing misfired holes in development faces but not in stoping faces, and with the consent in each case of either the underground manager, shift supervisor or other person having general charge of operations by authority of the underground

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manager, firing may be carried out at times other than those designated for the purposes of subregulation (2).

(5) In the case of development headings which are ventilated in such a way that blasting fumes are extracted so as not to affect any other parts of the mine, and if blasting operations will not create a hazard to persons elsewhere in the mine, firing may be carried out at times other than those designated for the purposes of subregulation (2) but in accordance with a procedure approved by the manager or underground manager.

[Regulation 8.27 amended in Gazette 29 Feb 2008 p. 689.]

8.28. Firing times — surface mining operations

(1) This regulation only applies to the firing of a charge in a surface mining operation.

(2) Except as otherwise provided in this regulation, the principal employer at, or the manager of, a mine must cause the times of blasting operations in each part of a surface mining operation to be so arranged that employees and the public are not exposed to any danger.

Penalty: See regulation 17.1.

(3) Except as provided in subregulation (4), a person must not fire a charge at night.

Penalty: See regulation 17.1.

(4) For the purposes of removing obstructions in crushers, or making workings safe, or for firing misfired holes, and with the consent in each case of the quarry manager or the representative of the quarry manager, firing may take place at night.

(5) If firing is likely to constitute a public nuisance in a built-up area, the manager of a mine must —

(a) prohibit firing at any times other than such as the manager determines; or

(b) impose other controls including prohibiting secondary blasting.

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Penalty: See regulation 17.1.

(6) A person must not fire a charge at a time other than that determined by the manager under subregulation (5)(a) or contrary to any control imposed by the manager under subregulation (5)(b).

Penalty: See regulation 17.1.

[Regulation 8.28 amended in Gazette 29 Feb 2008 p. 689.]

8.29. Special blasts underground

(1) If it is intended to fire any unusually large blast in an underground mine and, in the manager's opinion, there is a possibility of danger to persons or of damage to adjacent mines or property, the manager must —

(a) give not less than 48 hours' notice of the intention to fire such a blast to the senior inspector; and

(b) give not less than 48 hours' notice of the intention to fire such a blast to persons who may be endangered and to the manager of any mine in which damage could result.

Penalty: See regulation 17.1.

(2) Upon being notified under subregulation (1)(a), the senior inspector may by notice given to the manager —

(a) appoint a time for the blasting; and

(b) specify precautions to be taken in relation to the blasting.

(3) If a senior inspector appoints a time for any blast or specifies any precautions to be taken in relation to that blast, the manager of the mine must ensure that the blast does not occur except at the appointed time and that the precautions are taken.

Penalty: See regulation 17.1.

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8.30. Fly rock surface mining operations

(1) If debris from blasting in a surface mining operation could constitute a danger to any person or property, each responsible person at the mine must ensure that such precautions are taken as are necessary to prevent injury to persons and to minimize the risk of damage to property.

Penalty: See regulation 17.1.

(2) If debris from blasting in a surface mining operation could constitute a danger to persons or if fly rock could land on public roads or property other than that of the principal employer, the manager of the mine must ensure that blasting mats are used and secured in a manner which will contain the debris during the whole blasting operation.

Penalty: See regulation 17.1.

(3) If the nature or extent of any blasting at a mine is such that blasting mats may not be effective, the manager of the mine must ensure that the blast design (including charge distribution, stemming length and type and delay sequence) is such as to minimize the risk of fly rock.

Penalty: See regulation 17.1.

8.31. Firing with safety fuse

(1) A person may light a single fuse by means of a match but if a person is lighting more than one fuse the person must use a type of fuse lighter that has been supplied by an explosives manufacturer for that purpose.

Penalty: See regulation 17.1.

(2) A person must not light separately, by hand, more than 4 fuses in any one place.

Penalty: See regulation 17.1.

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(3) If a person is lighting more than 4 fuses, the person must use a multiple igniting cartridge, igniter cord, or some similar device in accordance with the manufacturer's or supplier's instructions.

Penalty: See regulation 17.1.

(4) A person must, both during lighting and when lighting is completed, take care to ensure that no portion of the burning fuse lighter falls into any part of the hole or upon any part of the fuse.

Penalty: See regulation 17.1.

(5) If safety fuses are to be used to fire shots in a shaft, winze or rise, the person firing the shots must ensure that —

(a) the fuses are not lit by hand;

(b) the fuses are fitted with igniter cord connectors and connected in the firing sequence with igniter cord; and

(c) the igniter cord in the shaft, winze or rise will be initiated by means of an electric initiator from a safe position clear of the collar of the shaft, winze or rise.

Penalty: See regulation 17.1.

8.32. Electrical firing

Each responsible person at a mine must ensure that efficient circuit testers, exploders, switches, fuses, electrical conductors and other necessary apparatus, suitable for the conditions under which they are to be used, are provided for electrical firing at the mine and are maintained in good working order.

Penalty: See regulation 17.1.

8.33. Testing electrical firing circuits

(1) A person must not use a meter or device for the purpose of testing the continuity or resistance of circuits intended for electrical firing unless the meter or device is designed for that purpose and is approved by the manager of the mine and is not damaged or modified.

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Penalty: See regulation 17.1.

(2) Except as provided in subregulation (3), if a circuit intended for electrical firing is to be tested for continuity or resistance, the person conducting the test must ensure that —

(a) the test is first done at a safe distance from the charged face; and

(b) if the initial test from a safe distance has indicated a fault in the circuit, any testing meter or device used at the charged face has a maximum current output of not more than 10 milliamps.

Penalty: See regulation 17.1.

(3) If the complexity of the circuits to be used for a mass blast is such that in the senior inspector's opinion frequent circuit testing is necessary, that testing may be carried out at a charged face at any time with a meter or device —

(a) which has been tested within the preceding 24 hours with a milliammeter which itself has, within the previous 12 months, been checked and calibrated to the satisfaction of and approved by the manager of the mine; and

(b) which has been shown to have a maximum current output of not more than 10 milliamps,

if each electric detonator has first been tested for continuity with the meter or device before being included in the circuit.

[Regulation 8.33 amended in Gazette 29 Feb 2008 p. 689-90.]

8.34. Electrical blasting accessories

(1) A person must not use a storage battery or dry cell for firing except when contained in an approved battery operated exploder.

Penalty: See regulation 17.1.

[(2) deleted]

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[Regulation 8.34 amended in Gazette 29 Feb 2008 p. 690.]

8.35. Electric detonators

(1) A person must not —

(a) take an electrical detonator into an underground mine unless the lead wires of each detonator have been short circuited; or

(b) open the short circuit referred to in paragraph (a) until charging operations have been completed and the detonator is required for connecting to the firing circuit.

Penalty: See regulation 17.1.

(2) A person who has possession at a mine of any electrical detonators must ensure that those detonators are kept at a safe distance from sources of electromagnetic radiation to prevent the possibility of induced ignition of the detonators by such sources.

Penalty: See regulation 17.1.

8.36. Electric firing circuits

(1) A person must not use a shot firing cable for any purpose other than shot firing.

Penalty: See regulation 17.1.

(2) A person who uses a shot firing cable at a mine must ensure that —

(a) the cable is adequately protected and insulated for the conditions under which blasting is to be carried out; and

(b) adequate precautions are taken to prevent the cable from coming into contact with any lighting or power cables.

Penalty: See regulation 17.1.

(3) A person who uses a shot firing cable at a mine must ensure that the cable is kept short circuited at each end during the period the face is being charged and remains short circuited at the power

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end while the leads from the detonators are being connected to each other or to the firing cables.

Penalty: See regulation 17.1.

(4) Except as provided in subregulation (7) or regulation 8.37, a person who uses a shot firing cable at a mine must ensure that the detonator leads at any face to be fired are connected to the firing line at a time as close to the time of firing as is practicable, consistent with the requirement for the firing crew to be able to return to the firing point without being put at risk from other firing in the vicinity.

Penalty: See regulation 17.1.

(5) Except as provided in subregulation (7) or regulation 8.37, a person who uses a shot firing cable at a mine must ensure that —

(a) the short circuit at the power end is not opened for connection to the source of power until all persons have been withdrawn from the face to a safe place for firing;

(b) as soon as the short circuit has been opened the shot firing cable is connected to the source of power and the blast fired forthwith, and the short circuit is then replaced.

Penalty: See regulation 17.1.

(6) Except as provided in subregulation (7) or regulation 8.37, the underground manager of a mine must ensure that a written procedure is developed that provides a safe system of connecting up and firing and that the procedure is clearly understood by all employees working underground and is followed by those employees.

Penalty: See regulation 17.1.

(7) In the case of rises (whether mechanized or conventional ladder access), the firing line should be left short circuited at the level below the rise, and connected to the level line immediately before firing.

Extract from www.slp.wa.gov.au, see that website for further information

8.37. Mains firing, connection of faces

If a mains firing system incorporating clearance of all personnel through a personal tag board checking system is in place, connection of detonators to the firing line at the face need not be made immediately before firing, but connection should be made no earlier before firing than is required by operating conditions.

8.38. Firing during electrical storms

(1) This regulation applies to and in relation to firing —

(a) in surface mining operations; and

(b) underground if the firing is controlled from the surface by means of a direct electrical firing cable.

(2) If, in the opinion of the manager of a mine, the proximity of an electrical storm is such as to constitute a danger to the process of charging and firing, the manager must ensure that work in connection with the charging and firing ceases, and that all employees are withdrawn from the area of that work.

Penalty: See regulation 17.1.

8.39. Mains firing

(1) A person must not use electricity from lighting or power cables for firing shots unless —

(a) the voltage and current used are adequate for the number of detonators and type of circuit, and the voltage used does not exceed 415 volts;

(b) the firing and isolating, short circuit and lock out system are designed and constructed to the recommendations of the manufacturer or supplier of the detonators;

(c) a cut-out relay is included in the firing circuit which limits current flow to a maximum of 25 milliseconds;

(d) the key to the firing box and isolating and short circuiting boxes is in the personal custody of a shotfirer authorised by the manager of the mine for each shift; and

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(e) a system is in place to ensure the clearance of personnel prior to firing from all workings of the mine in which blasts are fired from the mains system.

Penalty: See regulation 17.1.

(2) The authorised shotfirer must ensure —

(a) that the firing box is kept locked except at the time of firing and

(b) immediately after firing any charge, that the shot firing cables are disconnected from the source of power and that the box is locked.

Penalty: See regulation 17.1.

(3) A person must not remove the key to the door of the isolating switch box from the personal custody of the authorised shotfirer on duty or give the key to any other person.

Penalty: See regulation 17.1.

[Regulation 8.39 amended in Gazette 29 Feb 2008 p. 690.]

[8.40. *Deleted in Gazette 29 Feb 2008 p. 690.]*

8.41. Blasting agent — charging holes

(1) A person must load a hole charged with bulk AN-based explosive so as to ensure a continuous explosive line.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply if purpose designed deck charging is used.

(3) A person must not use a pneumatic loader to load bulk AN-based explosive unless the loader, charging hose and earthing arrangements are safe and efficient and in accordance with the manufacturer's and supplier's recommendations.

Penalty: See regulation 17.1.

(4) A person using a pneumatic loader to load bulk AN-based explosive must ensure that the explosive is loaded through a

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semi-conductive hose or tube having a resistance of not less than 15 thousand ohms per metre and not more than 2 megohms for its total length.

Penalty: See regulation 17.1.

(5) A person charging bulk AN-based explosive must ensure that he or she removes any gloves and is effectively earthed to drain off any static electrical charge before handling and connecting any electric detonators.

Penalty: See regulation 17.1.

(6) A person must not use water lines, compressed air lines, wire covered hoses, rail or permanent electrical earthing systems as a means of earthing.

Penalty: See regulation 17.1.

(7) A person must use protected type detonators when pneumatic loading and electric firing.

Penalty: See regulation 17.1.

[Regulation 8.41 amended in Gazette 29 Feb 2008 p. 690.]

8.42. Suspension of work following firing

After a charge has been fired in a workplace, a person must not recommence work in that place until it has been carefully inspected for misfires by the shotfirer or another competent person in accordance with this Division.

Penalty: See regulation 17.1.

[Regulation 8.42 amended in Gazette 29 Feb 2008 p. 690.]

8.43. Misfires

For the purposes of this Division, a misfire occurs, or should be suspected, if —

(a) when using safety fuse, the number of shots counted is less than the number of holes or groups of holes fired, or

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there is any other reason to suspect that any of the charges has failed to explode;

(b) any hole or portion of a hole has damaged safety fuse, detonating fuse, or detonating wires exposed; or

(c) there is any cut-off, butt, or remaining portion of a hole which is suspected to contain explosive and it has not been shown that it does not contain explosive.

[Regulation 8.43 amended in Gazette 29 Feb 2008 p. 690.]

8.44. Suspension of work — underground misfires

(1) When a misfire is suspected to have occurred in an underground mine the person who suspects or confirms the misfire must —

(a) report the misfire to the underground manager, foreman or supervisor; and

(b) if the misfire occurred at the end of the shift, also report it to the relieving person.

Penalty: See regulation 17.1.

(2) A person must not do any further drilling in a face until a misfire has been made safe or refired.

Penalty: See regulation 17.1.

8.45. Suspension of work — misfires in surface mining operations

If a misfire is suspected to have occurred in a surface mining operation a person must not do any work at the site at which the misfire occurred until the manager or quarry manager, or a competent person authorised by the manager or quarry manager, has inspected that site and taken such action as may be necessary to ensure that further work may be safely continued.

Penalty: See regulation 17.1.

8.46. Time interval and inspection

(1) A person must not approach a charge that has misfired —

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(a) if safety fuse was used, until half an hour has elapsed since the time of lighting the fuse; or

(b) if electrical firing was used, until the firing cables are disconnected from the source of electric power and short circuited and 5 minutes have elapsed.

Penalty: See regulation 17.1.

(2) After the period specified in subregulation (1), the shotfirer, supervisor, foreman or manager, whichever is applicable, must inspect, or delegate some other competent person to inspect, the bench or face and take such action as must be necessary to ensure that further work can be safely continued.

Penalty: See regulation 17.1.

(3) A record of the inspection and of the action taken under subregulation (2) must be recorded in the record book at the end of shift by the person making the inspection.

Penalty: See regulation 17.1.

8.47. Remedial action — refiring

(1) A person must not withdraw a charge of nitroglycerine based explosive which has misfired, but must reprime and fire the charge.

Penalty: See regulation 17.1.

(2) If a misfired charge consists of bulk AN-based explosive —

(a) the charge may be reprimed and fired; or

(b) washed out with water or a non-ferrous blowpipe and any residual primer recharged and fired.

Penalty: See regulation 17.1.

[Regulation 8.47 amended in Gazette 29 Feb 2008 p. 691.]

8.48. Misfires using safety fuse

(1) If a misfire containing blasting agent and safety fuse has been reprimed and fired (whether the charge explodes or does not

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explode), a person must not approach the face or bench containing the misfire so reprimed and fired until one hour has elapsed from the time of initiating the last charge.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply in a quarry if the shotfirer can confirm from a safe position that the hole which has been reprimed and fired has effectively broken out the ground.

8.49. Failed refiring — surface mining operations

If repriming and refiring has failed to explode all explosive in a misfired hole in a surface mining operation, the shotfirer must —

(a) clean off any rock around the misfire and determine the position of that hole;

(b) remove the remaining portion of the hole either by digging it out or by drilling and firing one or more holes adjacent as may be necessary to remove the misfire in accordance with procedures specified by the quarry manager; and

(c) determine the position of each additional hole.

Penalty: See regulation 17.1.

[Regulation 8.49 amended in Gazette 29 Feb 2008 p. 691.]

8.50. Burning without exploding

(1) If in any workplace a charge burns without exploding —

(a) a person must not approach the place until one hour has elapsed from the time when the attempt to fire the charge was made; and

(b) a person must not place another charge in any hole in which the charge has burned unless and until the hole has been left to cool or filled and cooled with water.

Penalty: See regulation 17.1.

(2) The hole, when cool, must be dealt with as a misfire.

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[Regulation 8.50 amended in Gazette 29 Feb 2008 p. 691.]

8.51. Recharging of holes

A person must not recharge a hole which has been fired unless —

(a) a period of one hour has elapsed from the time of firing; or

(b) the hole has been thoroughly cooled with water.

Penalty: See regulation 17.1.

8.52. Blasting under water

If it is necessary to carry out blasting underwater at a mine, the manager of the mine must ensure that —

(a) the explosives, initiating systems and procedures used are in accordance with the manufacturer's or supplier's recommendations; and

(b) persons who perform the work have the necessary experience and are competent to perform that work.

Penalty: See regulation 17.1.

8.53. Meaning of "relevant procedure" in r. 8.54 to 8.56

In regulations 8.54, 8.55 and 8.56 —

relevant procedure, in relation to the blasting referred to in that regulation, means a written procedure for the blasting —

(a) that has been developed in conjunction with the manufacturer or supplier of the explosives, or an explosives consultant or other expert authority; or

(b) that is set out in a blast plan that complies with the *Dangerous Goods Safety (Explosives) Regulations 2007* regulation 130.

[Regulation 8.53 inserted in Gazette 29 Feb 2008 p. 691.]

Extract from www.slp.wa.gov.au, see that website for further information

8.54. Blasting in hot material

(1) In this regulation —

hot material means material having a temperature exceeding 57 degrees Celsius.

(2) When blasting is to be undertaken in hot material, any person involved in that blasting must use explosives, adopt charging and firing practices, and take precautions in accordance with the relevant procedure.

Penalty: See regulation 17.1.

(3) The manager of a mine must notify the district inspector of any blasting that is to be undertaken in hot material at the mine.

Penalty: See regulation 17.1.

(4) The district inspector may specify additional precautions that must be taken when the blasting referred to in subregulation (3) is undertaken.

(5) A person involved in blasting in hot material at a mine must take any additional precautions specified by the district inspector under subregulation (4).

Penalty: See regulation 17.1.

8.55. Blasting in oxidising or reactive ground

(1) When blasting is to be undertaken in oxidising or reactive ground, any person involved in that blasting must use explosives, adopt charging and firing practices, and take precautions in accordance with the relevant procedure.

Penalty: See regulation 17.1.

(2) The manager of a mine must notify the district inspector of any blasting that is to be undertaken in oxidising or reactive ground at the mine.

Penalty: See regulation 17.1.

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(3) The district inspector may specify additional precautions that are to be taken when the blasting referred to in subregulation (2) is undertaken.

(4) A person involved in blasting in oxidising or reactive ground at a mine must take any additional precautions specified by the district inspector under subregulation (3).

Penalty: See regulation 17.1.

8.56. Demolition blasting

(1) In this regulation —

demolition blasting means the demolition of any structure, building, installation, foundation, machinery or equipment by the use of explosives on such a scale or in such a location that there may be a risk of injury to persons in the process of, or consequential to, that work.

(2) If demolition blasting is undertaken at a mine, each person involved in that blasting must use explosives, adopt charging and firing practices, and take precautions in accordance with the relevant procedure.

Penalty: See regulation 17.1.

(3) The manager of a mine must notify the district inspector of any demolition blasting that is to be undertaken at the mine.

Penalty: See regulation 17.1.

(4) Subregulation (3) does not apply to small scale or localized demolition blasting.

(5) The district inspector may specify additional precautions that are to be taken when the blasting referred to in subregulation (3) is undertaken.

(6) A person involved in demolition blasting at a mine must take any additional precautions specified by the district inspector under subregulation (5).

Penalty: See regulation 17.1.

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[Division 3 (r. 8.57-8.60) deleted in Gazette 29 Feb 2008 p. 691.]

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Part 9 — Ventilation and control of dust and atmospheric contaminants

9.1. Terms used in this Part

In this Part, unless the contrary intention appears —

asbestos removal work means any work involving the removal or sealing of installed thermal or acoustic insulation material which consists of, or contains, asbestos in a concentration of more than 1% by weight;

atmospheric contaminant means any potentially harmful substance in a workplace that is naturally absent from air, or is present in the workplace in an unnaturally high concentration, and to which employees may be exposed;

bulk depot means a depot within premises in which dangerous goods are stored in bulk;

contaminant asbestos means crocidolite, chrysotile, grunerite (amosite), or the asbestiform varieties of actinolite, tremolite or anthophyllite present in rock in or about the mine;

dust plan, in relation to an underground coal mine, means the plan prepared for that mine under regulation 9.35;

exposure standard for an atmospheric contaminant, means —

(a) the standard specified in Worksafe Australia's National Exposure Standards (NOHSC:1003); or

(b) in relation to an atmospheric contaminant for which a different standard is determined by the Minister under regulation 9.2, such standard as is determined;

inhalable dust has the same meaning as in AS 3640;

package depot means a depot in which packages are stored;

peak, in relation to an exposure standard, means the maximum airborne concentration of an atmospheric contaminant determined over the shortest analytically practicable period of time which does not exceed 15 minutes;

respirable dust has the same meaning as in AS 2985;

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short term exposure limit or ***STEL***, in relation to an exposure standard, means a concentration of atmospheric contaminant averaged over a period of 15 minutes;

TWA concentration means the time weighted average concentration of an atmospheric contaminant when calculated over a normal 8 hour working period during a 5 day working week;

ventilation log book means the book referred to in regulation 9.7;

ventilation officer, in relation to a mine, means a person appointed to be a ventilation officer for the mine under regulation 9.3.

[Regulation 9.1 amended in Gazette 4 Apr 2005 p. 1109.]

9.2. Determination of different exposure standard

The Minister may, on the advice of the Mining Industry Advisory Committee, determine in writing that an exposure standard other than that specified in Worksafe Australia's National Exposure Standards (NOHSC:1003) applies to an atmospheric contaminant.

[Regulation 9.2 amended in Gazette 19 Jan 1996 p. 237; 4 Apr 2005 p. 1109.]

9.3. Ventilation officer to be appointed

(1) The manager of a mine must ensure that a person is appointed to be a ventilation officer for the mine.

Penalty: See regulation 17.1.

(2) The manager of a mine may for the purposes of subregulation (1) appoint different persons to be ventilation officers for different parts of the mine.

(3) The manager of a mine must advise the district inspector in writing of the appointment of each ventilation officer.

Penalty: See regulation 17.1.

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(4) The district inspector may by written directive exempt any mine from the requirements of this regulation if, in the district inspector's opinion, the scale, scope and nature of mining operations at the mine do not warrant the appointment of a ventilation officer.

9.4. Qualifications of ventilation officer

(1) To be eligible for appointment as a ventilation officer for an underground mining operation, a person must hold —

(a) a diploma or degree in which mine ventilation was a substantial component of the curriculum; or

(b) a qualification considered by the State mining engineer to be adequate for the mine.

(2) To be eligible for appointment as a ventilation officer for a surface mining operation, or as a technician assisting a ventilation officer, a person must —

(a) be trained in the sampling and assessment of atmospheric contaminants; and

(b) demonstrate to the satisfaction of the manager or principal employer that the person is competent to perform the duties of that position.

9.5. Duties of ventilation officer — underground

A ventilation officer for an underground mining operation is responsible for —

(a) regularly inspecting and testing workplaces, travelways, and locations where persons may travel in the mine to determine whether —

(i) atmospheric contaminants in the mine are maintained at levels as low as can reasonably be achieved; and

(ii) the mine ventilation system is providing adequate ventilation flows through those areas;

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(b) at 3 monthly intervals and after any substantial change to the primary ventilation circuits and volume flows, determining and recording the quantity and quality of ventilating air in the mine using correct procedures and using instruments and equipment suited to that purpose;

(c) operating, calibrating and maintaining any metering or monitoring device used to determine the levels of emission of toxic or other atmospheric contaminants from any plant or equipment at the mine;

(d) ensuring that all atmospheric contaminant sampling requested by an inspector is carried out and is recorded and reported accurately, within the time required and in the manner provided in this Part;

(e) reading and recording the wet and dry bulb temperatures of all workplaces in the mine where it is suspected that temperatures or humid conditions may have potential for adverse effects on the safety and health of persons in those workplaces;

(f) correctly selecting and positioning auxiliary fans, regulators and other controls, if required to ensure that the required volumes of air are provided in workplaces at the mine to satisfy the requirements of this Part;

(g) having the pressure and volume readings of primary fans used in ventilating the mine taken and recorded at intervals not exceeding 3 months;

(h) having ventilation plans of the mine updated at intervals not exceeding 3 months, and ensuring that the current ventilation and survey information is immediately available on special plans maintained for the use of rescue teams in the event of an underground emergency;

(i) reporting promptly to the manager or the manager's representative —

(i) any defect or deficiency of which the ventilation officer is aware in the ventilation at the mine; and

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(ii) any atmospheric contaminant level in a workplace at the mine that exceeds the exposure standard;

(j) entering in the ventilation log book all records required under this Part to be entered in that book, and ensuring that each complete entry is dated and signed; and

(k) providing technical advice and guidance to any technician employed to assist the ventilation officer.

[Regulation 9.5 amended in Gazette 19 Jan 1996 p. 237.]

9.6. Duties of ventilation officer — surface mining operations

A ventilation officer for a surface mining operation is responsible for —

(a) regularly inspecting and testing workplaces, travelways, and locations where persons may travel at the mine to determine whether atmospheric contaminants at the mine are maintained at levels as low as can reasonably be achieved;

(b) ensuring that any sampling of atmospheric contaminants requested by an inspector is carried out and recorded and reported accurately, within the time required and in the manner provided in this Part;

(c) examining, and reporting on, the means and effectiveness of dust suppression or dust collection devices and systems at the mine;

(d) operating, calibrating and maintaining any metering or monitoring device used to determine the levels of emission of toxic or other atmospheric contaminants from any plant or equipment at the mine;

(e) reporting promptly to the manager or the manager's representative —

(i) any defect or deficiency of which the ventilation officer is aware in the ventilation system at the mine; and

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(ii) any atmospheric contaminant level in a workplace at the mine that exceeds the exposure standard;

and

(f) entering in the ventilation log book all records required under this Part to be entered in that book, and ensuring that each complete entry is dated and signed.

9.7. Ventilation log book

The manager of a mine must cause to be kept at the mine a ventilation log book in which the information required by this Part must be recorded.

Penalty: See regulation 17.1.

9.8. Ventilation system defects to be rectified

The manager of a mine must ensure that any defect or deficiency in the ventilation system in the mine reported by a ventilation officer to the manager or the manager's representative is rectified as soon as is practicable and the fact that it has been rectified is recorded in the ventilation log book.

Penalty: See regulation 17.1.

9.9. Abrasive blasting equipment

(1) Each responsible person at a mine must ensure that abrasive blasting equipment is not operated in or about a mine without appliances to control or suppress the emission of atmospheric contaminants.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that none of the following abrasive materials is used in abrasive blasting —

(a) any material containing more than 5% (by weight) crystalline silica;

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(b) any material containing more than 1% (by weight) of any one of the following substances —

(i) arsenic;

(ii) beryllium;

(iii) lead;

(iv) cadmium;

(v) nickel;

(vi) antimony;

(vii) cobalt;

(viii) chromium; or

(ix) tin;

(c) any material containing any radioactive substance as defined in the *Radiation Safety Act 1975*; or

(d) in the case of dry abrasive blasting —

(i) any recycled material that has not been treated to remove respirable dust; and

(ii) any other material likely to adversely affect the upper respiratory tract of a person.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that each person engaged in abrasive blasting at the mine is provided with —

(a) an airline respirator of the hood or helmet type of a standard not less than that specified in AS 1716, fitted with an inner bib and a shoulder cape, jacket or protective suit; and

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(b) skin and foot protection to the extent that such protection has not been provided under paragraph (a).

Penalty: See regulation 17.1.

9.10. Crushing and processing plant

The principal employer at, and the manager of, a mine must ensure that any crushing and processing plant at the mine, and any other plant or part of a plant at the mine where crushing, grinding, screening, conveying or any other processing operation takes place, is not operated without appliances to control, suppress or dilute the emission of atmospheric contaminants.

Penalty: See regulation 17.1.

9.11. Exposure standards

(1) Each responsible person at a mine must ensure that any atmospheric contaminants in workplaces at the mine are maintained at levels below the exposure standard for the atmospheric contaminant and as low as practicable.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that in any workplace at the mine, the TWA concentration —

(a) of respirable dust does not exceed 3.0 milligrams per cubic metre of air; and

(b) of inhalable dust does not exceed 10.0 milligrams per cubic metre of air.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that in any workplace at the mine the atmosphere contains not less than 18% of oxygen by volume.

Penalty: See regulation 17.1.

[Regulation 9.11 amended in Gazette 4 Apr 2005 p. 1110.]

Extract from www.slp.wa.gov.au, see that website for further information

9.12. Control of atmospheric contaminants

(1) The principal employer at, and the manager of, a mine must ensure that —

(a) so far as is practicable, the level of atmospheric contaminants at a workplace in the mine is controlled by —

(i) a suppression, ventilation or exhaust extraction system that effectively reduces, dilutes or extracts the contaminants; or

(ii) some other suitable means;

and

(b) if it is not practicable to comply with paragraph (a), suitable respiratory protective equipment of a standard not less than that specified in AS 1715 is provided to employees in the relevant workplace.

Penalty: See regulation 17.1.

(2) If a hazard exists in any workplace from the risk of exposure to toxic or asphyxiant substances in excess of the peak or STEL exposure standard, or explosive gases, the manager of the mine must ensure that —

(a) all persons are withdrawn from the workplace; and

(b) a person is not permitted to work in the workplace until a suitable written risk assessment has been made.

Penalty: See regulation 17.1.

(3) Subregulation (2) does not apply to a person who is permitted to work in the workplace to remedy the situation or to rescue persons if the person is wearing suitable respiratory protective equipment that conforms with AS 1715.

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(4) If the level of atmospheric contaminant in a workplace exceeds the peak or STEL exposure standard, the manager of the mine must —

(a) remedy the situation so far as is practicable using process, engineering and other atmospheric control measures;

(b) supply suitable respiratory equipment that conforms with AS 1715 whenever the peak or STEL exposure standard is likely to be exceeded; and

(c) inform relevant employees of the potential hazard to health and the measures to be taken to prevent or reduce the risk of exposure to the contaminant.

Penalty: See regulation 17.1.

9.13. Sampling of atmospheric contaminants

(1) A person who takes a sample of any atmospheric contaminant in a workplace must ensure that the sample —

(a) is a representative sample when sampling for an atmospheric contaminant with a TWA exposure standard; and

(b) is collected and analysed in accordance with —

(i) in the case of inhalable dust, AS 3640;

(ii) in the case of respirable dust, AS 2985;

(iii) in the case of organic vapours, AS 2986;

(iv) in the case of asbestos fibres, Worksafe Australia's "Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust 1988"; or

(v) in any other case, a method approved by the State mining engineer.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(2) A person must not tamper with, or suffer or permit another person to tamper with, a sample taken of any atmospheric contaminant in a workplace.

Penalty: See regulation 17.1.

[Regulation 9.13 amended in Gazette 4 Apr 2005 p. 1110.]

9.14. Air in underground workplaces

The manager of an underground mine must ensure that ventilating air provided for the mine is of sufficient volume, velocity and quality —

(a) to remove atmospheric contaminants resulting from blasting and other mining operations in the time allowed for that purpose; and

(b) to maintain a healthy atmosphere in workplaces during working hours by reducing the level of atmospheric contaminants in the workplace to levels as low as are practicable.

Penalty: See regulation 17.1.

9.15. Air temperature

(1) Each responsible person at a mine must cause all necessary measures and precautions to be taken to ensure that employees at the mine do not suffer harm to their health from the adverse effects of extremes of heat or cold.

Penalty: See regulation 17.1.

(2) If conditions in any workplace are, or are likely to be, hot and humid, each responsible person at the mine must ensure that —

(a) all employees are provided with training on measures to be taken to avoid any harmful effects from those conditions;

(b) appropriate workplace environmental controls (including ventilation) and monitoring are implemented; and

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(c) if appropriate, a program for monitoring the health of employees in the workplace is implemented.

Penalty: See regulation 17.1.

(3) In any workplace in an underground mine, and in any tunnel under a surge stockpile on the surface of a mine, the manager of the mine must ensure that —

(a) if the wet bulb temperature exceeds 25 degrees Celsius, an air velocity of not less than 0.5 metres per second is provided; and

(b) any appropriate action referred to in subregulation (2) is implemented.

Penalty: See regulation 17.1.

9.16. Air sources

(1) The manager of a mine must ensure that the supply of air for any ventilating equipment used underground in the mine is obtained from the purest source available.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that —

(a) recirculation of air within any secondary ventilation circuit is maintained at the absolute minimum level that is practicable; and

(b) contaminated return air from any secondary ventilation circuit is, if practicable, exhausted directly to the primary return air exhaust system or, if that is not practicable, contamination of the primary intake air flow to work places which are downstream of any secondary ventilation circuit is minimized by directing the return air from that secondary circuit by the most immediate route to the primary return air exhaust system.

Penalty: See regulation 17.1.

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(3) The manager of a mine must ensure that, in any workplace in an underground coal mine, each working panel is ventilated by a separate intake air stream.

Penalty: See regulation 17.1.

9.17. Suppression of dust — drilling operations

(1) The manager of an underground mine must ensure that wet drilling is used so far as is practicable in the mine.

Penalty: See regulation 17.1.

(2) If it is necessary for dry drilling to be carried out in a mine (whether underground or on the surface), each responsible person at the mine must ensure that the drilling machine used is fitted with an effective device that —

(a) collects and contains the dust produced by drilling; or

(b) discharges that dust through ducting to a position where it will not be breathed by any person or where it will be effectively suppressed or contained.

Penalty: See regulation 17.1.

9.18. Water used to suppress dust must not be polluted

Each responsible person at a mine must ensure that any water used at the mine for the purpose of suppressing dust has not been polluted by any noxious substance.

Penalty: See regulation 17.1.

9.19. Use of dust collection and dust suppression appliances

(1) If dust collection or dust suppression appliances are provided at a mine, each responsible person at the mine must ensure that the appliances are —

(a) fitted and operated in accordance with the manufacturer's or supplier's specifications; and

(b) maintained in efficient operating condition.

Penalty: See regulation 17.1.

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(2) An employee at a mine who is engaged in any operation in which dust is produced must use any dust collection or dust suppression appliances provided at the mine for collecting or suppressing the dust.

Penalty: See regulation 17.1.

9.20. Ventilating fans and equipment

(1) If any fan or other ventilation device at a mine breaks down, the manager of the mine must ensure that such action is immediately taken as is necessary to ensure the safety and health of all persons affected by the breakdown.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that, if diesel units are used at the mine, each fan and other ventilation device at the mine is selected, installed, operated and maintained so that —

(a) the air volume circulating in the mine is in accordance with this Part and Part 10, Division 4; and

(b) the fan or other ventilation device is sufficient to maintain workplace atmospheric conditions in accordance with this Part and Part 10, Division 4.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that any installations provided for the regulation and control of air flows in the mine are kept free from obstruction and are maintained in good order.

Penalty: See regulation 17.1.

(4) The manager of an underground mine must ensure that each air door in the mine —

(a) is, so far as is practicable, self-closing; and

(b) has a sign stating “Keep Open” or “Keep Shut” (as the case requires) attached to it.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(5) The manager of an underground mine must ensure that if access to the mine is required through a ventilation door or other door in the mine, a means is provided to allow persons to gain safe access through that door without undue exertion.

Penalty: See regulation 17.1.

[Regulation 9.20 amended in Gazette 19 Jan 1996 p. 237.]

9.21. Control of air distribution underground

(1) If brattices or regulators are used as ventilating equipment to control the volume of air circulating within a mine, a person must not adjust, close or remove the brattices or regulators unless the person has been instructed by the ventilation officer, or by the manager or the manager's representative, to do so.

Penalty: See regulation 17.1.

(2) A person who gives an instruction referred to in subregulation (1) must as soon as is practicable cause a record of the instruction to be entered in the ventilation log book.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that —

(a) airways in the mine are maintained free from obstruction except for control purposes;

(b) at each fan installation at the mine, the flow of air on either side of the fan is not obstructed or restricted to the extent that the required quantity of air from the fan cannot be delivered to the workplace; and

(c) each fan installed on the surface for the purpose of ventilating any underground workplace is not allowed to recirculate.

Penalty: See regulation 17.1.

9.22. Fumes from blasting

(1) If blasting is carried out in any development heading or any workplace in a mine which is not situated in a through airway,

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the manager of the mine must ensure that an adequate secondary ventilation system is provided and used to remove the blasting fumes from that heading or workplace.

Penalty: See regulation 17.1.

(2) A person who uses a compressed air pipe or hose to blow out blasting fumes from any development heading or stope heading in a mine must ensure that the discharge end of the pipe or hose is secured in such a manner as to blow the compressed air on the face of that heading.

Penalty: See regulation 17.1.

(3) A person must use an independent air pipe or hose to remove blasting fumes and dust from a shaft, winze or rise in a mine and must ensure that the final valve controlling the air is situated in an adequately ventilated area.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that procedures are established and followed at the mine to ensure that, following blasting activities in the mine, persons do not enter any area where —

(a) toxic gases arising from the blasting have not been effectively dispersed; or

(b) the oxygen level may be depleted to a hazardous extent.

Penalty: See regulation 17.1.

(5) A person must not enter any area in a mine after blasting has taken place in or near that area unless the person has checked that fumes resulting from the blast have been effectively dispersed and the atmosphere is safe to breathe.

Penalty: See regulation 17.1.

9.23. Wetting down after blasting

A person must not carry out any work in a place in an underground mine following a blasting operation in that place

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unless the back, face, walls and broken rock in the place have been thoroughly wetted down and made safe.

Penalty: See regulation 17.1.

9.24. Compressed air underground

Each responsible person at a mine must ensure that —

(a) air compressors at the mine draw their intake air from the purest source available;

(b) air compressors at the mine are maintained in good mechanical condition to prevent contamination of compressed air;

(c) compressed air mains at the mine are fitted with sufficient traps to remove any accumulated oil and water and any receivers and water traps are drained at regular intervals unless they are fitted with automatic draining systems;

(d) air compressors used underground at the mine are fitted with a heat sensor in the discharge port which will initiate an alarm and then shut down at 150 degrees Celsius; and

(e) diesel engined air compressors used underground at the mine are liquid cooled.

Penalty: See regulation 17.1.

9.25. Air conditioning and refrigeration

(1) Each responsible person at a mine must ensure that air conditioners for any workplace are fitted with appropriate filters, and that those filters are cleaned of dust or other contaminants at such intervals as are required by operating conditions.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that if cooling towers, evaporative condensers, warm water systems or other

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plant or devices that may promote the growth of micro-organisms are used, or proposed to be used, at the mine, precautions are taken in accordance with AS 3666 to prevent the growth of such organisms.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that if any refrigeration plant at the mine exceeds 100 kW(R), monitoring devices are installed to detect refrigerant leakage, and procedures to deal with any such leakage are developed and followed.

Penalty: See regulation 17.1.

9.26. Tailings filled stopes — atmospheric contaminants

The manager of a mine must ensure that, if tailings which may contain residual amounts of chemicals or reagents are used for filling stopes or voids underground at the mine, the following precautions are taken —

(a) regular testing of the underground atmosphere in the area of current fill placement is undertaken to check contaminant levels; and

(b) if contaminants are detected, measures are taken to prevent employees from being exposed to risk from the contaminants.

Penalty: See regulation 17.1.

9.27. Ventilation system may be cut off in disused areas

(1) The manager of an underground mine may shut off the ventilation system in any area of the mine if mining operations in the area have ceased (whether temporarily or permanently).

(2) This Part does not apply to an area in which the ventilation system has been shut off as provided in subregulation (1).

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(3) If the ventilation system is shut off in an area as provided in subregulation (1), the manager of the mine must ensure that —

(a) a record of that fact is made in the record book as soon as is practicable after the ventilation system is shut off;

(b) each entrance to the area is securely fenced or barricaded across the whole width of the entrance to prevent inadvertent access to the area;

(c) a notice forbidding entry to the area is displayed at each entrance to the area; and

(d) work is not resumed in the area until ventilation has been restored to the area and the adequacy of that ventilation has been checked by a competent person.

Penalty: See regulation 17.1.

(4) A person must not enter any area of an underground mine to which the ventilation system has been shut off as provided in this regulation unless the person has been authorised by the manager to do so.

Penalty: See regulation 17.1.

(5) The manager of a mine must not give any authorisation referred to in subregulation (4) unless the manager is satisfied that adequate precautions have been taken to ensure the safety of the person.

9.28. Ventilation plans for underground mines

(1) The manager of an underground mine must ensure that a plan of the ventilation system at the mine is kept at the mine that shows the direction, course and volume of air currents, and the position of all air doors, stoppings, fans, regulators and ventilating devices, in the mine.

Penalty: See regulation 17.1.

(2) The manager of a mine must provide a copy of the plan referred to in subregulation (1) to an inspector as soon as is practicable after being requested to do so by the inspector.

Extract from www.slp.wa.gov.au, see that website for further information

Penalty: See regulation 17.1.

9.29. Monitoring of toxic, asphyxiant and explosive gases

(1) Each responsible person at a mine must ensure that adequate precautions are taken to monitor, and control the risk from, the formation or emission of toxic, asphyxiant and explosive gases in the mine.

Penalty: See regulation 17.1.

(2) If gases such as hydrogen cyanide, hydrocarbons, carbon dioxide, radon, sulphur dioxide, hydrogen sulphide, carbon monoxide, or methane are likely, suspected or known to be generated or emitted in a mine, the manager of the mine must ensure that the district inspector and employees at the mine are notified of the precautions that have been taken to monitor, and control the risks from, those gases.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that, in any workplace in that mine, the atmosphere does not contain more than 12500 ppm, or 1.25% by volume, of methane.

Penalty: See regulation 17.1.

(4) If in any operation at a mine toxic, asphyxiant or explosive gas is emitted into the atmosphere in any travelway or other workplace, the manager of the mine must ensure that, where practicable, a monitoring device or monitoring devices are installed in the mine to give adequate warning of when the peak or STEL level of gas concentration is being approached.

(5) If any monitoring device is installed as provided in subregulation (4), the manager of the mine must ensure that adequate notices are erected in or about the mine informing persons of —

(a) the meaning of the warnings given by the device; and

(b) what action is required to be taken in the event of any such warning being given by the device.

Extract from www.slp.wa.gov.au, see that website for further information

Penalty: See regulation 17.1.

9.30. Protection of employees from chemical fumes

Each responsible person at a mine must ensure that all vessels used for chemical treatment of minerals or mineral substances at the mine are fitted with hoods or other appliances to prevent harmful fumes, mists or vapours from entering the air breathed by employees.

Penalty: See regulation 17.1.

9.31. Smoking prohibited in certain workplaces

A person must not smoke in any of the following places —

(a) an enclosed workplace;

(b) a workplace where —

(i) the air contains asbestos;

(ii) solvents are used; or

(iii) flammable vapours are present;

(c) a package depot or above ground bulk depot;

(d) a conveyance in a shaft;

(e) a refuge chamber during an emergency; or

(f) the underground workings of a coal mine.

Penalty: See regulation 17.1.

9.32. Removal of asbestos

Each responsible person at a mine must ensure that if any asbestos removal work is carried out at the mine —

(a) the work is carried out in accordance with the procedures specified in the Code of Practice for the Safe Removal of Asbestos (NOHSC:CP002-1988), published by Worksafe Australia; and

(b) the district inspector is notified in writing before the work commences.

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Penalty: See regulation 17.1.

9.32A. Asbestos not to be used

(1) Subject to subregulations (2) to (11) the principal employer and each employer at a mine must ensure that asbestos is not used at the mine.

(2) Subregulation (1) does not apply in relation to the use of asbestos if —

(a) the use that is made of the asbestos is the same as it was immediately before 13 February 2004; and

(b) the asbestos has not been moved since that time.

(3) Subregulation (1) does not apply in relation to the use of asbestos in a vehicle or other plant if —

(a) the use that is made of the asbestos in the vehicle or plant is the same as it was immediately before 13 February 2004; and

(b) the asbestos has not been moved from its location within the vehicle or plant since that time.

(4) Subregulation (1) does not apply in relation to the use of asbestos —

(a) for systematic investigations for the primary purpose of adding to general knowledge, including the carrying out of an experiment; or

(b) for the display in a museum or educational display of any thing manufactured in whole or in part from chrysotile (white asbestos), including work necessary to prepare and maintain the display.

(5) Subregulation (1) does not apply in relation to the storage of —

(a) a compressed asbestos fibre gasket consisting of or containing chrysotile for use in a plant in contact with saturated steam, superheated steam or dangerous goods;

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(b) a diaphragm consisting of or containing chrysotile for use in an electrolyte cell in an electrolysis plant for chlor-alkali manufacture;

(c) a split face seal of at least 150 mm in diameter, consisting of or containing a mixture of chrysotile and a phenol formaldehyde resin or a cresylic formaldehyde resin;

(d) a vane for a rotary vacuum pump or a rotary compressor consisting of or containing a mixture of chrysotile and a phenol formaldehyde resin or a cresylic formaldehyde resin; or

(e) a thing the subject of an exemption under Schedule 1B of the *Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994* of the Commonwealth,

or to work necessary to make ready one of those things for use after such storage.

(6) Subregulation (1) does not apply —

(a) before 1 January 2005, in relation to the use of a compressed asbestos fibre gasket consisting of or containing chrysotile that is used as a gasket in plant in a process where it comes into contact with saturated steam, superheated steam or dangerous goods; or

(b) on and from 1 January 2005, in relation to the use of the gasket if —

(i) the use of the gasket and the asbestos in the gasket are the same as they were immediately before 1 January 2005; and

(ii) the gasket has not been moved from its location within the plant since immediately before 1 January 2005.

(7) Subregulation (1) does not apply —

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(a) before 1 January 2007, in relation to the use of a compressed asbestos fibre gasket consisting of or containing chrysotile that is used as a gasket in a plant in liquid chlorine service; or

(b) on and from 1 January 2007, in relation to the use of the gasket if —

(i) the use of the gasket and the asbestos in the gasket are the same as they were immediately before 1 January 2007; and

(ii) the gasket has not been moved from its location within the plant since immediately before 1 January 2007.

(8) Subregulation (1) does not apply —

(a) before 1 January 2007, in relation to the use of a diaphragm consisting of or containing chrysotile that is used as a diaphragm in an electrolyte cell in an electrolysis plant for chlor-alkali manufacture that existed immediately before 13 February 2004; or

(b) on and from 1 January 2007, in relation to the use of the diaphragm if —

(i) the use of the diaphragm and the asbestos in the diaphragm are the same as they were immediately before 1 January 2007; and

(ii) the diaphragm has not been moved from its location within the plant since immediately before 1 January 2007.

(9) Subregulation (1) does not apply —

(a) before 1 January 2008, in relation to the use of a split face seal of at least 150 mm in diameter, consisting of or containing a mixture of chrysotile and a phenol formaldehyde resin or a cresylic formaldehyde resin, that is used as a seal to prevent leakage of water from a cooling water pump in a fossil fuel powered electricity generating station; or

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(b) on and from 1 January 2008, in relation to the use of the seal if —

(i) the use of the seal and the asbestos in the seal are the same as they were immediately before 1 January 2008; and

(ii) the seal has not been moved from its location within the pump since immediately before 1 January 2008.

(10) Subregulation (1) does not apply —

(a) before 1 January 2008, in relation to the use of a vane consisting of or containing a mixture of chrysotile and a phenol formaldehyde resin or a cresylic formaldehyde resin that is used as a vane for a rotary vacuum pump or a rotary compressor; or

(b) on and from 1 January 2008, in relation to the use of the vane if —

(i) the use of the vane and the asbestos in the vane are the same as they were immediately before 1 January 2008; and

(ii) the vane has not been moved from its location within the pump or compressor since immediately before 1 January 2008.

(11) Subregulation (1) does not apply —

(a) before 1 January 2008, in relation to the use in plant of a thing consisting of or containing chrysotile that is the subject of an exemption under Schedule 1B of the *Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994* of the Commonwealth; or

(b) on and from 1 January 2008, in relation to the use of the thing if —

(i) the use of the thing and the asbestos in the thing are the same as they were immediately before 1 January 2008; and

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(ii) the thing has not been moved from its location within the plant since immediately before 1 January 2008.

(12) In this regulation —

use includes cleaning, maintaining, processing, producing and treating, but does not include removal and disposal of asbestos from the mine.

[Regulation 9.32A inserted in Gazette 13 Feb 2004 p. 541-5; amended in Gazette 7 Jan 2005 p. 73; 29 Feb 2008 p. 691.]

9.33. Control of contaminant asbestos

(1) If any contaminant asbestos occurs at a mine, the manager of the mine must ensure that —

(a) such action is taken as is necessary to protect the health of employees at the mine from the effects of the asbestos; and

(b) the district inspector is notified in writing of that occurrence.

Penalty: See regulation 17.1.

(2) If in the course of any mining operation at a mine it is necessary to assess exposure to airborne asbestos fibres, the manager of the mine must ensure that the assessment is carried out using the method specified in the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust (NOHSC:GN 003-1988) published by Worksafe Australia.

Penalty: See regulation 17.1.

(3) For the purposes of subregulation (2), a countable fibre is taken to be defined in the document referred to in that subregulation as any object having a maximum width of 1 micrometre or less and a length exceeding 5 micrometres.

9.34. Electric vehicles underground

Each responsible person at a mine must ensure that a minimum air velocity of 0.25 metres per second is maintained in all

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underground areas in the mine where vehicles or locomotives powered by electricity are used.

Penalty: See regulation 17.1.

9.35. Preparation of dust plan for underground coal mine

(1) The manager of an underground coal mine must ensure that a plan that complies with subregulation (2) for the monitoring and control of coal dust in the mine is prepared —

(a) before mining operations are commenced at the mine; and

(b) before mining operations are recommenced at the mine after their suspension.

Penalty: See regulation 17.1.

(2) The plan must —

(a) consider means by which coal dust may be prevented, suppressed and collected;

(b) provide for the analysis of each coal seam being worked to determine its volatile matter;

(c) provide for the periodic application of incombustible dust (stone dust) to the roof, floor and sides of all ventilated roadways to reduce the volatile matter content to a level agreed with the State coal mining engineer;

(d) provide for the systematic taking of dust samples from all ventilated roadways at specified intervals and using a specified method of collection; and

(e) provide for the analysis by a specified method of any samples taken and for the volatile matter content determined after such an analysis to be reported to the inspector.

(3) The manager of an underground coal mine must ensure that as soon as is practicable after a plan is prepared under subregulation (1) a copy of the plan is submitted to the State coal mining engineer.

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Penalty: See regulation 17.1.

(4) If in the State coal mining engineer's opinion a plan is inadequate in any respect, the State coal mining engineer may direct that the plan be revised in a specified way and resubmitted to the State coal mining engineer.

(5) A direction may be given under subregulation (4) as often as the State coal mining engineer thinks necessary.

(6) The manager of an underground coal mine must ensure that a direction given under subregulation (4) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

9.36. Barriers in underground coal mines

(1) The State coal mining engineer may require stone dust barriers or water barriers of a specified standard to be installed in the coal production section of any underground coal mine in some or all of the roadways leading from the face.

(2) The manager of an underground coal mine must ensure that stone dust barriers or water barriers are installed in accordance with any requirement made by the State coal mining engineer under subregulation (1).

Penalty: See regulation 17.1.

9.37. Stone dust quality in underground coal mines

The principal employer at, and the manager of, an underground coal mine must ensure that any incombustible dust (stone dust) applied to underground roadways in the mine is of such fineness and mineral content as to comply with the best current industry standards.

Penalty: See regulation 17.1.

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Part 10 — Specific requirements for underground mines

Division 1 — Application

10.1. Application of Part

This Part applies only to and in relation to underground mining operations.

Division 2 — General

10.2. Meaning of "flame safety lamp plan"

In this Division —

flame safety lamp plan, in relation to an underground coal mine, means the plan prepared for that mine under regulation 10.7.

10.3. Underground workers must read and speak the English language

Each responsible person at an underground mine must ensure that a person does not work underground in the mine unless the person is able —

(a) to speak the English language readily and intelligibly;

(b) to read and comprehend safety signs and directions in the English language (whether written or printed); and

(c) to understand verbal instructions in the English language.

Penalty: See regulation 17.1.

10.4. Persons under 18 years of age not to be employed underground

(1) Except as provided in subregulation (2), each responsible person at an underground mine must ensure that a person under 18 years of age does not work underground in the mine.

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Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to or in relation to a cadet or apprentice who is working underground in order to gain required experience in the course of training for a profession or trade.

10.5. Persons working alone

(1) If an employee is working alone underground in an underground mine and is not in frequent communication with or within easy hearing of other employees, the manager of the mine must ensure that the employee is inspected, visited or communicated with, at least every 2 hours.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that if hazardous conditions exist underground at any workplace in the mine —

(a) no employee works alone in that workplace; and

(b) any employee working in a team in that workplace is at all times within sight of another employee.

Penalty: See regulation 17.1.

10.6. Lamps for persons underground

(1) The manager of an underground mine must ensure that any battery operated electric lamp for use underground in the mine contains at least 2 sources of light, in that it must be fitted with 2 independent globes or with one globe containing 2 independent lighting filaments.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that any persons travelling or working underground in the mine are provided with battery operated cap lamps that are of an appropriate standard and have a sufficient capacity, with an adequate reserve, for the duration of that shift.

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Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that —

(a) adequate procedures and facilities are established at the mine for the maintenance of cap lamps; and

(b) an adequate system is in place at the mine for the issue of cap lamps.

Penalty: See regulation 17.1.

(4) A person must not travel or work underground in an underground mine unless the person is wearing a cap lamp that is in good working condition.

Penalty: See regulation 17.1.

(5) Subregulation (4) does not apply while a person —

(a) is working in a fully illuminated workshop, control room or similar installation;

(b) is in an underground crib room;

(c) is operating a vehicle or any other mobile equipment; or

(d) is doing any other work which the manager has directed in writing does not require the wearing of a cap lamp.

10.7. Preparation of flame safety lamp plan for underground coal mines

(1) The manager of an underground coal mine must ensure that a plan for the safe use of flame safety lamps at the mine is prepared before mining operations commence at the mine.

Penalty: See regulation 17.1.

(2) The plan referred to in subregulation (1) must set out means by which hazards associated with flame safety lamps may be reduced including the following —

(a) procedures for the maintenance of flame safety lamps;

(b) provision for the issue of flame safety lamps with and without a re-lighting device; and

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(c) a standard procedure for the use of flame safety lamps.

(3) The manager of an underground coal mine must ensure that as soon as is practicable after a plan is prepared under subregulation (1), a copy of the plan is submitted to the State coal mining engineer.

Penalty: See regulation 17.1.

(4) If in the State coal mining engineer's opinion a plan is inadequate in any respect, the State coal mining engineer may direct that the plan be revised in a specified way and resubmitted to the State coal mining engineer.

(5) A direction may be given under subregulation (4) as often as the State coal mining engineer thinks necessary.

(6) The manager of an underground coal mine must ensure that a direction given under subregulation (4) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

10.8. Naked flames prohibited in underground coal mines

(1) A person must not cause or permit a naked flame to burn underground in an underground coal mine.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to a naked flame in a flame safety lamp.

10.9. Possession of matches and lighters prohibited in underground coal mines

A person must not in an underground coal mine have in the person's possession any match or cigarette lighter.

Penalty: See regulation 17.1.

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10.10. Means of entry and exit

(1) In each underground mine where a shaft has been sunk or an adit driven, the manager of the mine must ensure that provision is made for a means of escape (in this regulation called ***an escape route***) from the mine workings in addition to the hoisting shaft or the opening normally used as a means of entry or exit to the mine.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that an escape route at the mine —

(a) is maintained in a safe condition; and

(b) is adequately marked or signposted having regard to the potential for reduced visibility in an emergency.

Penalty: See regulation 17.1.

(3) During the time when a shaft or other single development opening is the only means of entry or exit into mine workings, the manager of the underground mine must ensure that work on an escape route is carried out diligently and concurrently with the general development of the mine, in order that the escape route will be completed before production from stoping operations commences.

Penalty: See regulation 17.1.

(4) If —

(a) an escape route in an underground mine involves travelling through an adjacent mine; and

(b) the adjacent mine is separately owned or managed,

the manager of the first-mentioned mine must ensure that appropriate written arrangements have been made with the manager of the adjacent mine for the use of the escape route.

Penalty: See regulation 17.1.

(5) The manager of the first-mentioned mine referred to in subregulation (4) must provide the senior inspector with a copy

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of any arrangement referred to in that subregulation as soon as is practicable after the arrangement is made.

Penalty: See regulation 17.1.

10.11. Stope to have 2 travelling ways

(1) Except in relation to initial stope preparation or leading stopes, the manager of an underground mine must ensure that, so far as is practicable, 2 separate travelling ways are provided into all working stopes underground.

Penalty: See regulation 17.1.

(2) If the manager of an underground mine considers that it is not practicable to provide a second exit, the manager must notify the district inspector accordingly.

Penalty: See regulation 17.1.

(3) The district inspector must notify the State mining engineer that the manager of the underground mine considers that it is not practicable to provide a second exit and the State mining engineer may direct the manager to take specified alternative precautions to minimize any risk to persons working in the stope of exposure to potential hazards and, if any such direction is given, must specify the reasons for those precautions.

(4) The manager of an underground mine must ensure that any direction given by the State mining engineer under subregulation (3) is complied with as soon as is practicable after it is given.

Penalty: See regulation 17.1.

10.12. Workers to be withdrawn if danger exists

(1) If, in the opinion of the person for the time being in charge of an underground mine, any part of the mine is dangerous from any cause the person must —

(a) have every person withdrawn immediately from that part; and

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(b) as soon as is practicable report the matter to the underground manager or manager, who must record the withdrawal and the reason for it in the record book.

Penalty: See regulation 17.1.

(2) A person to whom a matter is reported under subregulation (1)(b) must ensure that as soon as is practicable after the report is made —

(a) the part of the mine considered to be dangerous is inspected by the underground manager or by another competent person; and

(b) a true report on the condition of that part of the mine is made to the person by the underground manager or other person carrying out the inspection.

Penalty: See regulation 17.1.

(3) The underground manager of a mine must ensure that a person does not enter the part of the mine considered to be dangerous except, with the authorisation of the underground manager, for the purpose of rectifying the dangerous conditions.

Penalty: See regulation 17.1.

(4) The underground manager of a mine must ensure that if a person enters the part of the mine considered to be dangerous as provided in subregulation (3), the person —

(a) has taken adequate safety precautions; and

(b) is adequately controlled and supervised if necessary.

Penalty: See regulation 17.1.

(5) Subregulation (3) does not apply to an inspection referred to in subregulation (2)(a).

(6) The underground manager of an underground mine must ensure that a person does not enter the part of the mine considered to be dangerous for the purpose of resuming normal mining operations until the underground manager —

(a) is satisfied that the danger no longer exists; and

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(b) has recorded that opinion in the record book.

Penalty: See regulation 17.1.

10.13. Excavations to be kept safe

The underground manager of an underground mine must ensure that each underground excavation in the mine in which persons work or travel is scaled and maintained in a safe condition.

Penalty: See regulation 17.1.

10.14. Lights in working levels etc.

(1) The manager of an underground mine must ensure that suitable permanent or fixed installation lighting is provided at each of the following locations in the mine —

(a) main shaft plats, active shaft landings and loading stations;

(b) workshops and service areas where moving machinery or equipment could be a hazard;

(c) fixed machinery installations such as pump stations, crushing stations, primary or circuit fans, electrical switch rooms and sub-stations;

(d) accessways to main magazines;

(e) crib rooms and first aid stations;

(f) major tips and loading points for rail and trackless haulage;

(g) conveyor galleries and transfer stations;

(h) any installation, travelway or workplace where a cap lamp does not provide sufficient illumination; and

(i) any other facility where lack of illumination could create a hazard.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that any haulage area under repair and any temporary obstruction in the

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mine is delineated with flicker lights or with reflective barriers or signs placed to be visible at a safe stopping distance for any equipment being used.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that effective auxiliary lighting is provided in any place where persons have to assess ground conditions in the mine at a distance greater than the effective range of a cap lamp.

Penalty: See regulation 17.1.

(4) The manager of an underground mine must ensure that an adequate standard of lighting is provided for overhead drilling into high backs and walls in the mine.

Penalty: See regulation 17.1.

10.15. Communication — surface to underground

(1) The manager of an underground mine must ensure that, unless exempted in writing by the district inspector, a direct form of electronic communication is provided in the mine between the surface and convenient places underground in that mine.

Penalty: See regulation 17.1.

(2) The district inspector may direct that a telephone or other form of electronic communication must be installed in a particular place in an underground mine.

(3) The manager of an underground mine must ensure that a direction given under subregulation (2) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

10.16. Levels to have safe entry

The manager and underground manager of, and any other person for the time being in charge of, an underground mine must ensure that provision is made at all working levels for the

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safe entry and exit of persons entering or leaving a cage, skip, kibble or ladderway in the mine.

Penalty: See regulation 17.1.

10.17. Shaft entrances to be fenced

(1) The manager of an underground mine must ensure that the top and each level entrance to a shaft in the mine is kept securely fenced or protected by a gate.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not prevent the temporary removal of a fence or gate for the purposes of repairs or other operations if other proper precautions are taken to protect the entrance to the shaft.

10.18. Approaching dangerous water

(1) The underground manager of an underground mine must ensure that, in each development opening, stope or other working in the mine approaching a place likely to contain a dangerous accumulation of water, water cover holes are drilled in advance of the face in accordance with this regulation.

Penalty: See regulation 17.1.

(2) The underground manager must determine the number, pattern and length of the water cover holes based on the geological and stratigraphic information available to the underground manager.

(3) The system of water cover holes must include measures to control the pressures and volume of water likely to be intersected.

(4) If any development heading, stope or other working in an underground mine is being advanced towards any working or natural opening that contains or may contain a dangerous accumulation of water or sludge, the underground manager of the mine must ensure that —

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(a) work is stopped at a safe distance from that working or opening, having regard to the size and geometry of the respective openings and the ground conditions; and

(b) work does not recommence until the accumulated water or sludge has been pumped or drained away.

Penalty: See regulation 17.1.

10.19. Dams and plugs

(1) If any open dam is built in any workings in an underground mine or any plug is constructed to restrict or close off water flow in an underground mine, the manager of the mine must ensure that —

(a) competent engineering and geomechanical advice is obtained concerning the building or construction of the dam or plug; and

(b) the building or construction of the dam or plug is carried out to a standard that ensures adequate safety.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must —

(a) advise the district inspector in writing before any building or construction referred to in subregulation (1) commences at the mine; and

(b) provide written confirmation to the district inspector that the building or construction has been carried out in accordance with subregulation (1) as soon as is practicable after it has been completed.

Penalty: See regulation 17.1.

10.20. Winze sinking operations

(1) The manager of an underground mine must ensure that, so far as is practicable, each winze sunk at the mine is clear of a travelling way.

Penalty: See regulation 17.1.

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(2) The manager of an underground mine must ensure that the brace of each winze at the mine is constructed in a way that will prevent loose rock or material from accidentally falling down the winze.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that a signalling system is installed in a winze if depth, ambient noise or other factors in the winze make verbal communication difficult or ineffective.

Penalty: See regulation 17.1.

(4) The manager of an underground mine must ensure that if hoisting appliances are utilized in a winze at the mine, a knocker line or other contrivance approved by the district inspector is provided in the winze to enable signals to be communicated to the driver from each part of the winze.

Penalty: See regulation 17.1.

(5) The manager of an underground mine must ensure that a secure ladderway fastened to bearers at intervals of not greater than 5 metres is installed in a winze in the course of construction to ensure a safe means of exit from the bottom of the winze.

Penalty: See regulation 17.1.

(6) Notwithstanding subregulation (5) a chain ladder or temporary steel ladder may be used to provide access to the bottom of a winze in advance of the installed ladderway but only for a distance not greater than 2 bearer intervals.

(7) A person must not raise or lower any tool in a winze or other confined place in which persons are working in an underground mine, except in a bucket or other approved receptacle, and any projecting tool must be secured so as to prevent it falling out of the bucket or receptacle.

Penalty: See regulation 17.1.

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(8) The manager of an underground mine must ensure that, at the beginning of each shift and after each blast, the walls of a winze in the mine are inspected for loose rock and scaled if necessary.

Penalty: See regulation 17.1.

10.21. Rise operations

(1) The manager of an underground mine must ensure that, before any method of rising new to that mine involving drill and blast and entry to the rise is undertaken at the mine, the method to be used and the type of equipment to be used are approved by the senior inspector.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that, in each rise under construction at the mine where normal travel to and from the face is by mechanical means —

(a) an alternative means of travel to and from the face is provided for the purpose of inspecting the rise and in case of any accident; and

(b) each person working at the face of the rise is provided with a signalling device or procedure or other suitable means of communication to the level below, except in the case of a bore hole cage rise when the person must be provided with suitable means of communicating with the level above.

Penalty: See regulation 17.1.

10.22. Travelling ways in shafts

The manager of an underground mine must ensure that if one compartment of a shaft at the mine is used for the ascent and descent of persons by ladders and another compartment of the same shaft is used for raising persons, materials or counterweights, the ladderway compartment is close timbered or otherwise securely sealed from the other compartment.

Penalty: See regulation 17.1.

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10.23. Travelling ways to be made safe

If the natural rock walls of a winze or shaft used for travelling at an underground mine are not safe, the manager of the mine must ensure that the walls are securely timbered, lined, or otherwise made safe.

Penalty: See regulation 17.1.

10.24. Travelling ways to have safety nooks

(1) The manager of an underground mine must ensure that pedestrian safety nooks of adequate size are provided at intervals of not more than 100 metres in —

(a) all haulage drifts in the mine along which trackless mining equipment operates; and

(b) in rail haulages in the mine if sufficient clearance has not been provided for the safety of persons walking or working along the drift.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that each safety nook at the mine is kept clear.

Penalty: See regulation 17.1.

(3) A person must not place anything so as to prevent safe access to a safety nook in an underground mine.

Penalty: See regulation 17.1.

10.25. Ladderways and footways

(1) The manager of an underground mine must ensure that in each underground workplace in the mine a proper ladderway or footway or other means of travel is provided that enables safe entry and exit.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that if any rise or winze is driven at the mine and the rise or winze is to be

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used as an accessway or travelway to a workplace or to another horizon in the workings, a ladderway that is properly constructed and safe is installed in the rise or winze.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that if a ladderway at the mine may be used as a means of providing access for mine rescue, the opening of the ladderway is wide enough to be used for that purpose.

Penalty: See regulation 17.1.

10.26. Ladderway in shafts

The manager of an underground mine must ensure that each ladder in the mine that is constructed and fixed in a shaft for the ascent and descent of persons working in the mine —

(a) is inclined at the most convenient angle which the space allows;

(b) has substantial platforms at intervals of not more than 10 metres and spaces for foothold of not less than 150 millimetres from the wall;

(c) projects at least 600 millimetres above the platform or, if that is not practicable, has hand grips provided at the top of each ladder; and

(d) is maintained in a safe condition.

Penalty: See regulation 17.1.

10.27. Procedures when workings are approaching each other

(1) If development headings or stoping operations in an underground mine are being advanced so that they may intersect any existing development opening, stope void, filled stope, old workings or any open cut workings, the manager of the mine must ensure that the precautions referred to in subregulation (2) and any other necessary precautions are taken to ensure the safety of persons in the workings involved.

Penalty: See regulation 17.1.

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(2) The following precautions must be taken —

(a) check surveys;

(b) probe drilling ahead of the heading or stope being advanced;

(c) in the case of drill and blast operations — thorough cleaning and checking for misfires in the heading towards which the active face is advancing before drilling of the break-through round, and the recording of that fact; and

(d) adequate safeguards to prevent exposure of persons to hazards during and after the break-through.

10.28. Geotechnical considerations

(1) The principal employer at, and the manager of, an underground mine must ensure that geotechnical aspects are adequately considered in relation to the design, operation and abandonment of the mine.

Penalty: See regulation 17.1.

(2) The principal employer at, and the manager of, an underground mine must ensure that the following things are done in relation to workplaces, travelways and installations underground in the mine —

(a) due consideration is given to local geological structure and its influence on rock stability;

(b) rock damage at the excavation perimeter due to blasting is minimized by careful drilling and charging;

(c) due consideration is given to the size and geometry of openings;

(d) appropriate equipment and procedures are used for scaling;

(e) appropriate measures are taken to ensure the proper design, installation and quality control of rock support and reinforcement; and

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(f) the installation of ground support is timed to take into account rock conditions.

Penalty: See regulation 17.1.

(3) The principal employer at, and the manager of, an underground mine must ensure that the following things are done in relation to all development openings and stoping systems underground in the mine —

(a) geotechnical data (including monitoring of openings when appropriate) is systematically collected, analysed and interpreted;

(b) appropriate stope and pillar dimensions are determined;

(c) rationale for sequencing stope extraction and filling (if appropriate) is determined;

(d) there is adequate design, control and monitoring of production blasts; and

(e) rock support and reinforcement are adequately designed and installed.

Penalty: See regulation 17.1.

10.29. Sulphide dust ignitions

The manager of an underground mine in which minerals in the form of sulphides are present must ensure that —

(a) the risk of sulphide dust ignition is thoroughly evaluated before mining operations commence at the mine;

(b) procedures and work practices are developed and followed that minimize the risk of an explosion; and

(c) procedures are developed and followed that prevent injury or harm to the health of any person in the event of a sulphide dust ignition following blasting.

Penalty: See regulation 17.1.

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10.30. Shift communications

The manager of an underground mine must ensure that if any hazard to any employee in a workplace in the mine has not been remedied or removed before the end of a shift —

(a) a record is made in writing, and signed, by the supervisor of the shift for the workplace concerned setting out —

(i) the nature of the hazard and its location; and

(ii) the state of corrective measures taken to remedy the hazard;

(b) the record is read and countersigned by the supervisor of the next shift (***the new shift***) for the workplace concerned before any employee does any work in the new shift in the workplace; and

(c) before any employee does any work in the new shift in the workplace, the supervisor for that shift has advised the employee of —

(i) the nature of the hazard and its location;

(ii) the state of corrective measures taken to remedy the hazard; and

(iii) the work and precautions required to be taken to remove or remedy the situation.

Penalty: See regulation 17.1.

10.31. Chute and pass safety precautions

(1) The manager of an underground mine must ensure that a standard written procedure that complies with subregulation (2) is followed when clearing any chute, pass, millhole or stope drawpoint at the mine that is blocked or hung up.

Penalty: See regulation 17.1.

(2) The procedure must include —

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(a) a supervisor being responsible for control of action taken to remove the obstruction and ensuring that a person does not enter the pass beneath the hang up;

(b) a person not being exposed to any risk of the hang up releasing until the chute, pass, millhole or stope drawpoint has been checked from above the hang up for the presence of accumulated water or slurry;

(c) a person not being present in or around a stope or any location where the release of the hung up chute, pass, millhole or stope drawpoint will constitute a hazard; and

(d) if blasting is to take place, all adjacent workplaces and travelways (including other levels or sublevels) where persons may be affected by the blasting, or the sudden movement of air or rock, being effectively closed and guards being posted to prevent access to those areas.

(3) If a person uses standard procedures to clear any chute, pass, millhole or stope drawpoint at an underground mine that is blocked or hung up and those methods fail to remove or clear the obstruction, the person must notify the underground manager.

Penalty: See regulation 17.1.

(4) If the underground manager of a mine receives notification under subregulation (3), the underground manager must —

(a) determine what further action is to be taken; and

(b) ensure that the further action is then taken.

Penalty: See regulation 17.1.

10.32. Record of persons underground

(1) The manager of an underground mine must ensure that a procedure is established at the mine for checking all persons in and out of the mine so that all persons are accounted for at the end of each working shift.

Penalty: See regulation 17.1.

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(2) A person at an underground mine must not fail to follow the procedure referred to in subregulation (1) or interfere with the system of recording and checking persons under that procedure.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that if mains firing is used in the mine, or if large scale mass blasting is practised in the mine, all persons are accounted for at a place determined to be safe before firing or blasting.

Penalty: See regulation 17.1.

10.33. Reflective material on clothing

The manager of an underground mine in which trackless mining equipment is used must ensure that all persons in the mine —

(a) wear an outer vest or webbing harness fitted with reflective material so as to be visible from all directions; or

(b) have panels or strips of reflective material securely attached to their clothing so as to be visible from all directions.

Penalty: See regulation 17.1.

10.34. Shrinkage stoping or development

(1) The manager of an underground mine in which shrinkage stoping or development is used must ensure that —

(a) procedures that comply with subregulation (2) are established and followed at the mine to minimize the hazard of slumping of the broken rock in the stope or development heading upon which employees are required to work and travel;

(b) all employees at the mine are fully instructed about the procedures; and

(c) the effectiveness of the procedures is monitored.

Penalty: See regulation 17.1.

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(2) The procedures must include a means of accurately reconciling the volume of material drawn off the stope or development heading extraction points with the slump on top of the shrink.

10.35. Vertical opening safety procedures

(1) At any underground mine where operations at 2 or more horizons are interlinked by vertical or sub-vertical openings, the manager of the mine must ensure that systems of work and precautions are devised and implemented which will minimize any risk of injury or harm to health if persons are required to work on those horizons at locations near the vertical or sub-vertical openings.

Penalty: See regulation 17.1.

(2) In this regulation —

vertical or sub-vertical openings includes stopes, access rises, fill passes, ore and waste passes, ventilation rises and shafts and escape ways.

Division 3 — Loading and transport

10.36. Terms used in this Division

In this Division, unless the contrary intention appears —

rail haulage plan, in relation to an underground mine, means the plan prepared for that mine under regulation 10.44;

trackless unit means any vehicle, drill rig, trackless load haul dump unit or services unit that is —

(a) powered by a diesel, compressed air or electric motor;

(b) used for loading, hauling, grading, drilling or services functions; and

(c) not mounted on rail.

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10.37. Trackless units — maintenance

The manager of, and each employer at, an underground mine must ensure that each trackless unit used in the mine that is designed, constructed and equipped to conform with the Australian Design Rules is maintained so that it continues to conform with those Rules.

Penalty: See regulation 17.1.

10.38. Trackless units — braking systems

(1) The manager of an underground mine must ensure that each trackless unit used in the mine is fitted with the equipment required under this regulation.

Penalty: See regulation 17.1.

(2) The trackless unit must be fitted with —

(a) service brakes to be used as the primary braking system;

(b) secondary or emergency brakes to be used in the event of the failure of the service brakes;

(c) parking brakes; and

(d) rear stop lights which light up as red when the service brakes are applied, or when the retarder is actuated.

(3) The brakes referred to in subregulation (2) may use common components, but the failure of any one component must not prevent the application of the secondary brakes to stop the unit safely.

(4) At least one of the brakes referred to in subregulation (2) must be designed to permit operation by the operator of the unit.

(5) If a power assisted brake is provided as part of any of the braking system of a trackless unit, the power assisted brake must be capable —

(a) of being applied in the event of an engine failure; and

(b) of bringing the vehicle to a stop in all operating conditions.

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(6) If a power assisted brake is part of the braking system of a trackless unit, the brake must have a pressure gauge fitted that is clearly marked to indicate the minimum safe braking operating pressure and the gauge must be clearly visible from the vehicle operator's seat.

(7) A clear visual indicator or an effective interlocking system must be provided to protect against the trackless unit being driven with the brakes applied.

(8) The manager of, and each employer at, an underground mine must ensure that the brakes on each trackless unit used in the mine are —

(a) tested in accordance with the manufacturer's or supplier's specifications; and

(b) maintained in good working order.

Penalty: See regulation 17.1.

10.39. Trackless units — condition of haulage way

(1) The manager of an underground mine must ensure that —

(a) if special precautions are necessary for the safe running of trackless units in a haulage way in the mine, an adequate number of warning notices are posted in the haulage way advising persons of those special precautions;

(b) the road surface of each haulage way in the mine is regularly graded and otherwise maintained in a good and safe condition; and

(c) dimensions in each haulage way in the mine are sufficient to provide the clearances required under subregulation (2).

Penalty: See regulation 17.1.

(2) A haulage way must have —

(a) a total horizontal clearance of not less than 1.8 metres based on the widest vehicle used in the mine; and

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(b) a total vertical clearance of not less than 600 millimetres based on the highest vehicle used in the mine (the height of which is to include any overhead protection canopy).

10.40. Trackless units — traffic control

(1) If 2 or more trackless units are required to operate in a haulage way in an underground mine, the manager of the mine must ensure that an appropriate traffic control system is implemented to minimize the risk of collision between units.

Penalty: See regulation 17.1.

(2) The district inspector may require warning lights, signal lights or a block light system to be installed in a haulage way in an underground mine.

(3) Each responsible person at an underground mine must ensure that a requirement made under subregulation (2) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

(4) A person who operates a trackless unit in an underground mine must ensure that the transmission is engaged at all times while the unit is in motion.

Penalty: See regulation 17.1.

10.41. Unattended trackless units

(1) The operator of a trackless unit in an underground mine must ensure that the unit is not parked or left unattended unless —

(a) the engine or power supply has been switched off;

(b) the parking brake has been applied;

(c) any bucket or other implement is lowered to the ground or chocked; and

(d) if a flashing light is fitted to the vehicle, the light is activated during any period when there is other traffic in the locality.

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Penalty: See regulation 17.1.

(2) If a trackless unit is left unattended on a slope in an underground mine, the operator of the unit must ensure that the wheels of the vehicle are either turned towards the adjacent side wall or securely chocked.

Penalty: See regulation 17.1.

10.42. Maintenance of trackless units

(1) The manager of, and each employer at, an underground mine must ensure that each trackless unit used in the mine is cleaned, inspected, tested and maintained by a competent person at intervals, and in accordance with procedures, recommended by the manufacturer.

Penalty: See regulation 17.1.

(2) The manager of, and each employer at, an underground mine must ensure that —

(a) all windows and windshields that are fitted to trackless units used in the mine are made of laminated glass or other shatter-proof material; and

(b) if any window or windshield is cracked from one edge to another, the window or windshield is replaced as soon as is practicable.

Penalty: See regulation 17.1.

10.43. Trackless units with restricted vision must have warning signal

(1) If the size or design of a trackless unit used at an underground mine restricts the field of view of the operator in the intended direction of travel —

(a) the manager of, and each employer at, the mine must ensure that the unit is fitted with an audible warning signal; and

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(b) the operator of the unit must ensure that the warning signal is sounded before the unit is moved from a stationary position.

Penalty: See regulation 17.1.

(2) The warning signal required under subregulation (1) is in addition to any reversing alarm which may be fitted to the unit.

10.44. Rail haulage plan

(1) If rail mounted locomotive haulages are used or are to be used in an underground mine, the manager of the mine must ensure that a plan is prepared in accordance with subregulation (2) to ensure that the operation and maintenance of that haulage system is made as safe as is reasonably practicable.

Penalty: See regulation 17.1.

(2) The plan must —

(a) be prepared before the haulage system is used at the mine; and

(b) include details of —

(i) operating and maintenance procedures;

(ii) haulage specifications and layout; and

(iii) safety precautions to be observed.

(3) The manager of an underground mine must ensure that as soon as is practicable after a plan is prepared under subregulation (1), a copy of the plan is submitted to the district inspector.

Penalty: See regulation 17.1.

(4) If in the district inspector's opinion a plan is inadequate in any respect, the district inspector may direct that the plan be amended in a specified way and re-submitted to the district inspector.

(5) A direction may be given under subregulation (4) as often as the district inspector thinks necessary.

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(6) The manager of an underground mine must ensure that a direction given under subregulation (4) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

10.45. Remote controlled equipment

If any equipment (including any diesel or electrically powered unit) is to be operated on remote control in an underground mine, each responsible person at the mine must ensure that —

(a) a written procedure is developed and followed that provides a standard system of operating equipment in the remote control mode that minimizes the risk of injury to the operator and other persons;

(b) all persons involved in operating remote control equipment and those required to work in the vicinity of such equipment are fully trained and instructed in the procedure referred to in paragraph (a);

(c) regular tests are carried out on the remote control equipment in accordance with the manufacturer's recommendations;

(d) except in an underground coal mine that has remote control equipment that conforms with AS 2381.1 and AS 2595, no remote control equipment is used unless it conforms with AS 4240; and

(e) a safe means is provided of retrieving any remote controlled unit if the unit is immobilized in any area which cannot be safely reached by a person.

Penalty: See regulation 17.1.

10.46. Overhead protection on underground mining equipment

(1) The manager of an underground mine must ensure that the following equipment at the mine is fitted with falling object protective structures (in this regulation called ***FOPS***) which conform with AS 2294 —

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(a) all trackless underground mining equipment that is fitted with operator controls on the machine, including drills, trucks, loaders, bulldozers and excavators; and

(b) all service units which are operated in stopes and in the mining of development headings.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to any equipment referred to in that subregulation that is being used at a mine immediately before the commencement day until the expiration of 24 months from that day.

(3) Each responsible person at an underground mine must ensure that if the FOPS or the mountings of the FOPS on any equipment referred to in subregulation (1) is structurally damaged, the equipment is not used again until it has been repaired so that it conforms with AS 2294.

Penalty: See regulation 17.1.

Division 4 — Diesel units

10.47. Terms used in this Division

(1) In this Division, unless the contrary intention appears —

AFFF means aqueous film forming foam;

automotive diesel fuel means a low volatile fuel that conforms with AS 3570;

diesel engine means an engine which works on the compression ignition principle and generally operates on automotive diesel fuel;

diesel unit means any item of equipment which has as its power source a diesel engine, and includes mobile equipment, compressors and welders;

exhaust treatment device means —

(a) an oxidising catalytic converter;

(b) a particulate filter; or

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(c) any other device or process that has been approved by the district inspector under subregulation (2);

FFFP means film forming fluoroprotein foam;

notice of registration, in relation to a diesel unit, means notice of registration issued by the district inspector under regulation 10.50 for that diesel unit;

opacity measurement means a measurement of opacity or smoke units that can be converted using the Smoke Meter Conversion Chart in Appendix 4 to ADR 30/00;

opacity meter means an opacity meter or smoke meter approved in accordance with section 30.3.3 of ADR 30/00;

register number or ***registration number***, in relation to a diesel unit, means the number issued by the district inspector in the notice of registration for the diesel unit.

(2) The district inspector may approve in writing a device or process for the purposes of the definition of an "exhaust treatment device" in subregulation (1) if the district inspector is satisfied that the device or process has been demonstrated to reduce harmful exhaust emissions.

10.48. Diesel engines only to be used

(1) Each responsible person at an underground mine must ensure that no internal combustion engine, other than a diesel engine, is used underground in the mine.

Penalty: See regulation 17.1.

(2) Each responsible person at an underground mine must ensure that only automotive diesel fuel is used in diesel engines used underground in the mine.

Penalty: See regulation 17.1.

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10.49. Flame proofing of diesel engines in underground coal mines

Each responsible person at an underground coal mine must ensure that no diesel engine is used underground in the mine unless it conforms with AS 3584.

Penalty: See regulation 17.1.

10.50. Registration of diesel units used underground

(1) The manager of an underground mine must ensure that no diesel unit is used underground in the mine until notice of registration has been issued for that diesel unit.

Penalty: See regulation 17.1.

(2) If a person applies to the district inspector, the district inspector may issue notice of registration for a diesel unit that is to be used underground.

(3) Notice of registration may be issued subject to conditions specified by the district inspector relating to the use of the diesel unit including —

(a) the minimum ventilation requirement for operation of the unit, in cubic metres per second;

(b) the maximum permissible levels of atmospheric contaminants in the exhaust gases and exhaust gas opacity;

(c) the maximum rated engine capacity of the unit; and

(d) in the case of any diesel unit rated, for the purposes of the notice, at more than 125 kW, a requirement that the engine of the diesel unit be fitted with a specified exhaust treatment device before it is used underground.

(4) A condition specified in a notice of registration may at any time be deleted, varied or added to by the district inspector.

(5) If in an inspector's opinion a condition specified in a notice of registration is not being complied with, the inspector may direct

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that the diesel unit must be immediately withdrawn from service and must not be used again until the condition is complied with.

(6) An inspector must make a record in the record book of any direction given under subregulation (5).

(7) The manager of an underground mine must ensure that a direction given under subregulation (5) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

(8) The district inspector must specify in the notice of registration for a diesel unit —

(a) the mine or mines at which the unit may be used; and

(b) the registration number for the unit.

(9) Each responsible person at an underground mine must ensure that a diesel unit is used only at the mine or mines specified in the notice of registration.

Penalty: See regulation 17.1.

(10) Each responsible person at an underground mine must ensure that the registration number of the diesel unit is clearly marked on the unit.

Penalty: See regulation 17.1.

10.51. Specifications and testing of diesel units

(1) If the engine of a diesel unit is of a rating, type or manufacture that is not familiar to the district inspector, the district inspector may require an application for registration of the unit to be accompanied by information detailing the complete specifications of the engine.

(2) The information may include an analysis of the undiluted exhaust gas composition with respect to carbon monoxide, nitric oxide and nitrogen dioxide conducted with calibrated instruments and showing under what engine load and speed the maximum emission of each gas occurs.

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(3) For the purposes of an analysis referred to in subregulation (2), automotive diesel fuel of a similar specification to that in regular use at the mine must be used.

(4) If a diesel unit at an underground mine is fitted with a replacement engine, each responsible person at the mine must ensure that —

(a) the maximum engine rating of the new engine does not exceed that recommended by the supplier or manufacturer of the unit;

(b) a competent person confirms in writing that all fire prevention and fire fighting equipment on the unit has been properly replaced and adjusted and is fully operational; and

(c) the district inspector is advised, within one week of the changeover, of the details of the new engine (including the engine number).

Penalty: See regulation 17.1.

10.52. Ventilating air requirements for diesel unit operations

(1) In an underground mine in which diesel units are used, the principal employer at, and the manager of, the mine must ensure that the requirements of this regulation are complied with in each separate ventilation circuit in which diesel units are required to be operated.

Penalty: See regulation 17.1.

(2) The total primary airflow must be determined having due regard to the total number of diesel units required to be operated in the mine and how they are to be utilized and the requirement to reduce recirculation of air from workplaces into the primary ventilation circuit, to the lowest practicable level.

(3) The airflow in any workplace in which a diesel unit is operated must be not less than 2.5 cubic metres per second.

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(4) A sufficient volume flow of air must be maintained in each workplace in which a diesel unit is operated to dilute the engine exhaust gases to the lowest practicable levels, and this volume flow must not in any case be less than the minimum ventilation flow specified in this regulation.

(5) The minimum ventilation volume rate of air required for each diesel unit is —

(a) if the maximum exhaust gas emissions of the engine in a diesel unit contain less than 1 000 ppm of oxides of nitrogen and less than 1 500 ppm of carbon monoxide, the amount set out in subregulation (6) or such other amount as the district inspector may determine under subregulation (8); or

(b) if the maximum exhaust gas emissions of the engine of a diesel unit contain not less than 1 000 ppm oxides of nitrogen or not less than 1 500 ppm of carbon monoxide, the amount set out in subregulation (7) or such other amount as the district inspector may determine under subregulation (8).

(6) A diesel unit referred to in subregulation (5)(a) must have a ventilation volume rate of not less than 0.05 cubic metres per second per kilowatt of the maximum rated engine output specified by the manufacturer, for the fuelling and timing configuration at which the engine has been set.

(7) A diesel unit referred to in subregulation (5)(b) must have a ventilation volume rate of not less than 0.06 cubic metres per second per kilowatt of the maximum rated engine output specified by the manufacturer for the fuelling and timing configuration at which the engine has been set.

(8) If the district inspector is satisfied that because of all or any of the following —

(a) special design features on an engine;

(b) exhaust gas monitoring methods and equipment;

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(c) particular operating and engine maintenance practices; and

(d) use of low emission fuel,

exhaust gases from any engine or engines will be diluted to an acceptable level at a reduced ventilating volume rate, the district inspector may determine that a ventilating volume rate per kilowatt of engine output less than that specified in subregulation (6) or (7) applies to a specified diesel unit or to any specified underground mine or mines.

(9) The ventilating volume rate determined under subregulation (8) must not in any case be less than —

(a) in relation to a diesel unit referred to in subregulation (5)(a) — 0.03 cubic metres per second per kilowatt; and

(b) in relation to a diesel unit referred to in subregulation (5)(b) — 0.05 cubic metres per second per kilowatt.

(10) If more than one diesel unit is operating in any ventilation circuit of a mine at the same time, the total ventilation volume rate of air in that circuit must be not less than the aggregate of the volume requirement for the individual diesel units.

(11) In calculating the aggregate volume requirement in any given ventilation circuit under subregulation (10), light four wheel drive vehicles and drill jumbos and other diesel units of small engine capacity which are operated intermittently, may be disregarded.

10.53. Exhaust treatment device

(1) Each responsible person at an underground mine must ensure that the engine of each diesel unit used underground in the mine that is turbocharged or that is rated at 125 kW or more, is fitted with an exhaust treatment device.

Penalty: See regulation 17.1.

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(2) Each responsible person at an underground mine must ensure that each exhaust treatment device that is fitted to the engine of a diesel unit in use at the mine —

(a) is monitored and maintained in accordance with the manufacturer's recommendations; and

(b) is immediately replaced if it is found to be defective or inefficient.

Penalty: See regulation 17.1.

10.54. Undiluted exhaust gas sampling

(1) Each responsible person at an underground mine must ensure that the undiluted exhaust gas produced, under all standard conditions of engine speed or load, by the engine of a diesel unit underground at the mine is sampled and analysed —

(a) at intervals of not more than 250 hours as measured by the diesel unit hour meter, or at intervals not exceeding one month if the unit does not have an hour meter;

(b) after any maintenance work is done on the turbocharger or fuel injection system on the engine of a diesel unit (other than cleaning or replacing filters); and

(c) when required to do so by an inspector.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that if sampling of undiluted exhaust gases from the engine of a diesel unit shows that exhaust emissions from an engine contain more than 2 000 ppm of carbon monoxide or more than 1 800 ppm of the oxides of nitrogen, the diesel unit is not returned to service until the exhaust emissions are reduced to levels below those specified and as low as is practicable.

Penalty: See regulation 17.1.

(3) After the expiry of 24 months from the commencement day, the exhaust gas emission levels for the prevention of the return of the engine to service in subregulation (2) are 1 000 ppm of

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oxides of nitrogen or 1 500 ppm of carbon monoxide, under any condition of engine speed or load.

10.55. Opacity of exhaust emission

(1) The manager of an underground mine must ensure that the undiluted emission produced by the engine of a diesel unit used underground at the mine undergoes an opacity measurement —

(a) at intervals of not more than 250 hours as measured by the diesel unit hour meter, or at intervals not exceeding one month if the unit is not provided with an hour meter; and

(b) after any maintenance work (other than cleaning or replacing filters) is done on the turbocharger or fuel injection system on the engine of a diesel unit.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that if the opacity measurement (using a snap idle test) for the engine of a diesel unit used in the mine shows that —

(a) any condition relating to opacity specified in the notice of registration is not being complied with; or

(b) the opacity is greater than 50% as measured on the United States Public Health Service smoke meter percent opacity scale, or the equivalent value shown on the Smoke Meter Conversion Chart,

the diesel unit is not returned to service until the opacity complies with that condition or is reduced below that level (as the case may be).

Penalty: See regulation 17.1.

10.56. Testing costs, methods and equipment

(1) The principal employer is responsible for all costs incurred in obtaining information on the characteristics of diesel exhaust emissions required under this Division.

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(2) The manager of an underground mine must ensure that the equipment and methods used for testing undiluted exhaust gases or workplace atmospheres conform with any standards that the district inspector specifies in writing for that purpose.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that sampling smoke with a smoke meter or determining opacity with an opacity meter is done in accordance with the meter manufacturer's recommendations.

Penalty: See regulation 17.1.

10.57. Records

(1) The manager of an underground mine must ensure that a copy of the notice of registration for each diesel unit used at the mine is kept at the mine.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that a record is kept at the mine of the result of each undiluted gas analysis and opacity meter measurement carried out in relation to a diesel unit at the mine.

Penalty: See regulation 17.1.

10.58. Fuelling and servicing

(1) The manager of an underground mine must ensure that the district inspector is notified in writing of the location and details of each proposed automotive diesel fuel service and storage facility that is to be installed underground in the mine.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that the location, method of construction and means of ventilation of an automotive diesel fuel service and storage facility that is underground in the mine is such as to reduce the risk of hazards from that facility and conforms with AS 1940.

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Penalty: See regulation 17.1.

10.59. Fire suppression

(1) The manager of an underground mine must ensure that each diesel unit at the mine that is turbocharged or rated at 125 kW or more, and each loader or grader at the mine, is equipped with an effective and properly maintained AFFF or FFFP fire suppression system with a minimum of 2 activators.

Penalty: See regulation 17.1.

(2) If a diesel unit in an underground mine is controlled by remote control, the manager of the mine must ensure that the unit is equipped with an automatically operated AFFF or FFFP fire suppression system that has the facility to be activated from the operator's remote control unit.

Penalty: See regulation 17.1.

(3) The manager of an underground mine must ensure that, so far as is practicable, automatic fixed fire suppression systems are installed and properly maintained at all underground locations in the mine where oils, fuels or lubricants are stored or dispensed.

Penalty: See regulation 17.1.

(4) Subregulation (3) does not apply to an underground coal mine.

(5) If in the manager's opinion it is not practicable in a particular case to install a fire suppression unit in an underground mine as required under subregulation (3), the manager must —

(a) notify an inspector accordingly and advise the inspector of the reasons why it is not practicable to do so;

(b) ensure that alternative precautions are taken to minimize the hazards to any person in the event of a fire; and

(c) notify the inspector of the alternative precautions that have been taken as required under paragraph (b).

Penalty: See regulation 17.1.

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10.60. Fuel transport and storage

(1) The manager of an underground mine must ensure that if any liquid that is a flammable liquid or combustible liquid under AS 1940 is taken underground in the mine, the liquid —

(a) is taken underground in a container that does not leak; and

(b) is transported in a secure manner.

Penalty: See regulation 17.1.

(2) The manager of an underground mine must ensure that at any time the quantity of automotive diesel fuel stored underground at the mine does not exceed the quantity required to do one week of work at the mine.

Penalty: See regulation 17.1.

[Regulation 10.60 amended in Gazette 29 Feb 2008 p. 692.]

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Part 11 — Winding, winding ropes and signals

Division 1 — Preliminary

11.1. Terms used in this Part

In this Part, unless the contrary intention appears —

winding engine log book means the book referred to in regulation 11.8;

winding rope log book means the book referred to in regulation 11.40.

Division 2 — Provisions applicable to all winding operations

11.2. Application of Division

This Division applies to and in relation to all winding operations.

11.3. Notice of intention to install winding system

(1) Before any winding system for the transportation of persons, materials or rock is installed, erected or re-erected in a mine, each responsible person at the mine must ensure that —

(a) the State mining engineer is notified in writing of the intention to construct, erect or re-erect the winding system;

(b) plans showing the location of the shaft together with the general layout of the system are submitted to the State mining engineer; and

(c) details of the design of the various components of the winding installation are submitted to the State mining engineer including details of —

(i) winding machinery;

(ii) shaft conveyances, which show that they comply with AS 3785.4;

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(iii) winding ropes;

(iv) winding rope terminations or cappings, which show that they comply with AS 3637.3;

(v) headframes, which show that they comply with AS 3785.5;

(vi) headframe overwind provisions;

(vii) shaft conveyance guiding systems, which show that they comply with AS 3785.6;

(viii) associated surface bins; and

(ix) sheaves, which show that they comply with AS 3785.7.

(2) The State mining engineer may require the provision of design information additional to that provided under subregulation (1).

(3) Each responsible person at a mine must ensure that a requirement made under subregulation (2) is complied with within one month after the day on which it is made.

Penalty: See regulation 17.1.

(4) This regulation does not apply to the installation, erection or re-erection of hoists to be used for —

(a) winze sinking;

(b) rising;

(c) stope servicing; or

(d) any other similar purpose.

11.4. Approval of winding system

(1) Each responsible person at a mine must ensure that no winding engine, machinery, plant or apparatus for haulage is used in a shaft in the mine unless the winding engine, machinery, plant or apparatus has been approved by the State mining engineer under this regulation.

Penalty: See regulation 17.1.

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(2) When any notification is received under regulation 11.3(1), the State mining engineer may approve or reject the use of the winding engine system.

(3) An approval may be subject to such conditions as the State mining engineer thinks fit and specifies in the approval.

(4) The State mining engineer may —

(a) cancel or suspend an approval; or

(b) amend, add to, vary or delete any condition to which an approval is subject.

(5) Each responsible person at a mine must ensure that a person does not use or operate a winding engine, machinery, plant or apparatus for haulage in a shaft in the mine —

(a) if the approval relating to its use is suspended or cancelled; or

(b) in contravention of a condition of the approval.

Penalty: See regulation 17.1.

11.5. Testing

Each responsible person at a mine must ensure that before a winding engine is used at the mine —

(a) it has been tested to the satisfaction of the State mining engineer;

(b) an inspector has verified that it is capable of performing in accordance with its design and within the limitations that apply in relation to its working; and

(c) the inspector has made a record in the winding engine log book that the verification referred to in paragraph (b) has taken place.

Penalty: See regulation 17.1.

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11.6. Notice of intention to repair or modify winding system

(1) Before any repair, modification or alteration is carried out to the main structure, safety devices or other safeguards of a winding engine at a mine, each responsible person at the mine must ensure that —

(a) the State mining engineer is notified in writing of the intention to carry out that work; and

(b) plans, specifications, drawings and design calculations are submitted to the State mining engineer which indicate the nature and extent of that work.

Penalty: See regulation 17.1.

(2) The State mining engineer may require the provision of information additional to that provided under subregulation (1).

(3) Each responsible person at a mine must ensure that a requirement made under subregulation (2) is complied with within one month after the day on which it is made.

Penalty: See regulation 17.1.

11.7. Approval of repair or modification

(1) Each responsible person at a mine must ensure that no repair, modification or alteration is carried out to the main structure, safety devices or other safeguards of a winding engine at the mine unless the repair, modification or alteration has been approved under this regulation.

Penalty: See regulation 17.1.

(2) When any notification is received under regulation 11.6, the State mining engineer may approve or reject the repairs, modification or alteration.

(3) An approval may be subject to such conditions as the State mining engineer thinks fit and specifies in the approval.

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(4) The State mining engineer may —

(a) cancel or suspend an approval; or

(b) amend, add to, vary or delete any condition to which an approval is subject.

(5) Each responsible person at a mine must ensure that a person does not repair, modify or alter a winding engine at the mine —

(a) if the approval relating to that work is suspended or cancelled; or

(b) otherwise than in accordance with any condition that applies in relation to that work.

Penalty: See regulation 17.1.

11.8. Winding engine log book

The manager of a mine must cause to be kept in each winding engine room at the mine a winding engine log book in which the information required by this Part must be recorded.

Penalty: See regulation 17.1.

11.9. Winding engines — shift records

(1) The manager of a mine must ensure that the winding engine driver in charge of each shift records in the winding engine log book —

(a) any peculiarities in the running of the engine;

(b) any defects in any of the engines or winding system components under the driver's charge which the driver considers warrants repair or correction; and

(c) any accident or incident that occurs in relation to the winding system.

Penalty: See regulation 17.1.

(2) If —

(a) 2 or more drivers are employed on the same winding engine in rotation of shifts; and

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(b) any defect in the working of the machinery is recorded in the winding engine log book,

the driver or drivers who follow the driver who made the original entry must make an entry in the book confirming or otherwise commenting on the original entry.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that —

(a) each winding engine log book in the mine and any entry in such a book is checked daily by the manager or by a person authorised in writing for that purpose by the manager; and

(b) in respect of any entry, the manager or person authorised by the manager records in the log book in a suitable manner any repair or correction that has been effected.

Penalty: See regulation 17.1.

(4) A person who makes an entry in a winding engine log book (whether a driver, the manager or another person) must properly sign and date the entry.

Penalty: See regulation 17.1.

11.10. Winding engine to be available

If the usual means of exit from the underground workings of a mine is by winding engine, the manager of the mine must ensure that while any person is underground or at any other time when the engine is required to be used —

(a) the engine is kept ready for use; and

(b) unless push button automatically controlled winding is provided, a winding engine driver remains in control or effectively supervises the winding engine.

Penalty: See regulation 17.1.

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11.11. Testing of hoist drivers

(1) A person must not operate a hoist at a mine, and the manager of a mine must not permit a person to operate a hoist at the mine, unless —

(a) the manager is satisfied that the person is competent to operate that hoist; and

(b) the manager or a competent person has tested the person and is satisfied that the person knows all relevant hoisting signals and procedures.

Penalty: See regulation 17.1.

(2) The manager of a mine may determine that a person who operates a hoist at the mine is no longer competent to operate that hoist.

(3) If the manager makes a determination under subregulation (2) —

(a) the manager must notify the person accordingly; and

(b) the person must not operate a hoist at the mine after the person receives that notification.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that a record is made in the record book of —

(a) the name of each person who is competent to operate a hoist;

(b) the date on which the manager determined that the person was competent to operate a hoist;

(c) the date on which the person was tested and the name and signature of the person who carried out the test; and

(d) if the manager makes a determination under subregulation (2) —

(i) the date on which the determination was made;

(ii) the reasons for the determination; and

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(iii) the date on which the operator was notified by the manager of the determination.

Penalty: See regulation 17.1.

11.12. Winding engine drivers to have medical examinations

(1) This regulation does not apply to —

(a) a person who is exempted from holding a winding engine driver's certificate; or

(b) the operator of a hoist.

(2) Each person in charge of a winding engine at a mine must attend before a medical practitioner for a medical examination —

(a) before the person first takes charge of the winding engine;

(b) either —

(i) in the case of a person who has attained 65 years of age, before the expiration of 6 months from the day on which the person last had a medical examination under this regulation; or

(ii) in any other case, before the expiration of 12 months from the day on which the person last had a medical examination under this regulation;

and

(c) at such other times as the medical practitioner may require.

Penalty: See regulation 17.1.

(3) A person who receives a medical examination as required under this regulation must forward to the manager of the mine within 7 days after receiving that examination, a medical certificate that complies with subregulation (4).

Penalty: See regulation 17.1.

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(4) The medical certificate must —

(a) be in a form approved for that purpose by the Board of Examiners; and

(b) state that the person is not suffering from deafness, defective vision, epilepsy, disease of the heart, diabetes or other infirmity to such an extent as would, or would be likely to, render the person unfit for his or her duties or liable to become suddenly incapable of controlling his or her engine.

(5) A person must not operate a winding engine if a medical practitioner has certified that the person is not in a fit state of health to operate such an engine.

Penalty: See regulation 17.1.

(6) An employer at a mine must not knowingly employ a person who contravenes this regulation.

Penalty: See regulation 17.1.

11.13. Winding engine drivers not to work for more than 8 hours

(1) Except as provided in subregulation (2), the manager of a mine must ensure that a person in charge of a manually operated winding engine in or about the mine does not work for more than 8 hours in any 24 hour period.

Penalty: See regulation 17.1.

(2) In the event of an emergency a person in charge of a manually operated winding engine may work for more than 8 hours but not more than 12 hours in any 24 hour period.

(3) In subregulation (2) —

emergency means any serious breakdown of plant, machinery or mine workings, or any other circumstance that could not have been reasonably foreseen and that causes a hazard or danger to the health or safety of the personnel employed in or about a mine or which could seriously affect the safety or security of the mine.

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(4) For the purposes of subregulations (1) and (2), the hours specified include meal times but do not include time occupied in starting or closing down the machinery.

11.14. Winding engine — power required

The manager of a mine must ensure that each winding engine at the mine is capable of raising the maximum designed unbalanced load from the bottom of the shaft or winze.

Penalty: See regulation 17.1.

11.15. Power cut off

Each responsible person at a mine must ensure that the source of power to a winding engine is not cut off unless it is safe to do so.

Penalty: See regulation 17.1.

11.16. Indicators and gauges

(1) The manager of a mine must ensure that each winding engine at the mine is fitted with a gauge or other suitable instrument in proper working order which will indicate to the winding engine driver whether or not power is available to the engine.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that each winding engine, other than a hoist, at the mine is provided with a depth and speed indicator driven from the driving sheave or drum shafting.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that a winding engine at the mine is not used for winding while a depth or speed indicator is disconnected.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that each electric winding engine at the mine is fitted with an ammeter that is maintained in proper working order and clearly indicates to the driver the

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level of electric current being drawn by the electric motor driving the winding engine.

Penalty: See regulation 17.1.

11.17. Speed control

(1) The manager of a mine must ensure that each winding engine at the mine is provided with an effective automatic device, that is constantly engaged and built into the winding engine, that prevents overwinding and over-speeding and is constructed so as —

(a) to prevent the shaft conveyance from exceeding a speed 10% greater than the approved maximum designed speed;

(b) to control the speed of the shaft conveyance in any part of the shaft to predetermined limits; and

(c) to prevent the shaft conveyance from exceeding a speed of 2 metres per second when being landed at the lowest entrance to, or at the bottom of, the shaft.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to a hoist.

11.18. Brakes

(1) The manager of a mine must ensure that all winding engines (other than hoists) at the mine are provided with adequate brakes which —

(a) in the case of a drum winder, comply with the requirements of regulation 11.66; and

(b) in the case of a friction winder, comply with the requirements of regulation 11.81.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that all hoists at the mine are provided with at least one brake system that —

(a) acts directly on the hoist drum;

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(b) is designed, adjusted and maintained to stop safely and hold the shaft conveyance under all conditions of loading, direction of travel and speed;

(c) is capable of being manually applied by the hoist driver irrespective of any safety device that may act to apply the brake;

(d) will be automatically applied when —

(i) the supply of power to the hoist fails; or

(ii) the pressure of any fluid or other medium used as a means of controlling the brake falls below a predetermined level;

(e) has a brake holding capacity capable of supporting a load not less than 1.5 times the maximum static load normally hoisted from the lowest operating position in the shaft;

(f) has parts that have a factor of safety of not less than 10 with screwed members in tension having a factor of safety of not less than 15; and

(g) if it is the only brake on the hoist, has no welding on single line components if the failure of the weld would render the brake inoperative.

Penalty: See regulation 17.1.

(3) A person operating a winding engine at a mine must ensure that the brake is fully applied while any person is getting on or off the conveyance.

Penalty: See regulation 17.1.

11.19. Persons or material not to be lowered by the brake

(1) A person must not lower a person or any material in a winding conveyance by means of the brake alone.

Penalty: See regulation 17.1.

(2) A person must not enter or remain, or permit another person to enter or remain, in any cage, skip or kibble that is held or

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suspended by the brake alone when the clutch of the winder drum is not engaged.

Penalty: See regulation 17.1.

11.20. Stop switch

The manager of a mine must ensure that all winding engines at the mine are fitted with a stop switch for the purpose of stopping the engine and applying the brakes and that the stop switch is placed within easy reach of the driver.

Penalty: See regulation 17.1.

11.21. Driver not to be spoken to while on duty

A person must not speak to or otherwise distract the driver of a winding engine while the driver's machine is in motion except —

(a) for the purpose of stopping the engine in an emergency; or

(b) if for any other reason it is necessary to do so for the safe operation of the engine.

Penalty: See regulation 17.1.

11.22. Hoist controls

The manager of a mine must ensure that all hoist installations at the mine are fitted with a power control appliance which returns the power application to neutral and applies the braking system when manual pressure is removed.

Penalty: See regulation 17.1.

11.23. Acceleration control

(1) The driver of a winding engine must ensure that a cage or skip in which any person is travelling is not accelerated or decelerated by the winding engine at a rate greater than 1.5 metres per second per second, except in the case of an emergency when deceleration must be not less than 2 metres per

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second per second and not more than 5 metres per second per second.

Penalty: See regulation 17.1.

(2) If an automatic winding engine is installed or used at a mine, the manager of the mine must ensure that the automatic controls will not allow the winding engine to exceed the acceleration and deceleration rates prescribed in subregulation (1).

Penalty: See regulation 17.1.

11.24. Control selection

(1) If a winding engine at a mine may be controlled by either a manual or an automatic method, the manager of the mine must ensure that only persons authorised for that purpose by the manager select the operating mode of the engine.

Penalty: See regulation 17.1.

(2) Prior to a changeover of operating mode, the driver and any other person authorised by the manager must ensure that the brake is applied, and during the changeover, the driver and any other person authorised by the manager must ensure that the brake remains applied.

Penalty: See regulation 17.1.

11.25. Push button controls

(1) Except as provided in subregulation (2), the manager of a mine must ensure that, when a winding engine at the mine is being used to carry any person and it is being operated by push button control, the winding engine is incapable of motion unless all shaft doors and the cage doors in connection with that engine are properly closed.

Penalty: See regulation 17.1.

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(2) Provision may be made to open shaft doors when a winding engine is being used to carry materials if the conveyance is within 10 metres of a landing and the engine is subject to inching control only.

(3) The manager of a mine must ensure that, if a winding engine at the mine has push button control from within the cage, a device is provided which, when operated, will cause the engine to stop.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure all persons who operate a winding engine with push button controls are fully instructed in the safe operating procedures for the engine and any emergency procedures that have been devised to cope with accidents involving, or malfunctions of, the system.

Penalty: See regulation 17.1.

11.26. Cage to be supported when repairs are being carried out

The manager of a mine must ensure that at all times when repairs are being effected to the clutches or brakes of a winding engine and if ropes are attached to the drums, any affected skip, cage or counterweight is removed or firmly supported while the work is in progress.

Penalty: See regulation 17.1.

11.27. Prevention of overwind

The manager of a mine must ensure that devices are provided in the shaft headframe, or tower, that remove the power from the winding engine and, by automatic application of the brakes, bring the winding drum or driving sheave to rest before any shaft conveyance, counterweight or rope attachment reaches any permanent obstruction to its passage.

Penalty: See regulation 17.1.

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11.28. Backing out devices

The manager of a mine must ensure that any device provided on a winding engine to permit backing out from an overwound position responds to manual control only, and permits withdrawal from the overwind position only.

Penalty: See regulation 17.1.

11.29. Winding engine fire precautions

(1) The manager of a mine must ensure that, in each winding engine room in the mine, suitable and sufficient apparatus is provided and maintained to extinguish any fire which may break out.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that if a winding engine is situated in a headframe or tower of a shaft —

(a) suitable and sufficient apparatus is provided to automatically extinguish any fire which may break out; and

(b) effective precautions are taken to prevent any flammable liquid used in connection with the winding engine or any apparatus installed in the headframe or tower from entering the shaft.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that each winding engine room in the mine is kept clean and free from any unnecessary combustible material.

Penalty: See regulation 17.1.

11.30. Signalling system

(1) The manager of a mine must ensure that each working shaft in which a cage or skip is used and each division of the shaft in which persons are raised or lowered, is provided with some proper means of communicating distinct and definite signals —

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(a) from the bottom working level of the shaft, from each entrance for the time being worked between the surface and the bottom working level, and from the surface brace to the winding engine room; and

(b) from the winding engine room to the surface brace and to the bottom working level of the shaft, and to each entrance for the time being worked between the surface and the bottom working level of the shaft.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that —

(a) competent persons are appointed to be platmen, bracemen or skipmen responsible for communicating signals to the winding engine driver; and

(b) except for signalling the accident signal, other persons do not communicate signals to the winding engine driver.

Penalty: See regulation 17.1.

(3) Nothing in this regulation prevents employees other than platmen, bracemen and skipmen from communicating signals on a separate interplat signal system installed for that purpose.

11.31. Code of Signals

The following signals comprise the Code of Signals —

Knocks or Rings	What is Signified
1	Stop — Signal to be returned by driver when the conveyance is or has been brought to rest.
2	Lower.
3	Raise.
4	Hoist to surface.
5	Danger signal — The conveyance must not be moved until release signal 8 has

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	been given.
6	Materials or equipment to be conveyed (cautionary signal). Signal to be returned by driver before a command signal is given when the driver must move the conveyance slowly.
Knocks or Rings	**What is Signified**
7	Firing warning.
8	Release conveyance from "Danger" signal. Signal to be returned by driver before a command signal is given.
12	Accident signal — to be followed after a pause by the signal for the level where the conveyance is required.
1 pause 2 pause 3	Change to wind from a different level (throw in or out of gear). Signal must not be given while the conveyance is in motion.

Winding signals — Change of level

The shaft conveyance must be raised or lowered, as required, in accordance with the following signals —

1 pause 1 To No. 1 level.
1 pause 2 To No. 2 level.
1 pause 3 To No. 3 level.
1 pause 4 To No. 4 level.
1 pause 5 To No. 5 level.

2 pause 1 To No. 6 level.
2 pause 2 To No. 7 level.
2 pause 3 To No. 8 level.
2 pause 4 To No. 9 level.
2 pause 5 To No. 10 level.

3 pause 1 To No. 11 level.

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3 pause 2 To No. 12 level.
3 pause 3 To No. 13 level.
3 pause 4 To No. 14 level.
3 pause 5 To No. 15 level.

4 pause 1 To No. 16 level.
4 pause 2 To No. 17 level.
4 pause 3 To No. 18 level.
4 pause 4 To No. 19 level.
4 pause 5 To No. 20 level.

5 pause 1 To No. 21 level.
5 pause 2 To No. 22 level.
5 pause 3 To No. 23 level.
5 pause 4 To No. 24 level.
5 pause 5 To No. 25 level.

6 pause 1 To No. 26 level.
6 pause 2 To No. 27 level.
6 pause 3 To No. 28 level.
6 pause 4 To No. 29 level.
6 pause 5 To No. 30 level.

7 pause 1 To No. 31 level.
7 pause 2 To No. 32 level.
7 pause 3 To No. 33 level.
7 pause 4 To No. 34 level.
7 pause 5 To No. 35 level.

8 pause 1 To No. 36 level.
8 pause 2 To No. 37 level.
8 pause 3 To No. 38 level.
8 pause 4 To No. 39 level.
8 pause 5 To No. 40 level.

Unless preceded by the cautionary signal (6 knocks or rings) indicating that materials or equipment are to be conveyed, all signals from level to level, surface to level and level to surface

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must be regarded as meaning that persons are being raised or lowered and the engine driver must drive accordingly.

The pause between signals in the Code must be the space of time required to give 2 knocks or rings.

Winding signals — repairing shafts

When persons are engaged in repairing or timbering any shaft, special notice must be given to each driver who comes on duty on the winding engine. The signals 3-raise, and 2-lower, must then be taken as meaning that persons are to be raised or lowered and the winding must be done slowly and with great care.

11.32. Code of Signals to be displayed

The manager of a mine must ensure that a copy of the Code of Signals is posted, and maintained in clear and legible form, in the winding engine room, at the surface brace, and at each working plat underground.

Penalty: See regulation 17.1.

11.33. Signals to be known

(1) A person employed underground in a mine at which a winding engine is used must know the Code of Signals.

Penalty: See regulation 17.1.

(2) An employer must not employ a person as a winding engine driver, platman, skipman or braceman in a mine unless the person has satisfied the employer or manager that he or she —

(a) knows the Code of Signals, and his or her duties and obligations under the Act and these regulations; and

(b) can perform efficiently his or her duties and obligations in that position.

Penalty: See regulation 17.1.

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11.34. Signals to be clear and correct

(1) A person who gives any signal at a mine must ensure that the method of signalling is clear and distinct.

Penalty: See regulation 17.1.

(2) A braceman, or any other person, on the surface of a mine must not give verbal or visual signals to the winding engine driver.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that —

(a) a winding engine driver has a clear view between his or her station and the shaft at the surface brace; or

(b) if it is not practicable to comply with paragraph (a), that indicators are provided that will efficiently provide for safety.

Penalty: See regulation 17.1.

(4) A person must not —

(a) give any wrong signal or cause any wrong signal to be given; or

(b) ride in or upon any cage, skip or kibble at a time when signals have been given informing the driver that no person is so riding.

Penalty: See regulation 17.1.

11.35. Signals to be returned

(1) This regulation does not apply if automatic winding is used.

(2) Subject to subregulation (3), a winding engine driver must, on receiving a signal, before beginning to wind, give a return signal, repeating the signal as received by the driver.

Penalty: See regulation 17.1.

(3) The winding engine driver is not required to return the signal "1" — to stop when the skip or cage is in motion or to return the signal as provided for in the sinking signals.

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(4) After returning a signal, the winding engine driver must not move the cage, skip or kibble until —

(a) when raising or lowering any person, a period of at least 6 seconds has elapsed; or

(b) when raising or lowering materials, a period of at least 2 seconds has elapsed.

Penalty: See regulation 17.1.

11.36. Communication by voice restricted

A person must not communicate signals by word of mouth up or down any shaft except —

(a) through a telephone properly fitted and isolated in a compartment that is not used for hoisting; or

(b) by radio or radio telephone installed for that purpose.

Penalty: See regulation 17.1.

11.37. Shaft guides

(1) This regulation does not apply to a shaft during shaft sinking.

(2) The manager of a mine must ensure that in each vertical shaft over 50 metres in depth in which persons or materials are transported by machinery other than hand winches, guides are provided to within 20 metres from the bottom of the shaft and efficient means and appliances for steadying the load are provided and used.

Penalty: See regulation 17.1.

(3) If rope guides are used for the purposes referred to in subregulation (2), the manager of a mine must ensure that the guide ropes are not spliced.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

11.38. Winding ropes — specifications

(1) Before any winding rope is placed in service in a mine the manager of the mine must ensure that a true copy of the maker's certificate giving full details of the construction of the rope, the class of steel used, and the breaking force of the rope is given to the district inspector.

Penalty: See regulation 17.1.

(2) If the district inspector is not satisfied that the maker's certificate supplied is authentic and applies to the particular rope in question, the district inspector may require a certificate to be obtained by means of a test of the breaking force and the certificate to be forwarded to the district inspector before using the rope.

(3) The manager of a mine must ensure that a requirement made under subregulation (2) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that any test of the breaking force of a rope referred to in subregulation (2) is carried out on a sample cut off the end of the rope and is conducted at a testing station approved by the State mining engineer.

Penalty: See regulation 17.1.

11.39. Winding ropes — history

Before a rope which has previously been in service may be used for any other winding purpose, the manager of the mine must ensure that a complete history of the rope and the details of its proposed use are submitted to the district inspector and the district inspector has approved that use.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

11.40. Winding rope log book

The manager of a mine at which a winding rope is used must cause to be kept at the mine a winding rope log book in which the information required by this Part must be recorded.

Penalty: See regulation 17.1.

11.41. Winding ropes — records

(1) The manager of a mine must ensure that a record of the history of each winding rope used in the mine is, in accordance with subregulation (2), entered in the winding rope log book.

Penalty: See regulation 17.1.

(2) The record of the history of a rope entered in the winding rope log book must include —

(a) the certificate number of that rope;

(b) the name of the shaft or winze in which the rope is used;

(c) the compartment of the shaft in which the rope is used;

(d) the date on which the rope was put on;

(e) the dates on which the rope was shortened;

(f) the dates on which the rope was re-capped;

(g) the dates of destructive and of non-destructive rope testing;

(h) the result of destructive or non-destructive rope testing;

(i) the date when the rope was taken off and the reason; and

(j) the dates of the examination, cleaning, and oiling of the rope as required by these regulations.

(3) A person who makes an entry in the winding rope log book must sign that entry as soon as practicable after making the entry.

Penalty: See regulation 17.1.

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11.42. Winding ropes — splicing

(1) A person must not use splicing for rope attachment without the approval of the senior inspector.

Penalty: See regulation 17.1.

(2) Except as provided in subregulation (1), the manager of a mine must ensure that ropes which have been spliced are not used for hoisting in a shaft or winze.

Penalty: See regulation 17.1.

11.43. Winding ropes — capping

(1) The manager of a mine must ensure that the method used for capping a winding rope is —

(a) approved by the senior inspector; and

(b) of a proven design that provides a minimum factor of safety of 7 when applied to the maximum static load on the capped end of the rope.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that a winding rope which is capped to secure the rope to a shaft conveyance or counterweight by means of a capel or socket is not used at any time unless that capping has been made within the period of 6 months immediately preceding its use.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that a rope which has been recapped is not used on any winding engine unless on the last occasion on which it was recapped the capping was moved a distance of not less than 150 millimetres along the rope towards the standing end of the rope.

Penalty: See regulation 17.1.

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11.44. Winding ropes — factors of safety

The manager of a mine must ensure that any rope used in a mine hoisting or haulage installation has a factor of safety —

(a) in the case of drum winding, that complies with regulation 11.61; and

(b) in the case of friction winding, that complies with regulation 11.71.

Penalty: See regulation 17.1.

11.45. Winding ropes and guide ropes — discard

The manager of a mine must ensure that a rope used in a mine hoisting or haulage installation is immediately withdrawn from use if —

(a) a physical inspection by a competent person shows that the rope appears to be unsafe for the use to which it is subjected;

(b) the breaking force of the rope by tensile test is less than 90% of the breaking force of that rope when new; or

(c) a non-destructive examination of the rope by a competent person using non-destructive testing equipment, shows that continued use of the rope is not consistent with safe operation of the hoisting or haulage installation.

Penalty: See regulation 17.1.

11.46. Winding ropes — maintenance

The manager of a mine must ensure that a rope used in a shaft or winze is cleaned and oiled or dressed in a manner that minimizes wear and corrosion.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

11.47. Guide ropes and rubbing ropes

(1) The manager of a mine must ensure that guide ropes and rubbing ropes are of locked coil construction unless otherwise approved in writing by the senior inspector.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that guide ropes or rubbing ropes are not used until the number, size, length, disposition, method and type of attachment of the rope and the tension weight used with the ropes has been approved in writing by the senior inspector.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that the minimum factor of safety of each guide and rubbing rope is 5.

Penalty: See regulation 17.1.

11.48. Hoist inspection

(1) The manager of a mine must ensure that hoists that are used for the conveyance of persons, or that could otherwise affect the safety of persons, are inspected by a competent person at intervals of not more than 12 months.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that at intervals of not more than 12 months non-destructive testing is carried out by a competent person on —

(a) all single line components of the brake system of a hoist the failure of which could make the brake inoperative; and

(b) the drum shaft of a hoist.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

11.49. Winding installations — inspection

(1) The manager of a mine must ensure that a competent person carefully examines —

(a) at least daily, the winding rope or ropes whilst they are travelling at a speed not exceeding one metre per second, and their attachments to the conveyances and counterweights, the brakes, depth indicators, cages, skips, head sheaves, safety devices and each external part of the winder installation upon the proper working of which life depends;

(b) at least weekly, the shaft guides, including guide ropes and the winding compartments generally, the balance ropes while they are travelling at a speed not exceeding one metre per second, the automatic winding controls, and the signalling arrangements generally;

(c) at least half yearly, each detaching hook by dismantling, cleaning, gauging for deformation, checking for corrosion and other imperfections, and testing with crack detection equipment;

(d) at least yearly, the winding engine and auxiliary equipment and each item of attachment in the following manner, namely —

(i) in the case of chains, chain links, shackles, pins and pin holes by measurement for wear;

(ii) in the case of each attachment, by checking for deformation, corrosion or other imperfections, and by testing with crack detection equipment; and

(iii) in the case of each winder brake system, each component of at least one brake, the failure of which would render the brake inoperative, by testing with crack detection equipment, and if there are 2 or more brakes in the winder brake

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system, each such brake must be tested in this manner on an alternate year basis.

Penalty: See regulation 17.1.

(2) If any serious weakness or defect in a rope or winding appliance is discovered as a result of an examination —

(a) the person who discovers the weakness or defect must immediately report the weakness or defect to the manager of the mine or to the manager's representative; and

(b) the manager of the mine must ensure that a person is not lowered or raised by the rope or appliance until the weakness or defect is remedied.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that a test is made prior to placing in commission any new, remodelled or repaired skip, cage or other conveyance, and after any alteration to the shaft furnishings or headframe, for clearance and free travel in all parts of the shaft in use up to the overwind detaching device.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that the results of all inspections and tests required by this regulation, together with action taken to remedy any weaknesses or defects found, are recorded —

(a) in the case of winding ropes and appliances, in the winding rope log book; and

(b) in the case of any other items, in the winding engine log book.

Penalty: See regulation 17.1.

(5) A person must not carry out any testing of materials required to be carried out under this regulation unless the person is a person approved for that purpose by the body known as the National Association of Testing Authorities, Australia.

Penalty: See regulation 17.1.

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11.50. Shaft conveyances — coupling

(1) A person must not use a chain in a shaft in lieu of a winding rope when persons are being raised or lowered, but short coupling chains may be used to attach the shaft conveyance to the rope in a vertical shaft.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that coupling chains which are attached to a shaft conveyance —

(a) number at least 2;

(b) have identical dimensions;

(c) are parallel and vertical; and

(d) have a combined factor of safety of not less than 20, however many chains are used.

Penalty: See regulation 17.1.

(3) This regulation does not apply to the suspension of kibbles in shaft sinking.

11.51. Shaft conveyances — testing after repairs

The manager of a mine must ensure that a cage, skip or other shaft conveyance is not used for raising or lowering persons until it has made at least one complete trip up and down the working portion of the shaft following —

(a) any stoppage for repairs which may affect the safe running of the winding engine;

(b) any repairs to the shaft or shaft conveyance or counterweight;

(c) any stoppage in shaft hoisting exceeding 4 hours duration; or

(d) the occurrence of any seismic event.

Penalty: See regulation 17.1.

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11.52. Shaft conveyances — overhead protection

The manager of a mine must ensure that each person working or travelling in or on a conveyance in a shaft has overhead protection from falls of rock or material down the shaft.

Penalty: See regulation 17.1.

11.53. Shaft conveyances — design and construction

Each responsible person at a mine must ensure that all shaft conveyances at the mine are designed, constructed, tested and inspected in accordance with AS 3785.4.

Penalty: See regulation 17.1.

11.54. Shaft conveyances — embarking and disembarking facilities

Each responsible person at a mine must ensure that provision is made at all working levels for persons to embark and disembark from a shaft conveyance safely.

Penalty: See regulation 17.1.

11.55. Cages to be used in shafts

(1) Each responsible person at a mine must ensure that whenever a mine shaft exceeds 60 metres in depth a suitable cage or skip is provided to raise or lower persons.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to a shaft during shaft sinking where a kibble is available for that purpose.

(3) The underground manager of an underground mine must —

(a) fix the maximum number of persons allowed to ride at any one time in a cage or other conveyance;

(b) ensure that number is posted up at the brace; and

(c) ensure that not more than that number of persons rides at any one time in the cage or other conveyance.

Penalty: See regulation 17.1.

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(4) In fixing the maximum number of persons allowed to ride at any one time in a cage or other conveyance under subregulation (3), the underground manager must ensure that there is at least 0.2 square metres of floor space for each person in the cage or conveyance.

Penalty: See regulation 17.1.

(5) A person must not travel in any cage or skip without being accompanied by the platman or skipman unless —

(a) the person is inspecting or repairing a shaft;

(b) an automatic winding engine is used;

(c) the person is authorised in writing by the manager to do so; or

(d) a load of persons is to be sent to the surface directly from a level plat or lowered from the surface directly to a level plat when a change of shift takes place, and —

(i) the platman or skipman remains on the plat; and

(ii) a braceman is stationed on the surface.

Penalty: See regulation 17.1.

(6) The manager of a mine must ensure that —

(a) a securely fastened gate or gates is or are used on each cage in which a person is travelling; and

(b) the platman or skipman is responsible for the safe entry and exit into and from the cage or skip and for the proper fastening of the shaft and cage gate or gates.

Penalty: See regulation 17.1.

(7) The manager of a mine must ensure that a competent person is appointed to be platman, or skipman and, except in the circumstances referred to in subregulation (5), to accompany any person who travels in the cage or skip.

Penalty: See regulation 17.1.

[Regulation 11.55 amended in Gazette 28 Feb 2003 p. 669.]

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11.56. Use of ore skip by persons

(1) The manager and the underground manager of a mine must ensure that a person is not raised or lowered in an ore skip in a vertical shaft unless the person stands on the bottom of the skip or on a platform provided in the skip for that purpose and provision is made for the safe entry and exit of the person.

Penalty: See regulation 17.1.

(2) The manager and the underground manager of a mine must ensure that all necessary precautions are taken to ensure that persons travelling in skips are not put at risk, and that the winding engine driver is fully informed at all times of this use of the skip or skips.

Penalty: See regulation 17.1.

11.57. Persons not to travel with material

(1) A person must not travel, or permit another person to travel, in a shaft or winze in or on any cage, skip, kibble, or other conveyance which contains timber, pipes, rails, explosives, ore, waste rock or similar material, or tools.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not prevent —

(a) a person who is repairing a shaft from travelling in or on a cage or skip with tools or materials necessary for repairing the shaft;

(b) a person from carrying small tools if they are in a suitable container;

(c) a person from travelling with the person's instruments;

(d) a driver from travelling with the driver's locomotive or vehicle; or

(e) a platman travelling in a cage or skip with tools, explosives or materials.

(3) A platman must not —

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(a) travel with any material that is not securely fastened or secure in the conveyance; or

(b) travel upwards with drill steel, timber, pipes or material of similar form.

Penalty: See regulation 17.1.

(4) A person must not ride in a deck of a multi-deck cage while a load other than passengers is in a higher deck.

Penalty: See regulation 17.1.

(5) A person must not ride in a shaft conveyance when equipment, long timber, rails or material of similar form is slung below the conveyance.

Penalty: See regulation 17.1.

11.58. Cage and skip attachments — design

(1) The manager of a mine must ensure that the components of attachments between the winding ropes, or balance ropes, and the cage, skip, kibble or counterweight are designed, constructed, tested and inspected in accordance with AS 3637.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that in respect of any component of attachment referred to in subregulation (1) —

(a) a screwed suspension member in tension is not used except for swivels used on balance ropes;

(b) the attachment does not have any main component welded;

(c) an open hook is not used in any hoisting operation;

(d) any king or humble detaching hook is of the thickened plate type; and

(e) the attachment is not subjected to any heat treatment other than the initial heat treatment performed by the manufacturer.

Penalty: See regulation 17.1.

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(3) The manager of a mine must ensure that any item of attachment between the winding ropes, balance ropes, and the cage, skip, kibble or counterweight is discarded on the completion of a period of 12 years in service.

Penalty: See regulation 17.1.

11.59. Cage and skip attachments — records

The manager of a mine must ensure that a record is kept of all shaft conveyance attachments used in a mine and that the record includes —

(a) the name of the shaft or winze in which the attachment is used;

(b) the location of that attachment on the conveyance, in the case of multi-rope attachments;

(c) the compartment of the shaft in which the attachment is used;

(d) the identification number of the attachment;

(e) the date on which the attachment was installed in service;

(f) the dates of the examinations, cleaning and oiling of attachment required by these regulations;

(g) the date and result of each testing of the attachment required by these regulations; and

(h) the date of the removal of the attachment from service.

Penalty: See regulation 17.1.

Division 3 — Drum winding operations

11.60. Application of Division

This Division only applies to drum winding operations.

Extract from www.slp.wa.gov.au, see that website for further information

11.61. Ropes — factors of safety

(1) This regulation is in addition to any requirements in these regulations that a rope be withdrawn from use if it fails to pass physical inspection, a tensile test or a non-destructive test.

(2) The manager of a mine must ensure that the load applied to any rope used for drum winding does not at any time in its working life result in a factor of safety which is less than the minimum factor, where L equals the depth of wind in metres, specified in relation to the relevant proposed use, namely —

Proposed Use	Minimum Factor of Safety
Transporting persons, or where the safety of persons is involved	7.5 — 0.001L
Transporting rock or materials, where the safety of persons is not involved	5.5 — 0.0003L
Transporting rock in a shaft used exclusively for that purpose	4.5
Transporting a machine or part of a machine at a speed of less than 2 metres per second	5

Penalty: See regulation 17.1.

11.62. Ropes — testing and maintenance

(1) The manager of a mine must ensure that any rope used on a drum winding engine —

(a) is recapped at intervals of not more than 6 months, or at such shorter intervals as may be designated by the district inspector;

(b) has 2 metres cut from the shaft conveyance or counterweight end and sent to a testing station for destructive tensile testing at intervals of not more than 6 months; and

(c) if required by the district inspector at the end of the first year after it has been installed, has a sufficient length cut

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from the shaft conveyance or counterweight end to enable a breaking and elongation test to be made of 2 metres of the rope which has repeatedly passed over the head sheave, at a testing station.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that if there are 2 or more layers on the drum, a rope used on a drum winding engine is cropped at yearly intervals at the drum end in a manner that will ensure that the position of the crossover points of the rope on the drum are changed.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that, unless exempted in writing from doing so by the senior inspector —

(a) the structure of the drum winding rope is examined at intervals of not more than 6 months over its entire working length by a non-destructive method for the purpose of determining any deterioration; and

(b) the condition of the rope as ascertained from that examination is recorded in the winding rope log book.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that —

(a) a test report is made of any destructive or non-destructive test carried out on a winding rope; and

(b) a copy of the test report is submitted to the senior inspector as soon as is practicable after it is made.

Penalty: See regulation 17.1.

11.63. Ropes — lubrication

The manager of a mine must ensure that winding ropes are lubricated with a suitable lubricating compound at intervals of not more than one month.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

11.64. Flanges on drums

(1) Each responsible person at a mine must ensure that on the drum of each winding engine used for raising or lowering persons are such horns, flanges, or other appliances as are sufficient to prevent the rope from slipping off the drum.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that if horns or flanges are provided on a drum of a winding engine, the horns or flanges project not less than 2 rope diameters or 100 millimetres, whichever is the greater, beyond the outermost rope layer on the drum.

Penalty: See regulation 17.1.

11.65. Drum and head sheave diameters

(1) Each responsible person at a mine must ensure that, unless otherwise approved in writing by the State mining engineer, the diameter of a drum or head sheave is not less than —

(a) in the case of a hoist installation, the diameter specified in AS 1418 Part 1 for classification of mechanism M8;

(b) in the case of a locked coil rope, 100 times the diameter of the rope; or

(c) in the case of any other rope, 80 times the diameter of the rope.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that the depth of the rope groove in the head sheave is not less than twice the diameter of the rope.

Penalty: See regulation 17.1.

11.66. Drum winder brakes

(1) Each responsible person at a mine must ensure that each drum of each double drum winding engine is provided with one or more brakes, and the drum of each single drum winding engine

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other than a hoist is provided with 2 or more brakes, and that each brake —

(a) however applied acts directly on the winder drum;

(b) is designed, adjusted and maintained so as to stop safely and hold the cage or skip under all conditions of loading, direction of travel and speed;

(c) can be applied manually by the winding engine-driver irrespective of the action of any safety device that may act to apply the brake or brakes;

(d) is automatically applied when the supply of power to the winder fails, or when the pressure of any fluid or other medium used as a means of controlling the brakes falls below a predetermined level;

(e) is automatically applied if an earth fault occurs in the electrical control circuit of push button controlled winding engines;

(f) when applied to that drum is capable of supporting a load equivalent of 2 times the maximum static load normally hoisted by that drum from the lowest operating position in the shaft; and

(g) so far as is practicable, is provided with a steel tension member between individual sole plates of brake shoes.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the braking system of each drum winding engine is designed in such a way that the failure of any one component in that system will not prevent the winding engine from being brought safely to rest.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that push button and automatically controlled drum winders are also provided with a suitable device which will automatically apply the brake before it becomes worn sufficiently to affect its safe operation.

Penalty: See regulation 17.1.

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(4) The manager of a mine must ensure that each part of each braking system of a drum winder has a minimum factor of safety of not less than 10, and screwed members in tension the failure of which would render the brake inoperative have a minimum factor of safety not less than 15.

Penalty: See regulation 17.1.

11.67. Rope detaching appliances

(1) The manager of a mine must ensure that provision is made in each drum winding installation, other than a hoist installation, for a suitable appliance to detach the rope from the conveyance in the event of an overwind and to prevent the conveyance once detached from falling down the shaft.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the distance between the detaching device on the headframe and the matching portion on the conveyance is at least 3 metres when the conveyance is in its highest normal operating position.

Penalty: See regulation 17.1.

11.68. Drum winding in single gear

(1) If a winding engine is provided with 2 drums, the manager of the mine must ensure that, except in an emergency, a person is not raised or lowered in a shaft conveyance connected with the engine while one of the drums is out of gear and loose on the drum shafting on which it operates.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that, if a double drum winding engine has one drum out of gear, that drum is prevented from revolving whilst out of gear.

Penalty: See regulation 17.1.

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11.69. Cage safety, appliances and testing

(1) The manager of a mine must ensure that, unless exempted in writing by the senior inspector, each cage and skip in which persons are transported is fitted with a suitable appliance to prevent its sudden fall down the shaft in the event of rope or winding system failure.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that a new or rebuilt cage is not used in a shaft until it is —

(a) proof loaded —

(i) in the case of a cage, with 2 times the static load normally hoisted; or

(ii) in the case of a skip, with 1.5 times the static load normally hoisted;

and

(b) provided with any safety appliances required by this regulation.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that safety appliances required by subregulation (1) are tested by a drop test each 2 weeks.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that, unless exempted in writing by the senior inspector, a cage used or intended to be used for transporting heavy equipment is fitted with suitable chairing devices for the purpose of loading and unloading heavy equipment.

Penalty: See regulation 17.1.

(5) The manager of a mine must ensure that, unless exempted in writing by the senior inspector, each cage or skip in which personnel are transported that is not fitted with safety appliances

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referred to in subregulation (1) is fitted with a slack rope detection device in proper working order that —

(a) is designed to give notice by visual or audible signal to the driver of the winding engine when a slack rope situation occurs; and

(b) will initiate emergency brake action application to the winding engine.

Penalty: See regulation 17.1.

Division 4 — Friction winding operations

11.70. Application of Division

This Division only applies to winding engine operations in which the rope or ropes are driven by friction.

11.71. Ropes — factors of safety

(1) This regulation is in addition to any requirement in these regulations that a rope be withdrawn from use if it fails to pass physical inspection, a tensile test or a non-destructive test.

(2) The manager of a mine must ensure that the load applied to any rope used for friction winding does not at any time in its working life result in a minimum factor of safety which is less than the factor specified in relation to the relevant proposed use, namely —

Proposed Use	Minimum Factor of Safety		
	Single rope	2 or 3 ropes	4 or more ropes
Transporting persons, or where the safety of persons is involved	7.5	6.9	6.3
Transporting rock or materials, where the safety of persons is not involved	6.8	6.2	5.6
Transporting rock in a shaft used exclusively for that purpose	6.3	5.7	5.1
Transporting a machine or part of a			

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machine at a speed of less than 2 metres per second	5	5	5
Balance ropes	6	6	6

Penalty: See regulation 17.1.

11.72. Ropes — testing

(1) This regulation is in addition to any requirement in these regulations that winding installations be inspected.

(2) The manager of a mine must ensure that each hoisting rope used on a friction winding engine is non-destructively tested, in a manner approved by the senior inspector, at intervals of not more than 6 months or such lesser period as the senior inspector may require.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that each hoisting rope in a friction winding installation is measured at intervals of not more than one month, or such lesser period as the senior inspector may require, to determine the total stretch of that rope.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that the results of each measurement referred to in subregulation (3) are recorded in the winding rope log book.

Penalty: See regulation 17.1.

11.73. Ropes — period of service

(1) The manager of a mine must ensure that, except with the approval in writing of the senior inspector, the period of service of any rope used for friction winding does not exceed 2 years.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that, except with the approval in writing of the senior inspector, the period of service of any rope used as a balance rope does not exceed 3 years.

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Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that a rope is discarded before reaching the period of service specified in this regulation if it shows —

(a) by surface visual inspection or by non-destructive testing, more than 6 broken wires in any section equal to the length of one external lay;

(b) a marked increase in the rate of stretch over the normal stretch noted during service;

(c) marked corrosion; or

(d) any other unsafe condition.

Penalty: See regulation 17.1.

11.74. Ropes — testing after discarding

The manager of a mine must ensure that —

(a) samples are cut from significant parts along the length of discarded winding ropes as required by the senior inspector; and

(b) the samples are subjected to such tests as may be determined by the senior inspector.

Penalty: See regulation 17.1.

11.75. Ropes — dressing restricted

The manager of a mine must ensure that rope dressing which would in any way increase the danger of slippage on the driving sheave is not used.

Penalty: See regulation 17.1.

11.76. Ropes — splicing prohibited

The manager of a mine must ensure that a spliced rope is not used as a winding or a balance rope in friction winding.

Penalty: See regulation 17.1.

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11.77. Ropes — tension adjustment

(1) The manager of a mine must ensure that multiple winding ropes on friction winders are attached to the cage, skip or counterweight through apparatus designed to load the ropes as uniformly as is practicable.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that if the attachments are connected directly to the cage, skip or counterweight means are provided for —

(a) adjusting the length of the attachment; and

(b) indicating unequal tension between ropes.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that each hoisting rope in a friction winding installation is measured at intervals of not more than one month, or such lesser period as the senior inspector may require, to determine and ensure that tension is evenly applied.

Penalty: See regulation 17.1.

11.78. Arresting devices

The manager of a mine must ensure that, in friction winding, no appliance intended to prevent a shaft conveyance from falling down the shaft following a winding rope failure is installed or used until it has been approved in writing by the State mining engineer.

Penalty: See regulation 17.1.

11.79. Driving sheave

(1) The manager of a mine must ensure that, unless otherwise approved in writing by the State mining engineer, the driving sheave diameter of a friction winder when measured at the bottom of the rope grooves is not less than —

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(a) 100 times the diameter of the winding rope when locked coil ropes are used; and

(b) 90 times the diameter of the winding rope when flattened strands are used.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the grooves of a multigrooved sheave are of substantially the same root diameter.

Penalty: See regulation 17.1.

11.80. Deflection sheave

(1) The manager of a mine must ensure that the diameter of any friction winding deflecting sheave is not less than 0.9 times the diameter of the corresponding driving sheave.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the angle of contact of the rope on a deflecting sheave is sufficient to prevent the rope slipping on the sheave.

Penalty: See regulation 17.1.

11.81. Friction winder brakes

(1) The manager of a mine must ensure that the driving sheave of each friction winding engine is provided with 2 or more brakes and that each brake —

(a) however applied acts directly on the driving sheave;

(b) is designed, adjusted and maintained safely to stop and hold the cage or skip under all conditions of loading, direction of travel and speed;

(c) when applied by the means provided for use by the winding engine driver, is capable of producing a braking torque —

(i) when transporting persons, of not less than 3 times; and

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(ii) when transporting rock or materials, of not less than 2 times,

the maximum out-of-balance static torque which will be applied to the driving sheave by the normal loads to be carried by the winder;

(d) when applied by any means, is capable of producing a braking torque not greater than 70% of that which will cause the winding rope to slip on the driving sheave, based on the minimum sliding coefficient of friction between the rope and sheave under normal operating conditions;

(e) can be applied manually by the winding engine driver irrespective of the action of any safety device that may act to apply the brake or brakes;

(f) is automatically applied when the supply of power to the winding engine fails, or when the pressure of any fluid or other medium used as a means of controlling the brakes falls below a predetermined level;

(g) is automatically applied if an earth fault occurs in the electrical control circuit of push button controlled winding engines; and

(h) so far as is practicable, is provided with a steel tension member between individual sole-plates of brake shoes.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the braking system of each friction winding engine is designed in such a way that the failure of any one component in that system will not prevent the driving sheave from being brought safely to rest.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that push button and automatically controlled winding engines are also provided with a suitable device which will automatically apply the brake before it becomes worn sufficiently to affect its safe operation.

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Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that each part of each braking system has a factor of safety of not less than 10, and screwed members in tension the failure of which would render the brake inoperative have a minimum factor of safety of not less than 15.

Penalty: See regulation 17.1.

11.82. Rope detaching appliances

The manager of a mine must ensure that detaching appliances for cages, skips or counterweights are not provided in a friction winding operation.

Penalty: See regulation 17.1.

11.83. Synchronizing devices

(1) The manager of a mine must ensure that each friction winding engine is provided with a device that will automatically synchronize the depth indicator and the automatic speed control device required by regulation 11.17 with the position of the conveyance in the shaft.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the synchronizing adjustment referred to in subregulation (1) only takes place while the brakes are applied and the winding engine is stationary.

Penalty: See regulation 17.1.

11.84. Slip and direction indicators

The manager of a mine must ensure that each friction winding engine is provided with —

(a) a device which will indicate slip of the rope relative to the driving sheave and stop the winder if a predetermined rate of slip is exceeded; and

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(b) a device for indicating in which direction the driving sheave is turning.

Penalty: See regulation 17.1.

11.85. Loading limitations

The manager of a mine must ensure that a friction winder is not loaded to the extent that it will require more than 70% of the available braking torque to stop and hold the driving sheave.

Penalty: See regulation 17.1.

11.86. Cage chairing devices

The manager of a mine must ensure that in friction winding no chairing device is provided in a shaft or on a cage without the written approval of the senior inspector.

Penalty: See regulation 17.1.

11.87. Overwound conveyance arrester

(1) The manager of a mine must ensure that, in the headframe or tower and in the part of the shaft below the lowest landing for the time being in use, apparatus is provided that is designed and constructed to ensure that, in the event of overwinding with a friction winder, the cage, skip or counterweight, as the case may be, is brought to rest without danger.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that, in the headframe or tower of the shaft, safety devices are provided that are designed and constructed to prevent a cage, skip or counterweight which has been brought to rest by apparatus provided under subregulation (1) from falling down the shaft.

Penalty: See regulation 17.1.

11.88. Shaft sump to be kept clear

(1) The manager of a mine must ensure that, when friction winding is used, the shaft sump is kept clear of water, debris or other

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material to an extent that will prevent the balance ropes from contacting that water, debris or other material.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that, unless exempted in writing by the senior inspector, a device or devices are provided in the shaft sump region that will, if a balance rope loop rises vertically from its normal position, remove the power from the winding engine and initiate an emergency brake application to the winding engine.

Penalty: See regulation 17.1.

11.89. Inspection of shaft sump

The manager of a mine must ensure that, when friction winding is used, the space between the lowest stopping point and the shaft sump is equipped with ladders or other suitable means of access to permit proper inspection and maintenance of that part of the shaft and the equipment.

Penalty: See regulation 17.1.

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Part 12 — Shaft sinking

12.1. Application of Part

This Part applies only to and in relation to shaft sinking operations.

12.2. Relationship to Part 11

This Part applies in addition to Part 11, but if there is any inconsistency between a provision of this Part and a provision of that Part the provision of this Part prevails to the extent of the inconsistency.

12.3. New shaft sinking operations

(1) The manager of a mine must ensure that before sinking any new shaft or extending any existing shaft, the senior inspector is notified in writing of the intention to sink or extend the shaft and plans and specifications are submitted to the senior inspector showing —

(a) the location of the shaft;

(b) the general layout of the sinking project;

(c) details of the sinking and hoisting equipment and the conveyances, rope type and size and attachments to be used;

(d) the ventilation arrangements; and

(e) any safety precautions that are to be taken in respect of the proposed operation.

Penalty: See regulation 17.1.

(2) The senior inspector may request that further details relevant to the proposed operation be submitted to the senior inspector.

(3) The manager of a mine must ensure that a request made under subregulation (2) is complied with within one month after the day on which the request is made.

Penalty: See regulation 17.1.

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12.4. Approval of shaft sinking operations

(1) The manager of a mine must not cause or permit any shaft sinking operation to be commenced at the mine unless the operation has been approved in writing by the senior inspector.

Penalty: See regulation 17.1.

(2) Before approving any shaft sinking operation the senior inspector may require specified precautions to be taken in respect of the operation.

(3) The manager of a mine must ensure that a requirement made under subregulation (2) is complied with.

Penalty: See regulation 17.1.

12.5. Use of crane

(1) The manager of a mine must ensure that a crane is not used to hoist the broken rock from the initial surface excavation or from the shaft unless its use for that purpose has been approved in writing by the senior inspector.

Penalty: See regulation 17.1.

(2) The approval may —

(a) be subject to specified conditions imposed by the senior inspector relating to the operation of the crane; and

(b) at any time be withdrawn if in the senior inspector's opinion the use of a crane could create a hazard.

(3) The manager of a mine must ensure that any condition imposed under subregulation (2)(a) is complied with.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that a crane is not used to hoist the broken rock from the shaft at a depth exceeding 50 metres.

Penalty: See regulation 17.1.

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(5) The manager of a mine must ensure that a crane is not used when the shaft perimeter has been traversed by dividers or any other structure which could be an obstruction to the free passage of the shaft conveyance.

Penalty: See regulation 17.1.

(6) The manager of a mine must ensure that any load lifted by a crane in shaft sinking operations does not exceed 50% of the normal safe working load as provided in AS 1418.

Penalty: See regulation 17.1.

(7) The manager of a mine must ensure that any crane used is of a slewing type and is located in a fixed position during the hoisting and dumping operations.

Penalty: See regulation 17.1.

(8) The driver of a crane used to hoist the broken rock from the initial surface excavation or from the shaft is required to be certificated under the *Occupational Safety and Health Act 1984*.

(9) The manager of a mine must ensure that, if a crane is used, an effective method of signalling is installed to allow communication with the driver.

Penalty: See regulation 17.1.

(10) The manager of a mine must ensure that a person is not raised or lowered from a shaft excavation by means of a crane unless the person —

(a) travels in a kibble or similar conveyance;

(b) wears a safety belt attached to the rope or conveyance if more than one third of the person's body is outside the conveyance; and

(c) is within sight of a person stationed in a place to communicate with the crane driver.

Penalty: See regulation 17.1.

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(11) A person must not remain in the shaft excavation while the crane is used to hoist broken rock by means of a grab.

Penalty: See regulation 17.1.

12.6. Alternative means of travel

(1) The manager of a mine must ensure that during shaft sinking operations, unless there is an alternative winding plant available for the raising or lowering of persons in an emergency in the event of power failure or winding plant failure, a substantial ladderway securely supported at intervals of not more than 5 metres is installed from the surface to the bottom of the shaft.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that if a sinking stage is used provision is made to permit travel from the shaft bottom to that stage.

Penalty: See regulation 17.1.

12.7. Factors of safety

The manager of a mine must ensure that the minimum factors of safety to be used in shaft sinking operations are —

(a) for ropes hoisting persons and materials or rock, 7.5 — 0.001L where L equals the depth of wind in metres;

(b) for ropes raising and lowering a sinking stage, 6;

(c) for chains used for the suspension of a kibble, a combined factor of 20; and

(d) for all components of attachments, 10.

Penalty: See regulation 17.1.

12.8. Inspection and maintenance of ropes

The manager of a mine must ensure that the following inspection and maintenance procedures are followed in relation to winding ropes used to support a shaft sinking stage —

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(a) the structure of each rope is examined at least weekly for —

(i) the incidence of broken wires;

(ii) any obvious increase in the lay length;

(iii) any obvious corrosion; and

(iv) any other unsafe condition;

(b) each rope is lubricated at least monthly with a suitable lubricating compound;

(c) if a physical inspection of the rope by a competent person shows that it appears to be unsafe for use, the rope is discarded; and

(d) the period of service of any such rope does not exceed 3 years.

Penalty: See regulation 17.1.

12.9. Monkeys, crossheads and other conveyances

The manager of a mine must ensure that, if the depth of a shaft exceeds 50 metres, a kibble and monkey or crosshead arrangement or some other conveyance, that is of a design approved by the senior inspector and is provided with an overhead cover for the protection of persons when travelling, is used for haulage purposes in the shaft.

Penalty: See regulation 17.1.

12.10. Kibbles and attachments

(1) The manager of a mine must ensure that a kibble used in shaft sinking operations is of robust construction and is of a shape that will prevent it from catching on any obstruction during its travel in the shaft.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the kibble is suspended by a bridle, or by means of at least 3 chains equally spaced around the perimeter of the kibble top.

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Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that chains used for the suspension of the kibble —

(a) are of identical dimensions and strength;

(b) are of sufficient length to ensure that the included angle at the apex of the suspension of any 2 chains does not exceed 60°; and

(c) are designed, manufactured and tested in accordance with AS 3637.6.

Penalty: See regulation 17.1.

12.11. Overfilling of kibbles or skips

The manager of a mine must ensure that all persons who are authorised by the manager to transmit signals from the shaft floor to the stage hand positioned on the sinking stage are instructed in writing by the manager to ensure that —

(a) the kibble is correctly attached to the winding rope;

(b) the kibble is properly loaded;

(c) no broken rock projects above the rim;

(d) tools, equipment and other materials for use in the mine are not carried together with broken rock, and are secured if they project above the rim of the kibble;

(e) nothing capable of causing injury is adhering to the outside of the kibble; and

(f) when the kibble is to be hoisted it is first raised sufficiently to hang free and then steadied.

Penalty: See regulation 17.1.

12.12. Interlocking

The manager of a mine must ensure that interlocking is provided with the winding engine control system so that —

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(a) when winding is taking place, tipping chutes are clear of the path of the kibble;

(b) during an ascending wind, the shaft top doors are open whenever a kibble is in a zone extending from a safe stopping distance below the doors until it is above the doors; and

(c) before discharging kibbles into the tipping chutes, all shaft top doors are closed.

Penalty: See regulation 17.1.

12.13. Firing

The manager of a mine must ensure that, unless otherwise authorised in writing by the senior inspector, firing in shaft sinking operations is electrically initiated from the surface or from some other safe location.

Penalty: See regulation 17.1.

12.14. Pentices

The manager of a mine must ensure that when a shaft is to be sunk below any level which is being worked it is protected below that level by a securely constructed pentice.

Penalty: See regulation 17.1.

12.15. Timber bearer sets

The manager of a mine must ensure that, if timber is used to line a shaft, bearer sets or other means of support are provided between working levels or at distances of not more than 60 metres apart.

Penalty: See regulation 17.1.

12.16. Protection

(1) The manager of a mine must ensure that during shaft sinking operations adequate provision is made and maintained to

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prevent spillage from falling down the shaft during dumping operations.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that a door or doors for covering the sinking compartment are provided and maintained at the collar of each shaft while sinking operations are in progress.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that, unless suitable alternative protection is provided to prevent spillage from falling down the shaft, the doors are kept closed at all times when —

(a) persons, tools or material are being loaded into or unloaded from the kibble or skip at the collar of the shaft; or

(b) the kibble or skip is being dumped.

Penalty: See regulation 17.1.

12.17. Warning of obstruction

The manager of a mine must ensure that any doors or other shaft protective devices which, when moved into the haulage way or travel area of a shaft, would interfere with the free passage of the conveyance are equipped so that their position is positively indicated to the winding engine driver.

Penalty: See regulation 17.1.

12.18. Signals

The manager of a mine must ensure that signals other than the Code of Signals are not used in a shaft sinking operation without the approval in writing of the senior inspector.

Penalty: See regulation 17.1.

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12.19. Hoisting and lowering of shaft sinking stage

The manager of a mine must ensure that, except in an emergency, the following procedures are followed when a shaft sinking stage suspended by a stage winder is in use —

(a) stage winding is carried out only when all other winding operations in the shaft have been stopped;

(b) when the stage is to be moved, the drivers of other winders are advised and the stage is not moved until their winds are completed and the conveyances are parked clear of the projected stage movement; and

(c) when the stage movement is completed, drivers of other winders are notified and the drivers re-establish their stage position marks.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

Part 13 — Surface mining operations

13.1. Application of Part

This Part applies only to and in relation to surface mining operations.

13.2. Motor vehicle brakes

(1) Each responsible person at a mine must ensure that a motor vehicle is not used at the mine unless it is equipped and maintained with suitable brakes capable of effectively stopping and holding that vehicle fully loaded under any conditions of operation when driven in accordance with the manager's instructions.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that the following types of equipment at the mine are equipped with independent braking systems for use in an emergency in the event of failure of the primary braking system —

(a) wheeled earth moving machinery; and

(b) any other vehicle to which it is practicable to fit such a system.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that —

(a) each motor vehicle at the mine is maintained in good order and condition; and

(b) a competent person tests and, if necessary, adjusts the brakes of each motor vehicle to ensure that they operate effectively.

Penalty: See regulation 17.1.

(4) A person must not leave a motor vehicle unattended at a mine unless it is parked in a safe manner with the controls in the

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correct position for parking and the parking brakes fully applied.

Penalty: See regulation 17.1.

13.3. Motor vehicle safety equipment

(1) Each responsible person at a mine must ensure that all motor vehicles used at a mine are equipped with —

(a) effective headlights, tail lights and turn indicators;

(b) an effective audible warning signal, which can be sounded when the vehicle is about to be moved if clear vision immediately in front of and behind the vehicle is not available to the driver;

(c) adequate seating for the driver and any passengers; and

(d) a flashing light on the cab of all light servicing vehicles and vehicles used to transport personnel.

Penalty: See regulation 17.1.

(2) The driver of a vehicle used at a mine must sound the warning signal referred to in subregulation (1)(b) when the vehicle is about to be moved if clear vision immediately in front of and behind the vehicle is not available to the driver.

Penalty: See regulation 17.1.

(3) The driver of a motor vehicle used at a mine must ensure that a flashing light on the vehicle is operated when the vehicle is being used in an area designated by the manager.

Penalty: See regulation 17.1.

(4) The manager of a mine must not allow a motor vehicle to be driven, and a person must not drive a motor vehicle, in a quarry unless the brakes, steering, warning signal and lights are in good working condition.

Penalty: See regulation 17.1.

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(5) A person who finds any defect which could make the operation of a motor vehicle at a mine unsafe must immediately report the defect to the manager or the manager's representative.

Penalty: See regulation 17.1.

13.4. Loading precautions

(1) The driver of a haul truck at a mine must not enter or leave his or her cab while the truck is being loaded.

Penalty: See regulation 17.1.

(2) The driver of a shovel or loader must not cause the bucket of the shovel or loader to be traversed over the driver's cab of a truck or other motor vehicle during loading operations.

Penalty: See regulation 17.1.

(3) A person must keep clear of the area between the loading unit and the quarry pit face, and the area traversed by the loading bucket during loading operations.

Penalty: See regulation 17.1.

13.5. Dumping precautions

(1) The manager of a mine must ensure that the design, layout, construction and maintenance of any dump or stockpile takes into account the following factors to minimize any potential for instability of the dump or stockpile —

(a) the nature of the material dumped;

(b) the size and weight of the equipment used;

(c) the site conditions, including stability of the area on which the dump is built;

(d) the drainage conditions; and

(e) the weather conditions.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that rock or other material is not dumped from a motor vehicle over a bank or into a bin at

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the mine unless there is an effective back stop provided or a person suitably stationed to guide and direct the driver of the motor vehicle to a safe dumping position.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that, when dumping is carried out at the mine (whether by day or by night), marker guides or other effective signs are placed to indicate to the driver of the motor vehicle the limit of safe approach to the tipping area.

Penalty: See regulation 17.1.

(4) The manager of a mine must ensure that, when dumping is carried out by truck at night at the mine, the area is illuminated by stationary lights so placed as to give effective illumination to the working area and to the edge of the dump area.

Penalty: See regulation 17.1.

(5) The manager of a mine must ensure that a system is established at the mine that ensures the stability of a dumping area if rock or other material is to be dumped from a motor vehicle over any bank or bench.

Penalty: See regulation 17.1.

(6) The manager of a mine must ensure that no dumping is carried out over the edge of a stockpile at the mine when loading out from the base of the stockpile is taking place unless the loadout area is at a sufficient distance that it will not undermine the dumping location.

Penalty: See regulation 17.1.

13.6. Lighting

(1) The manager of a mine must ensure that all workplaces in surface mining operations are illuminated at night.

Penalty: See regulation 17.1.

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(2) A person must not enter an unilluminated part of a quarry unless —

(a) the person is in a vehicle that is illuminated; or

(b) the person or another person accompanying the person carries a light that is adequate to ensure safety.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that —

(a) safe driving zones on roads in quarry operations are marked by lights or other marker guides which are clearly visible at night; and

(b) that the edges of benches and banks and similar precipitous places near roads used for quarry operations are clearly illuminated or effectively marked.

Penalty: See regulation 17.1.

13.7. Bench widths and open pit roads

(1) The manager of a mine must ensure that quarry operation benches are of sufficient width to provide safe conditions for all vehicles, equipment and persons working or travelling thereon, and the safe travelling width between any bench face and shoulder of that bench is demarcated.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the design and construction (including the width, gradient, camber and radius of curvature of bends) of each road and other vehicle operating area at the mine —

(a) is such as to enable the safe operation of all mobile equipment authorised to travel on the road or in the area; and

(b) takes into account the size, speed, loads and operating characteristics of the equipment to be used, and the pit conditions including the effects of weather, on the road or in the area.

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Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that each road and other vehicle operating area at the mine is maintained so as to enable the safe operation of all mobile equipment authorised to travel on the road or in the area.

Penalty: See regulation 17.1.

(4) The manager of a mine must cause such signs to be erected or other devices or means to be installed as may be necessary to control the speed and movement of vehicles using roads in a quarry.

Penalty: See regulation 17.1.

(5) The manager of a mine must ensure that an adequate windrow or bund of material is provided on the outer edge of roadways in the open pit and on the outer edge of any roadway on the surface adjacent to a bank or steep slope.

Penalty: See regulation 17.1.

13.8. Geotechnical considerations

(1) The principal employer at, and the manager of, a mine must ensure that geotechnical aspects are adequately considered in relation to the design, operation and abandonment of quarry operations.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that the following measures are taken in relation to ground control in the quarry —

(a) adequate consideration is given to local geological structure and its influence on wall stability;

(b) adequate consideration is given to shear strength of the rock mass and its geological structure;

(c) a proper analysis is carried out of rain water inflow, surface drainage pattern, groundwater regime and mine

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de-watering procedures and their influence on wall stability over time;

(d) where necessary, appropriate designs of rock reinforcement are applied and used, and the quality of installation is verified;

(e) analysis is carried out of open pit wall stability for the projected geometry of the pit;

(f) appropriate drilling and blasting procedures are used to develop final walls; and

(g) appropriate methods of open pit wall monitoring are used over a period of time to determine wall stability conditions.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that appropriate precautions are taken and written safe working procedures are followed if open pits are excavated through abandoned underground workings, or in close proximity to current underground workings.

Penalty: See regulation 17.1.

13.9. Precautions in working faces and benches

(1) The manager of a mine must ensure that the maximum vertical height of any quarry bench face is determined with regard to the measures set out in regulation 13.8(2) and that an adequate margin of safety is provided for persons working on the bench below the face.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that, where necessary, appropriate methods and equipment are used to scale down bench faces above the benches on which persons are required to work.

Penalty: See regulation 17.1.

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(3) The manager of a mine must ensure that if a bench is, or a series of benches are, left unworked in a quarry operation, the height of the bench faces and the width of the benches is such that so far as is practicable localized failures of such benches can be contained to prevent a hazard to persons working deeper in the pit and that equipment is available to persons at the benches to enable them to make the area safe.

Penalty: See regulation 17.1.

(4) The manager of a mine in which the vertical height of the face exceeds 3 metres and in which explosives are used, must ensure that bench drilling is carried out from the top of the bench.

Penalty: See regulation 17.1.

(5) Subregulation (4) does not prevent the drilling and firing of toe or other holes authorised by the manager.

Penalty: See regulation 17.1.

(6) The manager of a mine must ensure that a quarry face is not drilled or otherwise worked in a manner which will create an overhang of the face, and if unconsolidated rock is mined the face and sides must be battered to prevent a collapse.

Penalty: See regulation 17.1.

(7) The manager of a mine must ensure that a quarry face is not undercut by the excavation of a slot at the toe or in any other part of the face.

Penalty: See regulation 17.1.

(8) Subregulation (7) does not prevent a tunnel or adit being driven into the face.

(9) The manager of a mine must ensure that, if a person on foot is required to work at the toe of a quarry face or on the face itself, the face is scaled of any loose rock which could fall on the person.

Penalty: See regulation 17.1.

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(10) This regulation does not apply to a quarry where the rock is being mined or sluiced by jets of water or like material.

13.10. Sluicing operations

In a quarry where the rock is being mined or sluiced by jets of water or like material —

(a) a person must not approach —

(i) the top of any quarry operation face within a distance equal to twice the height of that face; or

(ii) the toe of that face within a distance determined by the manager;

and

(b) the manager of the mine must ensure that signs are erected to mark the limits referred to in paragraph (a).

Penalty: See regulation 17.1.

13.11. Restriction of access

The manager of a mine must implement such measures as are necessary to prevent inadvertent access to a surface mining operation by persons who are not employed at the mine or are not authorised to enter the mine.

Penalty: See regulation 17.1.

13.12. Stockpile safety precautions

(1) A person must not walk or climb on top of any active surge stockpile of broken rock to which broken rock is fed from above and from which the rock is withdrawn through an extraction system below unless —

(a) the person has been instructed to do so by the manager or the manager's representative;

(b) the feed to and from the stockpile has been stopped;

(c) it has been established that the extraction system below is not hung up;

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(d) the person uses an appropriate fall arrest protection system; and

(e) the person is assisted by another person stationed at a safe vantage point above the person.

(2) A person must not use earthmoving equipment on a surge stockpile unless the manager or the manager's representative has authorised the person to do so.

Penalty: See regulation 17.1.

(3) The manager or the manager's representative must not give authorisation under subregulation (2) unless the manager or the manager's representative is satisfied that it is safe to use the earthmoving equipment on the stockpile.

(4) The manager of a mine must ensure that, if material is removed from the base of a stockpile, adequate precautions are taken to ensure that a slump of the stockpile will not endanger any person working on, or in the vicinity of, the stockpile.

Penalty: See regulation 17.1.

13.13. Stockpile tunnel exits

(1) Subject to subregulation (2), the manager of a mine must ensure that any tunnel under a surge stockpile of broken rock or other unconsolidated material has 2 entrances which are kept clear of obstructions at all times.

Penalty: See regulation 17.1.

(2) A tunnel under a surge stockpile may have a single entrance, if there is only one extraction point which is located at the blind end of the tunnel.

13.14. Sand pits

(1) Unless the face of a sandpit stands at an angle that approximates the natural angle of repose of the sand, the manager of the mine must determine the maximum height of a working face after considering the nature of the material mined, the method of

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mining and the equipment being used, so that safe working conditions are maintained.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that each bench has separate loading arrangements and is of sufficient length and breadth to provide safe working conditions for the vehicles and equipment to be used thereon.

Penalty: See regulation 17.1.

(3) The manager of a mine must ensure that a working face is advanced over as great a length as is practicable and, at the end of each day of work, is sloped to prevent a slump of sand.

Penalty: See regulation 17.1.

(4) For the purposes of this regulation the walls of a sand pit excavation are taken to be working faces.

13.15. Mine boundaries

(1) The manager of a mine must ensure that, if any planned or existing excavation, waste dump, ore stockpile, water or tailings impoundment or other activity or construction may present a hazard to persons on any adjacent mine or tenement or on any land adjacent to the boundary of the mine —

(a) the hazards are identified and the associated risks are assessed; and

(b) consideration is given to what preventative or remedial measures can be taken to remove the hazard or guard against those risks.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that excavations in a quarry are not mined so close to the boundaries of a tenement or other land holding, which is owned by a person other than the principal employer of the mine, that adequate room is not left to install protection against inadvertent access by persons after the quarry is abandoned.

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Penalty: See regulation 17.1.

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Part 14 — Dredging

14.1. Meaning of "dredge"

In this Part, unless the contrary intention appears —

dredge means any floating vessel used for —

(a) mining operations consisting of digging, cutting, excavating or raising (whether by mechanical, hydraulic or pneumatic means) any rock, metal, mineral or mineral substance from below the surface of a body of water (whether natural or artificial); or

(b) the purpose of treating or otherwise dealing with any rock, metal, mineral or mineral substance that has been dug, cut, excavated or raised as provided in paragraph (a),

but does not include —

(c) any floating vessel used for marine or aquatic engineering works, harbour works or land reclamation works; or

(d) any barge, workboat, tender, anchor punt or other vessel ancillary to a floating vessel used for a purpose referred to in paragraph (a) or (b).

14.2. Application of Part

This Part applies only to and in relation to dredging operations.

14.3. Dredges to be approved

A person must not use a dredge, or cause or permit another person to use a dredge, in any mining operation unless the use of the dredge has been approved in writing by the State mining engineer.

Penalty: See regulation 17.1.

14.4. Approval of use of a dredge

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(1) A person may apply to the State mining engineer for approval to use a dredge in any mining operations.

(2) An application must include —

(a) plans showing the location of the dredging operation together with the general layout of the dredging proposal;

(b) design and construction details of the dredge including —

(i) structural details;

(ii) the means to be used to manoeuvre the dredge and move the dredge from place to place in the dredging operation;

(iii) the means to be used to break out and raise the product of the dredging operations; and

(iv) the maximum depth below the surface of the water at which dredging operations are to be carried out;

(c) design details of any mooring or anchoring apparatus to be used in carrying out the dredging operation;

(d) details of the loads used in any design, stability and buoyancy calculations;

(e) details of any ballast requirements or limitations including any restrictions on the storage of free liquid, and the maximum and minimum draught of the dredge;

(f) details of the means of access from the bank to the dredge;

(g) the report of a qualified naval architect confirming the buoyancy and stability of the dredge under all operation conditions;

(h) the results of buoyancy and stability tests; and

(i) details of any approvals obtained under other laws.

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(3) The State mining engineer may request a person to provide information additional to that provided under subregulation (2).

(4) A person must ensure that a request made under subregulation (3) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

(5) If a person applies in accordance with this regulation, the State mining engineer may approve the use of a dredge in a mining operation.

14.5. Approval of repairs or modifications

(1) Each responsible person at a mine must ensure that before any repairs, modifications or alterations are carried out on a dredge that may affect its strength, buoyancy or stability —

(a) a person applies to the State mining engineer for approval to carry out that work;

(b) plans, specifications, drawings and design calculations are submitted to the State mining engineer which indicate the nature and extent of that work; and

(c) the work is approved by the State mining engineer.

Penalty: See regulation 17.1.

(2) The State mining engineer may request the provision of information additional to that provided under subregulation (1).

(3) Each responsible person at a mine must ensure that a request made under subregulation (2) is complied with as soon as is practicable.

Penalty: See regulation 17.1.

(4) If a person applies in accordance with this regulation, the State mining engineer may approve the carrying out of repairs, modifications or alterations on the dredge.

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14.6. Dredging operations and maintenance

Each responsible person at a mine must ensure that —

(a) the hull of a dredge is maintained in a sound and watertight condition;

(b) buoyancy compartments and ballast compartments are maintained so as to ensure the stability of the dredge;

(c) freeboard is maintained to suit the prevailing operating conditions;

(d) suitable means are provided to prevent persons from falling overboard;

(e) warning systems or devices are provided to warn that machinery is about to be started;

(f) automatic electrical or mechanical devices are provided that immediately stop any apparatus for breaking out or raising material from the working face in the event of an overload which might affect the stability of the dredge;

(g) devices are provided that indicate variations in the list and the fore and aft trim of the dredge; and

(h) the stability and structure of the dredge are maintained when materials, plant, equipment or other loads are transferred to it or removed from it.

Penalty: See regulation 17.1.

14.7. Life saving appliances

(1) The manager of a mine must ensure that any dredge used in a mining operation is equipped with such life saving equipment as is necessary to preserve the lives and effect the rescue of persons who may fall overboard.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that all life saving equipment referred to in subregulation (1) is —

(a) kept in a conspicuous place that is easily accessible; and

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(b) immediately repaired or replaced when it is damaged or lost.

Penalty: See regulation 17.1.

(3) A person must not interfere with any life saving equipment provided on a dredge except —

(a) for the purpose of saving lives;

(b) in the course of the conduct of a training exercise approved by the manager; or

(c) as otherwise authorised by the manager.

Penalty: See regulation 17.1.

14.8. Head lines, side lines and mooring lines

(1) The manager of a mine must ensure that, if necessary, warning notices are posted in conspicuous places to warn persons of danger from head lines, side lines and other drive lines or mooring lines.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that each anchor for a head line, side line or other drive line or mooring line is of adequate strength.

Penalty: See regulation 17.1.

14.9. Illumination

(1) Each responsible person at a mine must ensure that each workplace used in a dredging operation is adequately illuminated at night.

Penalty: See regulation 17.1.

(2) A person must not enter an unilluminated part of a dredging operation at night unless the person or another person accompanying that person carries a light adequate to ensure the person's safety.

Penalty: See regulation 17.1.

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Part 15 — Railway operations

15.1. Terms used in this Part

In this Part, unless the contrary intention appears —

certificate means a certificate issued under regulation 15.7;

controller, in relation to a railway, means the person appointed by the manager of a mine to control the movement of railway vehicles at the mine;

in-cab signalling means a signalling device in the cab of a locomotive that can be operated by the controller by remote control;

locomotive means a vehicle propelled by its own motive power and running on rails which is used primarily for the haulage of wagons or other rolling stock, but does not include a special vehicle used solely for the maintenance or inspection of the rail track and which does not haul other rolling stock;

main line means that part, or those parts, of a rail track used primarily for ore transport purposes, the limits of which are clearly marked by fixed signs in the ground adjacent to the track;

operating rules, in relation to a railway, means the operating rules determined for the railway under regulation 15.4;

order means an order made by a controller relating to the movement of a railway vehicle;

railway vehicle means any vehicle that is used on a railway track;

train means a locomotive or coupled locomotives with or without railway wagons or other rail vehicles attached thereto.

15.2. Application of Part

(1) This Part applies only to and in relation to railway operations conducted in or about a mine for mining or related purposes.

(2) This Part does not apply to or in relation to —

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(a) railways owned and operated by the State or an authority of the State;

(b) railways owned and operated by any national rail authority of the Commonwealth;

(c) railway operations conducted underground in underground mines; or

(d) narrow-gauge or light railway operations conducted at the shaft brace or adit portal of an underground mine in connection with the railway underground at that mine.

15.3. Main line limits and yard limits

(1) The manager of a mine must ensure that the limits of the main line and of any shunting yard are —

(a) made known to each person engaged in the operation of the railway; and

(b) clearly indicated by means of fixed signs adjacent to the track.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that no change is made to any main line or yard limit until due notice has been given to each person engaged in the operation of the railway.

Penalty: See regulation 17.1.

15.4. Operating rules

(1) The manager of a mine must ensure that no train operates at the mine unless —

(a) operating rules, including signals and signal codes, that comply with subregulation (2) have been developed for the railway;

(b) a copy of the operating rules has been submitted to the State mining engineer for approval; and

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(c) the rules have been approved in writing by the State mining engineer.

Penalty: See regulation 17.1.

(2) The operating rules must be clear and must specify standards, procedures, and methods of working so that persons operating the railway in accordance with those rules are not exposed to hazards.

(3) The manager of a mine must ensure that the operating rules are not amended, suspended or cancelled unless the amendment, suspension or cancellation has been approved in writing by the State mining engineer.

Penalty: See regulation 17.1.

(4) Subregulation (3) does not apply if —

(a) an unforeseen occurrence makes the application of any operating rule temporarily impracticable or indicates a dangerous defect or deficiency in the rules; and

(b) the manager or a person appointed by the manager takes such action as is necessary to remedy that situation.

(5) If action is taken as provided under subregulation (4), the manager or appointed person must —

(a) immediately notify the senior inspector that the action has been taken; and

(b) if required by the senior inspector, confirm in writing that the action has been taken within one week after the day on which the occurrence took place.

(6) If —

(a) a provisional rule is made under subregulation (4); and

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(b) the manager desires to make a permanent change to the operating rule,

the provisions of subregulation (7) apply except that the provisional rule continues to have effect unless the senior inspector notifies the manager in writing to the contrary.

(7) If a permanent change in an operating rule is necessary for any reason, the manager of a mine may make such provisional rule or rules as are required, but the provisional rule must first be submitted in writing to the senior inspector for approval before it operates.

(8) The senior inspector may specify a period during which the provisional rule may be operated before the approval of the State mining engineer becomes necessary.

(9) A person at a mine must comply with the operating rules for a railway at the mine.

Penalty: See regulation 17.1.

15.5. Employees to know operating rules and signals

(1) The manager of a mine must ensure that each person employed in a railway operation at the mine who has duties set out in the operating rules has access to a copy of the operating rules, including the signals and signal codes, for the railway.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that a person is not employed as a controller, locomotive driver, member of a train crew or as the driver of any railway vehicle at the mine unless the person has satisfied the manager, or a person appointed by the manager for that purpose, that the person —

(a) is fully conversant with the relevant operating rules, including signals and signal codes; and

(b) is competent to discharge the person's duties.

Penalty: See regulation 17.1.

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(3) The manager of a mine must ensure that a person is not employed in any capacity on a main line on which a railway vehicle is running unless the person is under the supervision of a person who is fully conversant with the relevant operating rules, including signals and signal codes.

Penalty: See regulation 17.1.

15.6. Railway vehicle driver to be competent

(1) A person must not, and each responsible person at a mine must ensure that a person does not, drive a railway vehicle on a railway track unless the person has been issued with a certificate certifying that the person is competent to drive or operate the railway vehicle.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply to a person who drives a railway vehicle on a railway track —

(a) while undergoing instruction or training while the person is being supervised by a qualified instructor; or

(b) for maintenance purposes if the person is trained to perform maintenance work on the railway vehicle.

15.7. Issue of certificate

(1) The manager or another competent person must issue a certificate to a person if —

(a) the person has been examined in accordance with subregulation (2) by the manager or competent person; and

(b) the manager or competent person is satisfied from the examination that the person is competent to perform the person's duties.

(2) The examination referred to in subregulation (1) may be written or oral or both, may include practical operating tests, and must

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be of such a standard as to satisfy the examiner that the examinee —

(a) can speak, read and write the English language competently;

(b) is medically fit to take charge of and drive on the mine railway the class of vehicle to which the examination relates;

(c) has had adequate experience under the direct supervision of a qualified driver in operating the class of vehicle to which the examination relates;

(d) has adequate knowledge of the principles of operating, the component parts and the braking system, of the class of vehicle to which the examination relates; and

(e) has adequate knowledge of the railway operating rules and the signals and signalling systems in use on the railway or part of the railway where the vehicle is to be used.

15.8. Certificate

(1) A certificate must state —

(a) the full name, date of birth and address of the person to whom it is issued;

(b) the class of vehicle to which it relates;

(c) the name of the mine and the principal employer at the mine to which it relates; and

(d) the date and place of its issue.

(2) A certificate must be signed by the person to whom it was issued in the presence of the examiner and must be countersigned by the examiner who must certify that the signature is the signature of the person who was examined and to whom the certificate is issued.

(3) The manager of a mine must ensure that —

(a) a duplicate is kept of each certificate issued; and

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(b) the duplicate is produced to an inspector on demand.

Penalty: See regulation 17.1.

15.9. Suspension or cancellation of certificate

(1) The manager of a mine may cancel or suspend a certificate if in the manager's opinion —

(a) the certificate was obtained by fraud;

(b) the holder is not a fit and proper person to hold such a certificate;

(c) the holder is not medically fit to drive and operate vehicles on the railway at the mine; or

(d) the certificate should be cancelled or suspended for any other reason.

(2) If a certificate is cancelled or suspended, the holder must deliver the certificate to the manager on demand by the manager.

Penalty: See regulation 17.1.

(3) If the manager cancels or suspends a certificate, the manager must as soon as is practicable notify the senior inspector of the cancellation or suspension and of the reason for it.

Penalty: See regulation 17.1.

(4) Before cancelling or suspending a certificate, the manager must give the holder notice of the proposed cancellation or suspension and a reasonable opportunity to make written submissions.

15.10. Medical examinations

(1) Each controller, member of a train crew or other person employed in any capacity in relation to a railway that requires the person to be fully conversant with the operating rules (including signals and signal codes) must attend before a medical practitioner to have the person's hearing, vision and general fitness examined —

(a) at intervals of not more than 2 years; and

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(b) at such other times as may be required by a medical practitioner or an inspector.

Penalty: See regulation 17.1.

(2) The person must ensure that the results of each medical examination referred to in subregulation (1) —

(a) are recorded in the form determined by the State mining engineer; and

(b) forwarded as soon as is practicable to the principal employer at, or the manager of, the mine at which the person examined is employed.

Penalty: See regulation 17.1.

(3) If a medical practitioner records under subregulation (2) that the person examined is not medically fit to carry out duties in a specified class of employment —

(a) a person must not employ the person concerned or permit him to be employed in that class of employment; and

(b) the person concerned must not, after being notified of the opinion recorded, engage in that class of employment.

Penalty: See regulation 17.1.

15.11. Tracks and structures

Each responsible person at a mine must ensure that each railway track, track formation, cutting, culvert, bridge, tunnel or other structure containing or supporting the railway track is designed, constructed, inspected, tested and maintained so that persons using it or passing over it in accordance with the operating rules or passing or standing adjacent to it are not exposed to hazards.

Penalty: See regulation 17.1.

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15.12. Locomotives and equipment to be safe

Each responsible person at a mine must ensure that each locomotive, item of rolling stock and other item of machinery and plant used in operating railway systems is designed, constructed, inspected, tested and maintained so that persons using it are not exposed to hazards.

Penalty: See regulation 17.1.

15.13. Unauthorised persons not to ride on trains

A person must not ride on a train unless —

(a) the person is an employee discharging his or her duties, an inspector, or some other person authorised by the State mining engineer or the manager to do so; or

(b) it is necessary to do so in the event of an accident or emergency.

Penalty: See regulation 17.1.

15.14. Railway vehicle driver to remain in control

(1) The driver of a railway vehicle in use on a railway track must remain in control or have effective supervision of the vehicle until relieved by another person who is competent to take control of the vehicle under this Part or to perform maintenance work on the vehicle.

Penalty: See regulation 17.1.

(2) Subregulation (1) does not apply when the railway vehicle is parked or otherwise stopped if the vehicle has been effectively braked or otherwise secured in accordance with the operating rules.

15.15. Propelling by locomotive

(1) The manager of a mine must ensure that a locomotive is not used to propel any vehicle except —

(a) within yard limits which are not part of the main line;

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(b) if assisting on upgrades in accordance with the operating rules;

(c) in the case of rail maintenance equipment; or

(d) in any other case, if otherwise specially authorised by the controller.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that if a locomotive is used to propel a vehicle on a main line —

(a) an observer rides in a safe position in, or located near, the leading vehicle and gives signals to the driver by an effective means of communication;

(b) the driver is prepared to act on any signal given by the observer for the purposes of controlling the movement of the train;

(c) the driver stops the locomotive if there is any failure of the communication method between the observer and driver;

(d) the observer instructs the driver to sound the locomotive's whistle at all cuttings, at all level crossings, when the observer's vision ahead is obscured, and when approaching work parties, in order to warn employees and others of the approach of the train;

(e) all persons employed on the section of the line where it is desired to propel a vehicle are warned in advance that the vehicle is to be propelled on that section of line;

(f) the locomotive is fully coupled to the vehicle or vehicles to be propelled and remains coupled until the vehicles are brought to rest and made secure; and

(g) the speed of propulsion is limited to that speed that will enable the train to be brought to rest within one half of the distance visible to the observer.

Penalty: See regulation 17.1.

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(3) Subregulation (2) does not apply to a pusher locomotive used only for the purposes of assisting a train.

15.16. Railway vehicle movements

(1) The manager of a mine must ensure that railway vehicles on the main line of the railway operate only under the instruction and control of a controller for the railway.

Penalty: See regulation 17.1.

(2) A controller must not leave his or her duties until he or she is relieved by another controller.

Penalty: See regulation 17.1.

(3) When a controller is relieved of his or her duties, the controller must inform the relieving controller of —

(a) any order that is unfulfilled; and

(b) the position of all railway vehicles in movement on the main line.

Penalty: See regulation 17.1.

15.17. Railway vehicle movement orders

(1) This regulation does not apply to a railway vehicle that is operating on a part of a railway that is controlled by a centralized traffic control system or similar system in accordance with the operating rules, unless a fixed signal is varied or supplemented under regulation 15.18(4).

(2) The manager of a mine must ensure that railway vehicle movements on main lines are controlled by orders issued and signed by the controller.

Penalty: See regulation 17.1.

(3) A controller at a mine must ensure that each order is written in full and is written in ink or typed.

Penalty: See regulation 17.1.

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(4) A controller at a mine must ensure that —

(a) an order is not added to, altered or erased; and

(b) any variation of a railway vehicle movement is the subject of a new order.

Penalty: See regulation 17.1.

(5) A controller at a mine must ensure that, if practicable, orders are handed to the railway vehicle operator who is intended to carry out that order.

Penalty: See regulation 17.1.

(6) If it is not practicable to hand orders to the railway vehicle operator, orders may be transmitted by the controller by radio or other similar means.

(7) If —

(a) an order is transmitted as provided in subregulation (6), the controller must ensure that the order has been correctly received by requiring the recipient to repeat it back word for word to the controller; and

(b) there is any communication breakdown in such a transmission, the controller, the recipient and any other person must treat the order as being of no effect and as if it had not been sent.

Penalty: See regulation 17.1.

(8) When an operator to whom an order is directed is relieved of his or her duty before the order is carried out, the operator must ensure that the order is delivered to the person who relieves the operator.

Penalty: See regulation 17.1.

(9) Nothing in this regulation prevents the manager of a mine from implementing an alternative system for the safe control of light vehicles which are designed to be operated on and off the rail track.

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15.18. Centralized traffic control systems

(1) This regulation applies if a railway vehicle is operating on a part of a railway that is controlled by a centralized traffic control system or similar system.

(2) The manager of a mine must ensure that railway vehicles at the mine are operated in accordance with fixed signal indications or in-cab signalling.

Penalty: See regulation 17.1.

(3) The operator of a railway vehicle must treat the absence of a fixed signal indication where one is normally located, or any failure of the in-cab signalling system, as a "stop" signal and must advise the controller that the vehicle has been stopped accordingly.

Penalty: See regulation 17.1.

(4) If a fixed signal indication is to be varied or supplemented, the controller must ensure that it is varied or supplemented —

(a) by an order in accordance with regulation 15.17; and

(b) in accordance with the operating rules.

Penalty: See regulation 17.1.

(5) If it is necessary for the operator of a railway vehicle to stop the vehicle at a fixed signal, the operator must ensure that the vehicle is stopped as close to the signal as is possible while still maintaining a clear view of the signal indication.

Penalty: See regulation 17.1.

(6) If a railway vehicle is stopped and a signal is showing "proceed" or an indicator is indicating that the vehicle should proceed, the operator must, before moving the vehicle, check to ensure that the signal or indicator is still showing that the vehicle should proceed.

Penalty: See regulation 17.1.

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(7) If the operator of a railway vehicle is unable to act promptly on a signal or an indication to proceed, the operator must notify the controller accordingly.

Penalty: See regulation 17.1.

(8) Nothing in this regulation prevents the manager of a mine from implementing an alternative system for the safe control of light vehicles which are designed to be operated on and off the rail track.

15.19. Signals

The manager of a mine must ensure that the code of signals and signalling practice used in relation to railway operations at the mine is consistent with good railway operating practice and is included in the railway operating rules.

Penalty: See regulation 17.1.

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Part 16 — Radiation safety

Division 1 — Preliminary

[Heading inserted in Gazette 13 Nov 1998 p. 6218.]

16.1. Terms used in this Part

In this Part, unless the contrary intention appears —

absorbed dose means a dose calculated by reference to the energy absorbed per unit mass by matter from ionising radiation which impinges upon it;

approved means approved by the State mining engineer;

authorised limit, in relation to a mine, means the authorised limit determined for that mine under regulation 16.4;

best practicable technology means that technology, from time to time relevant to a specific project, which enables radioactive waste or exposure to radiation to be managed so as to minimize radiological risks and detriment to people and the environment, having regard to —

(a) the achievable levels of effluent control and the extent to which pollution and degradation of the environment is minimized or prevented in comparable mining operations elsewhere;

(b) the cost of the application or adoption of that technology relative to the degree of radiological and environmental protection expected to be achieved by its application or adoption;

(c) evidence of detriment or lack of detriment to the environment after the commencement of mining operations;

(d) the location of the mine;

(e) the age of the equipment and facilities in use for mining purposes and their relative effectiveness in achieving radiological and environmental protection; and

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(f) the potential long term hazards from the wastes;

collective effective dose means the total radiation exposure of a group of people calculated by reference to the sum of their individual effective doses;

committed effective dose means the effective dose that a person will receive from an intake of radioactive material, calculated with reference to the persons age, type and time of radiation intake and statistically determined capacity for types of organs or tissue to absorb radiation over time;

contamination level means an amount of radioactivity in either air, water or on a surface, the presence of which is undesirable to the extent that it could be harmful if uncontrolled or not guarded against;

controlled area means an area to which access by employees should, for the purpose of minimizing radiation exposure, be limited or minimized;

designated employee means an employee who works, or may work, under conditions such that the employee's annual effective dose equivalent might exceed 5 millisieverts (0.005 Sv);

dose means either absorbed dose or effective dose, depending on the context;

dose constraint means a level of a dose, in relation to an employee, as determined by the State mining engineer under regulation 16.5, used to prompt investigation and (if appropriate) action if achieved or exceeded;

dose limit means a dose limit referred to in regulation 16.18 or 16.19;

effective dose means a dose that has been calculated by reference to both the type of radiation involved, and the radiological sensitivities of the organs and tissues involved;

equivalent dose means a dose to organs or tissues that has been calculated by reference to the type of radiation involved;

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exposure means exposure to radiation;

ionising radiation material means a radioactive substance consisting of or containing, as the case may be, an amount of radioactivity that requires regulation under the *Radiation Safety (General) Regulations 1983*;

irradiating apparatus means any apparatus capable of producing ionising radiation;

member of the public means any person other than an employee;

non-designated employee means an employee who is not a designated employee;

radiation management plan, in relation to a mine, means the plan approved for that mine under regulation 16.7;

radiation safety officer means a radiation safety officer appointed under regulation 16.9;

radioactive waste means radioactive solid, liquid or gaseous residues arising from a mining operation;

restricted release zone means a zone from which the release of radiation should be restricted to authorised limits;

sealed ionising radiation source means ionising radiation material sealed in a container, or having a bonded cover, strong enough to prevent contact with and dispersal of the radioactive material under the conditions of use and wear for which the cover or container was designed;

supervised area means an area access to which by members of the public should be restricted, for the purpose of minimizing radiation exposure to members of the public;

waste management system means the system for the handling, treatment, storage and disposal of radioactive waste.

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Division 2 — Mining and processing of radioactive material

[Heading inserted in Gazette 13 Nov 1998 p. 6218.]

16.2. Application of Division

This Division applies only to and in relation to a mine if —

(a) thorium or uranium ores are mined at the mine;

(b) employees at the mine are likely to receive doses of radiation in excess of an effective dose of 1 millisieverts (0.001 Sv) per year arising from mining; or

(c) members of the public at, or in the vicinity of, the mine are likely to receive doses of radiation, as a consequence of that mining operation, in excess of one half of the dose limits set out in regulation 16.19.

[Regulation 16.2 amended in Gazette 13 Nov 1998 p. 6221.]

16.3. State mining engineer may exempt mine

The State mining engineer may, in writing, exempt a mine from all or part of this Division where the sum of the effective doses from external radiation and intake of radioactive dust is below 1 millisieverts (0.001 Sv) per year for each employee and the long term average concentration of radon in the workplace is below 1 000 becquerels per cubic metre, but only if the exposure to radon is due solely to adventitious exposure to natural sources of radiation.

[Regulation 16.3 amended in Gazette 13 Nov 1998 p. 6221.]

16.4. Authorised limits

(1) The State mining engineer may in writing determine an authorised limit for any mine or class of mines.

(2) The State mining engineer may in writing amend any determination made under this regulation.

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(3) The authorised limit is to be either a limit of contamination levels or dose rates above which a person at a mine is not to be exposed, or a limit of airborne or waterborne radioactive discharges at the mine.

16.5. Dose constraints

(1) The State mining engineer may in writing determine a dose constraint for all employees or for any specified class of employees.

(2) The State mining engineer may in writing amend any determination made under this regulation.

(3) If a dose constraint determined under this regulation is achieved or exceeded by the relevant employee, the principal employer at and the manager of, the mine must, upon becoming aware of that achievement or excess, initiate an investigation and where appropriate take action to ensure that any higher dosage levels are avoided as far as is practicable.

Penalty: See regulation 17.1.

16.6. Results of baseline monitoring program

The principal employer at a mine must ensure that before mining operations (other than exploration operations) commence at the mine the State mining engineer is provided with the results of an approved environmental radiation monitoring program.

Penalty: See regulation 17.1.

16.7. Preparation of radiation management plan

(1) Each responsible person at a mine must ensure that a plan for the safe management of radiation at the mine that complies with subregulation (2) is prepared —

(a) in the case of an existing mine, as soon as is practicable after the commencement day; or

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(b) in any other case, before mining operations (other than exploration operations) commence at the mine.

Penalty: See regulation 17.1.

(2) The plan must —

(a) consider measures that can be taken to control the exposure of employees and members of the public to radiation at or from the mine including the following —

(i) the use of appropriate equipment, facilities and operational procedures at the mine;

(ii) monitoring programs;

(iii) procedures for the assessment of dose;

(iv) procedures for reporting incidents; and

(v) instruction and training programs;

(b) designate any controlled or supervised areas; and

(c) include a waste management system for the mine, details of which must include —

(i) restricted release zones;

(ii) facilities and procedures involved in the handling, treatment, storage and disposal of radioactive waste; and

(iii) an outline of the proposal for the eventual decommissioning and rehabilitation of the mine.

(3) Each responsible person at a mine must ensure that as soon as is practicable after a plan is prepared under this regulation, a copy of the plan is submitted to the State mining engineer for approval.

Penalty: See regulation 17.1.

(4) Each responsible person at a mine must ensure that the plan for the mine is reviewed within 2 years of the commencement of mining operations at the mine and subsequently at intervals designated by the State mining engineer.

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Penalty: See regulation 17.1.

(5) Each responsible person at a mine must ensure that the review of a plan under subregulation (4) incorporates the best practicable technology available at the time of the review.

Penalty: See regulation 17.1.

(6) Each responsible person at a mine must ensure that before the plan for the mine is amended a copy of the plan with any proposed amendments is submitted to the State mining engineer for approval.

Penalty: See regulation 17.1.

(7) When a copy of a plan is submitted or resubmitted to the State mining engineer under this regulation, the State mining engineer may —

(a) approve the plan; or

(b) if in the State mining engineer's opinion the plan is inadequate in any respect, request that the plan be revised in a specified way and resubmitted for approval.

(8) A request may be made under subregulation (7)(b) as often as the State mining engineer thinks necessary.

16.8. Radiation management plan to be complied with

(1) Each responsible person at a mine must ensure that the radiation management plan for the mine is complied with.

Penalty: See regulation 17.1.

(2) The principal employer at a mine must ensure that, for the purposes of giving effect to the radiation management plan, adequate resources, including staff, monitoring equipment and facilities are provided at the mine.

Penalty: See regulation 17.1.

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(3) The manager of a mine must ensure that monitoring equipment and facilities referred to in subregulation (2) are properly maintained.

Penalty: See regulation 17.1.

16.9. Radiation safety officer

(1) The manager of a mine must appoint a person to be a radiation safety officer at the mine.

Penalty: See regulation 17.1.

(2) To be eligible for appointment as a radiation safety officer a person must have qualifications and experience satisfactory to the State mining engineer.

(3) The radiation safety officer at a mine is to be responsible for advising the manager on matters relating to the implementation of the radiation management plan for the mine.

16.10. Defects

The manager of a mine must ensure that if any defect or malfunction is discovered in any plant, equipment or procedure at the mine that causes doses of radiation in excess of dose constraints, or absorbed dose rates or contamination levels in excess of authorised limits —

(a) the defect or malfunction is investigated by the radiation safety officer and any other competent person as is necessary;

(b) action is promptly taken to remedy the defect or malfunction; and

(c) a record is made in the record book of the cause of, and the action taken to remedy, the defect or malfunction.

Penalty: See regulation 17.1.

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16.11. Notification

The manager of a mine must ensure that the State mining engineer is notified in writing of —

(a) any dose of radiation in excess of dose constraints, or absorbed dose rates or any contamination levels in excess of authorised limits;

(b) the cause of the excessive dose or contamination levels referred to in paragraph (a) and the action taken to reduce those levels; and

(c) any other incident that the State mining engineer is required to be notified of under the radiation management plan.

Penalty: See regulation 17.1.

16.12. Supervised areas and controlled areas

(1) Each responsible person at a mine must ensure that in any area designated in a radiation management plan as a controlled area —

(a) access is limited to those persons who are required to work, or perform any duty under this Act, in the area;

(b) the boundaries of the area are clearly delineated and are made known to employees at the mine; and

(c) any person entering the area has received appropriate instructions about the nature of the radiation hazards in the area.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that in any area designated in a radiation management plan as a supervised area —

(a) access by members of the public is supervised; and

(b) the boundaries of the area are clearly delineated and are made known to employees at the mine.

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Penalty: See regulation 17.1.

16.13. Conditions for young persons

(1) Each responsible person at a mine must ensure that a person under the age of 16 years is not employed in a mine if, as a direct consequence of that mining operation the young person may receive doses of radiation in excess of the dose limits set out in regulation 16.19.

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that a person under the age of 18 years is not employed to work in a controlled area unless that person is adequately supervised, and then only for training purposes.

Penalty: See regulation 17.1.

16.14. Designated employees

(1) The manager of a mine must ensure that before mining operations (other than exploration operations) commence at the mine each employee at the mine is classified as either a designated employee or a non-designated employee.

Penalty: See regulation 17.1.

(2) The manager of a mine must review the classification of employees under subregulation (1) at intervals of not more than 12 months or whenever their work activities change.

Penalty: See regulation 17.1.

(3) The manager of a mine must, so far as is practicable, limit the number of designated employees to the minimum number necessary for the proper conduct of the mining operation.

16.15. Reduction of doses

The manager of a mine must ensure that the dose of radiation to individual employees and the collective effective dose of

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radiation to employees generally is reduced to levels that are as low as practicable.

16.16. Control of exposure to radiation

The manager of a mine must ensure that the exposure of employees and members of the public to radiation is limited by —

(a) not exposing them to radiation so far as is practicable;

(b) isolating sources of radiation, so far as is practicable, through shielding, containment and remote handling techniques;

(c) providing engineering controls to reduce absorbed dose rates and contamination levels in workplaces;

(d) adopting safe work practices; and

(e) if other means of controlling exposure are not practicable or adequate, by providing personal protective equipment.

Penalty: See regulation 17.1.

16.17. Respiratory protective equipment

The manager of a mine must ensure that any respiratory protective devices provided at the mine to protect against radiation are selected, used and maintained in accordance with AS 1715 and AS 1716.

Penalty: See regulation 17.1.

16.18. Dose limits — employees

The manager of a mine must ensure that an employee at the mine does not receive a dose of radiation exceeding that specified in the Table to this regulation or, if any other limit is approved by the State mining engineer under regulation 16.21, such other limit as is approved.

Penalty: See regulation 17.1.

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Table

Effective dose limit in a single year	50 millisieverts
Effective dose limit over a period of 5 consecutive years	100 millisieverts
Equivalent dose limit (per year) —	
in the lens of the eye	150 millisieverts
in the skin	500 millisieverts
in the hands and feet	500 millisieverts

16.19. Dose limits — members of the public

The manager of a mine must ensure that a member of the public does not receive a dose of radiation, as a consequence of the mine, exceeding that specified in the Table to this regulation.

Penalty: See regulation 17.1.

Table

Effective dose limit (per year)	1 millisievert
Equivalent dose limit (per year) —	
in the lens of the eye	15 millisieverts
in the skin	50 millisieverts

16.20. Interpretation of dose limits

(1) Dose limits apply to the sum of the relevant doses from external exposure in the specified period and to the 50 year committed dose (to age 70 years for children) from intakes in the same period.

(2) In subregulation (1), the ***specified period*** is a period made up of discrete 12 month units as is designated from time to time by the State mining engineer.

(3) The equivalent dose limits to the skin applies to the dose averaged over any 1 square centimetre of the skin, regardless of the total area exposed.

16.21. Approval of different dose limit

(1) The State mining engineer may approve a different dose limit at a mine for the purposes of regulation 16.18.

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(2) The State mining engineer must not approve a different dose limit at a mine under this regulation unless —

(a) exceptional circumstances exist;

(b) in the State mining engineer's opinion the collective effective dose has been reduced as low as is practicable;

(c) the safety and health committee at the mine or, if there is no safety and health committee, a representative of the employees at the mine, has agreed to the proposal;

(d) the dose limit is less than 50 millisieverts (0.05 Sv) per year;

(e) it is only for a specified period of not more than 5 years;

(f) the cumulative dose to any person over 10 years does not exceed 200 millisieverts (0.2 Sv); and

(g) the Radiological Council has approved the proposal.

[Regulation 16.21 amended in Gazette 19 Jan 1996 p. 237.]

16.22. Pregnant employees

(1) If a designated employee at a mine becomes pregnant the employee must as soon as is practicable notify the manager of the mine.

(2) If a manager is notified under subregulation (1) that a designated employee at the mine is pregnant, the manager must take such measures as are necessary to ensure that the employee —

(a) ceases to be a designated employee; and

(b) does not receive an effective dose of radiation exceeding 1 millisievert (0.001 Sv) over the remainder of the pregnancy.

Penalty: See regulation 17.1.

(3) The dose referred to in subregulation (2)(b) applies to the sum of the relevant doses from external exposure in the period of

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pregnancy and to the 50 year committed dose from intakes in the same period.

(4) The manager of a mine to which this Division applies must ensure that all female designated employees are informed of the requirements of this regulation.

Penalty: See regulation 17.1.

[Regulation 16.22 amended in Gazette 13 Nov 1998 p. 6221.]

16.23. Assessment of doses

(1) The following doses of radiation are not to be included in assessing the doses referred to in regulation 16.18 or 16.19 —

(a) doses due to natural background radiation; and

(b) doses received as a patient undergoing radiological examinations, radiotherapy or nuclear medicine investigations.

(2) The manager of a mine must ensure that any assessment of doses of radiation —

(a) takes into account the results obtained from the monitoring program contained in the radiation management plan for the mine;

(b) does not, without the approval of the State mining engineer, take into account any protection factor for the use of protective clothing or respiratory protective equipment; and

(c) is done in accordance with a procedure approved by the State mining engineer.

Penalty: See regulation 17.1.

(3) If the assessed annual effective dose to a person exceeds 10 millisieverts, the manager of the mine must, so far as is practicable, re-assess the effective dose using more appropriate data as approved by the State mining engineer.

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16.24. Reporting of results of dose assessment

(1) The manager of a mine must ensure that designated employees are notified of the results of any assessment of doses of radiation received by that person as soon as is practicable after the assessment is completed.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that values of assessed doses, absorbed dose rates and contamination levels in workplaces occupied by an employee are provided to the employee upon request if they are available.

Penalty: See regulation 17.1.

16.25. Records

(1) The manager of a mine must ensure that records are kept and maintained at the mine of —

(a) any approvals required and obtained under this Division;

(b) monitoring results;

(c) dose assessments; and

(d) any other information required to be kept under the radiation management plan.

Penalty: See regulation 17.1.

(2) The manager of a mine must ensure that the records referred to in subregulation (1) are readily accessible to inspectors who wish to inspect them.

Penalty: See regulation 17.1.

(3) Each responsible person must ensure that records of assessed doses for each employee are kept for the duration of employment of that employee.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(4) Each responsible person must ensure that dose assessment records of an employee are sent to the State mining engineer upon the cessation of employment of that employee.

Penalty: See regulation 17.1.

(5) Each responsible person must transfer all records specified by the State mining engineer, to the State mining engineer, before a mining operation is abandoned, and for that purpose the manager must notify the State mining engineer of any intention to abandon the mining operation in the near future.

Penalty: See regulation 17.1.

[Regulation 16.25 amended in Gazette 13 Nov 1998 p. 6221.]

16.26. Reporting of certain matters to State mining engineer

The manager of a mine must ensure that the following matters are reported to the State mining engineer in a form and at intervals approved by the State mining engineer —

(a) the results of the monitoring program approved in the radiation management plan; and

(b) the operation of the waste management system approved in the radiation management plan.

Penalty: See regulation 17.1.

16.27. Approval for removal of radioactive material

A person must not remove or dispose of any radioactive material obtained from mining operations at a mine for use elsewhere in the State without the prior written approval of the State mining engineer.

Penalty: See regulation 17.1.

16.28. Approval to use imported radioactive minerals

A person must not use or treat radioactive minerals that have been imported into the State in any mining operation unless the

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person has first obtained the written approval of the State mining engineer to do so.

Penalty: See regulation 17.1.

*[**16.29.** Deleted in Gazette 13 Nov 1998 p. 6218.]*

16.30. Storage of monazite, thorium, uranium or xenotime concentrate

Each responsible person at a mine must ensure that, unless otherwise approved by the State mining engineer, no monazite, thorium, uranium or xenotime concentrate is stored at the mine unless that product or concentrate is stored in an area that is specifically designated, and only used, for that purpose.

Penalty: See regulation 17.1.

[Regulation 16.30 amended in Gazette 13 Nov 1998 p. 6219.]

16.31. Stockpile management

Each responsible person at a mine must ensure that, unless otherwise approved by the State mining engineer, stockpiles of radioactive minerals obtained from mining operations are kept within a restricted release zone.

Penalty: See regulation 17.1.

16.32. Disposal of waste material

(1) If radioactive waste is buried at a mine, each responsible person at the mine must ensure that the following details are recorded on a plan —

(a) the location, including the depth, of the waste material and the top and bottom contour of the waste material and the total area covered by the waste material; and

(b) the average dry weight concentration of uranium and thorium in the material based on analyses of a representative number of samples.

Penalty: See regulation 17.1.

Extract from www.slp.wa.gov.au, see that website for further information

(2) Each responsible person at the mine must ensure that a copy of the plan referred to in subregulation (1) is provided to the State mining engineer.

Penalty: See regulation 17.1.

16.33. Best practicable technology

Each responsible person at a mine must ensure that the waste management system used at the mine —

(a) utilizes the best practicable technology; and

(b) is designed to minimize the release of radioactivity.

Penalty: See regulation 17.1.

16.34. Discharges

Each responsible person at a mine must ensure that —

(a) any discharges of radioactive waste at the mine are in accordance with the radiation management plan;

(b) the State mining engineer is notified as soon as is practicable if the discharge of radioactive waste exceeds authorised limits; and

(c) following any notification referred to in paragraph (b), such action is taken as is required by the State mining engineer.

Penalty: See regulation 17.1.

16.35. Long term waste management

(1) Each responsible person at a mine must ensure that before abandoning a mining operation —

(a) a plan is submitted to the State mining engineer for the final management of radiation at the mine, including details of decommissioning and final rehabilitation;

(b) the plan is approved by the State mining engineer; and

(c) the plan, as approved by the State mining engineer, is given effect to.

Extract from www.slp.wa.gov.au, see that website for further information

Penalty: See regulation 17.1.

(2) Each responsible person at a mine must ensure that, so far as is practicable, radioactive waste is diluted with other mined material before it is finally disposed of in order to ensure that in the long term the use of the disposal site is not restricted.

Penalty: See regulation 17.1.

(3) Each responsible person at a mine must ensure that when notification is given to the district inspector of the suspension or abandonment of mining operations at a mine, a plan is submitted with the notification which shows —

(a) the specific locations in which radioactive waste has been buried; and

(b) the absorbed dose rates in air one metre above the final surface.

Penalty: See regulation 17.1.

(4) The principal employer at a mine must ensure that after the mine is abandoned rehabilitation sites are inspected and monitored at such intervals and in such a way as is approved by the State mining engineer after consultation with the Radiological Council.

Penalty: See regulation 17.1.

(5) The State mining engineer may require the principal employer at a mine to take specified action at any rehabilitation site after the mine has been abandoned if inspection or monitoring reveals that the condition of the site is, or is likely to become, unacceptable to the State mining engineer or the Radiological Council.

(6) The principal employer at a mine must as soon as is practicable comply with a requirement under subregulation (5).

Penalty: See regulation 17.1.

[Regulation 16.35 amended in Gazette 13 Nov 1998 p. 6219.]

Extract from www.slp.wa.gov.au, see that website for further information

Division 3 — Use and storage of radiation sources and irradiating apparatus in mines generally

[Heading inserted in Gazette 13 Nov 1998 p. 6219.]

16.36. Application of Division

This Division applies to all mines.

[Regulation 16.36 inserted in Gazette 13 Nov 1998 p. 6219.]

16.37. Use of sealed radiation sources and irradiating apparatus

(1) Where sealed ionising radiation sources or irradiating apparatus are used in equipment in a mine, the manager must —

(a) formulate working rules and control measures specifically for the particular equipment and working situation, including appropriate instruction and training, supervision and secure storage, so as to ensure that radiation doses to any person are as low as is practicable and below the relevant dose limits specified in the *Radiation Safety (General) Regulations 1983*;

(b) arrange for periodic examination, testing and maintenance, and repair if necessary, of that particular equipment by a competent person to ensure its safe operation;

(c) record and retain the results of all measurements and examination and testing of that equipment;

(d) formulate emergency procedures to minimize radiation exposure in the event of an emergency;

(e) ensure that all radiation warning signs and labels are properly located, fixed and maintained in a clean and legible position;

(f) be able to account for all ionising radioactive material within his or her control at all times; and

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(g) maintain a register of the current location in the mine of each piece of equipment that comes under the scope of this Division.

Penalty: See regulation 17.1.

(2) A manager of a mine must allow inspectors to have a right of access and reasonable opportunity to examine equipment, working procedures and records required to be held by the manager under this regulation.

(3) Despite subregulation (1), the manager must not use sealed ionising radiation sources or irradiating apparatus in equipment in a mine if such equipment is defective or may present a radiological hazard.

Penalty: See regulation 17.1.

(4) For the purposes of complying with this regulation, guidance may be found in the following Australian Government publications —

(a) Code of Practice for the Safe Use of Radiation gauges;

(b) Code of Practice for the Safe Use of Sealed Radioactive Sources in Borehole Logging;

(c) Code of Practice for the Safe Use of Soil Density and Moisture Gauges Containing Radioactive Sources;

(d) Code of Practice for the Safe Use of Industrial Radiography Equipment;

(e) Code of Practice for Protection against Ionising Radiation emitted from X-ray Analysis Equipment;

(f) Revised Statement on Cabinet X-ray Equipment for Examination of Letters, Packages, Baggage, Freight and other Articles for Security, Quality Control and other purposes; and

(g) Statement on Enclosed X-ray Equipment for Special Applications.

Extract from www.slp.wa.gov.au, see that website for further information

(5) The provisions of this regulation are in addition to, and not in substitution for, the provisions of the *Radiation Safety Act 1975*.

[Regulation 16.37 inserted in Gazette 13 Nov 1998 p. 6219-20.]

16.38. Audit of sealed radiation sources and irradiating apparatus

(1) The manager must ensure that an audit, in a form acceptable to the State mining engineer, of all sealed radiation sources and of their location within the mine is carried out either annually or at such shorter intervals as specified by the State mining engineer.

Penalty: See regulation 17.1.

(2) The manager must ensure that upon completion of the audit in subregulation (1) a copy of the audit is sent to the State mining engineer.

Penalty: See regulation 17.1.

[Regulation 16.38 inserted in Gazette 13 Nov 1998 p. 6220-1.]

Extract from www.slp.wa.gov.au, see that website for further information

Part 17 — Miscellaneous

17.1. General penalty

The penalty for an offence committed by a person against a provision of these regulations that refers to this regulation is —

(a) if the offence was committed by the person as an employee —

(i) for a first offence, a fine of $5 000; and

(ii) for a subsequent offence, a fine of $6 250;

(b) if paragraph (a) does not apply —

(i) in the case of an individual —

(I) for a first offence, a fine of $25 000; and

(II) for a subsequent offence, a fine of $31 250;

or

(ii) in the case of a corporation —

(I) for a first offence, a fine of $50 000; and

(II) for a subsequent offence, a fine of $62 500.

[Regulation 17.1 inserted in Gazette 4 Apr 2005 p. 1111.]

17.2. Repeal

(1) The *Mines Regulation Act Regulations 1976* are repealed.

(2) The *Coal Mines Regulations* are repealed.

Extract from www.slp.wa.gov.au, see that website for further information

Schedule 1

[Regulation 2.3]

Election of employee's inspectors

1. Terms used in this Schedule

In this Schedule, unless the contrary intention appears —

election means election of an employee's inspector;

nominate means nominate as a candidate for an election;

notice of election means the notice published under clause 4;

returning officer, in relation to an election, means the returning officer appointed for that election under clause 3(2);

scrutineer means a scrutineer appointed under clause 15.

2. Request for election

The State mining engineer is to request the Electoral Commissioner to conduct an election to elect an employee's inspector —

(a) not less than 3 months before the expiration of the term of an employee's inspector; or

(b) in the case of a casual vacancy, not less than 14 days after the occurrence of the vacancy.

3. Conduct of elections

(1) An election is to be conducted by the Electoral Commissioner.

(2) The Electoral Commissioner is to appoint a returning officer who is to be responsible for the conduct of the election.

(3) A person must not be appointed under subclause (2) if the person is a candidate, or a person eligible to vote, in the election.

(4) Other officers may be appointed by the Electoral Commissioner to assist the returning officer to conduct an election.

Extract from www.slp.wa.gov.au, see that website for further information

4. Notice of election

(1) The returning officer must, not less than 14 days and not more than 21 days before the opening date for the lodging of nominations for an election, cause notice of the election to be published —

(a) in a newspaper circulating generally in the State; and

(b) in a newspaper circulating in the region in respect of which the employee's inspector is to be elected.

(2) The notice referred to in subclause (1) must —

(a) identify the region in respect of which the employee's inspector is to be appointed;

(b) identify the title of the vacant position;

(c) invite persons to nominate as candidates for the election;

(d) give details of the form on which nominations are to be made and where those forms can be obtained;

(e) give details of the place where nominations may be lodged; and

(f) specify the opening and closing times and dates for the lodging of nominations (being a period of not less than 7 days).

5. Nominations

(1) The nomination of a person as a candidate for an election must be —

(a) made in the form specified in the notice of election;

(b) signed by the person and by not less than 6 persons who are eligible to vote in the election;

(c) accompanied by a medical certificate signed by a medical practitioner stating that the person —

(i) is in good health; and

(ii) is physically fit for work as an employee's inspector;

(d) lodged at the place specified in the notice of election; and

(e) lodged —

(i) after the time and date specified in the notice of election for the opening of nominations; and

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(ii) before the time and date specified in the notice of election for the close of nominations.

(2) The returning officer may reject a nomination that does not conform with subclause (1).

(3) Before rejecting a nomination under subclause (2) the returning officer may notify the person nominated and give the person the opportunity to remedy the defect within a specified period.

(4) The returning officer is to refer all nominations to the State mining engineer.

(5) The State mining engineer may determine that a person is not a suitable person to be appointed as an employee's inspector and if such a determination is made the nomination must be taken to have been rejected by the returning officer.

6. Withdrawal of nominations

(1) A person nominated as a candidate for an election may, by notice in writing lodged with the returning officer before the time and date specified in the notice of election for the close of nominations, withdraw the person's consent to the nomination and the nomination is taken to have been withdrawn accordingly.

(2) The notice referred to in subclause (1) must be signed by the person nominated and witnessed by a person who is eligible to vote in the election.

7. Candidates elected unopposed

If the number of candidates duly nominated is equal to or less than the number of vacancies, the returning officer is to declare the candidates elected unopposed.

8. Insufficient candidates

If the number of candidates duly nominated is less than the number of vacancies, the returning officer is, in respect of remaining vacancy, to cause notice of election to be published again in accordance with clause 4.

Extract from www.slp.wa.gov.au, see that website for further information

9. Fixing of date of election

(1) If the number of candidates duly nominated exceeds the number of vacancies, the returning officer is to hold an election.

(2) The returning officer is to fix the date or dates and times for the holding of the election.

10. Elections to be held by postal ballot

An election is to be held by postal ballot.

11. Electoral roll

(1) The manager of a mine must, if requested to do so by the district inspector, provide the district inspector with a list of the names and addresses of all employees at the mine as at a specified date.

(2) The address of an employee provided under subclause (1) is to be —

(a) if the employee has nominated a preferred address, the address nominated; or

(b) in any other case, the address of the mine.

(3) If an election is to be held, the State mining engineer must, not less than 7 days before the closing date for the lodging of nominations, provide the returning officer with an electoral roll for the region for which the election is to be held.

(4) The electoral roll is to be compiled by the State mining engineer in such way as the Electoral Commissioner from time to time directs.

(5) The electoral roll is to close 14 days before the closing date for the lodging of nominations.

(6) Despite subclause (5), the returning officer may add to the electoral roll the name of any employee whose name has been incorrectly omitted from the roll.

(7) The returning officer is, from the day on which the electoral roll is provided until the day on which the result of the election is declared, to cause the roll to be made available for public inspection at the offices of the returning officer during normal office hours.

Extract from www.slp.wa.gov.au, see that website for further information

12. Ballot papers

(1) The returning officer is to draw lots to determine the order in which the candidates names are to be placed on the ballot paper.

(2) The returning officer is to include on the ballot paper information and instructions to the voter including the following matters —

(a) the title of the vacant position;

(b) the names of the candidates as determined in accordance with subclause (1);

(c) the date and time when the ballot closes;

(d) how to mark the ballot paper in order to record a formal vote;

(e) not to put on the ballot paper any mark or writing by which the voter can be identified;

(f) to place the ballot paper when completed in the envelope marked "ballot paper" and then seal the envelope;

(g) to complete the details on the counterfoil; and

(h) to place the ballot paper envelope (and the counterfoil if a separate one is used) in the envelope addressed to the returning officer, and then seal the envelope addressed to the returning officer and post it to reach the returning officer before the close of the ballot.

(3) The returning officer is to obtain from the printer of the ballot papers a certificate stating the number of ballot papers printed.

13. Issue of ballot papers

(1) The returning officer is to send by post to each person whose name appears on the electoral roll —

(a) a ballot paper initialled by the returning officer or bearing a facsimile of those initials;

(b) an envelope marked "ballot paper"; and

(c) a reply-paid envelope —

(i) that is addressed to the returning officer at a private box number;

(ii) that may be posted without expense by the voter; and

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(iii) the back of which may be used as a counterfoil and, if the back of the envelope is not used, a separate counterfoil numbered to coincide with the number shown against the name of that person on the electoral roll.

(2) The counterfoil is to be numbered consecutively and is to make provision for the following —

(a) the office or offices to which the election relates;

(b) the full name of the voter; and

(c) the signature of the voter.

(3) If a ballot paper is posted to an employee at the address of the mine at which the employee is employed, the manager of the mine must —

(a) ensure that it is made available for the employee to collect; and

(b) if the ballot paper is not collected by the employee, return it to the returning officer by the first available post following the close of the ballot.

(4) If, in respect of an election, the returning officer issues a ballot paper to a person whose name is after the issue of the paper deleted from the electoral roll, the person is to be taken to be entitled to vote in the election.

(5) If, on the application of any person, the returning officer is satisfied that a ballot paper, envelope or counterfoil issued to a person on the electoral roll has not been received or has been lost, destroyed or spoilt, the returning officer is to issue another ballot paper, envelope or counterfoil (as the case may be).

(6) An application referred to in subclause (5) must —

(a) be in writing signed by the person;

(b) set out the grounds on which the application is made; and

(c) declare that the person has not voted in the election.

14. Ballot box

(1) When a ballot paper is received the returning officer is to place the paper in a sealed ballot box provided for that purpose.

(2) The ballot box is to remain sealed until the close of the ballot.

Extract from www.slp.wa.gov.au, see that website for further information

15. Scrutineers

(1) Each candidate for an election may, by written notice given to the returning officer not less than 7 days before the close of the ballot, appoint a scrutineer to represent the person at the counting of votes.

(2) The returning officer must notify each scrutineer of the time and date of the commencement of counting of votes.

(3) A scrutineer must make a declaration before the returning officer in the form prescribed in the *Electoral Act 1907*.

(4) A scrutineer may —

(a) be present at the counting of votes;

(b) direct the attention of the returning officer to —

(i) any irregularity relating to the issue of ballot papers;

(ii) the admission of any envelope to scrutiny;

(iii) the admission of a ballot paper as formal;

(iv) the rejection of a ballot paper as informal; or

(v) the counting of the vote.

(5) If a scrutineer —

(a) interrupts the scrutiny of votes otherwise than as provided in subclause (4); or

(b) fails to comply with a direction of the returning officer,

the returning officer may direct the scrutineer to leave the place where the scrutiny is being conducted.

(6) A scrutineer must not refuse or fail to comply with a direction given by a returning officer under subclause (5).

Penalty: See regulation 17.1.

16. The scrutiny

(1) As soon as is practicable after the close of the ballot, the returning officer must, in the presence of any scrutineers who wish to attend, produce and open the ballot box.

(2) The returning officer must verify the validity of the counterfoil and the right of the person to vote and then mark off the name of that person from the roll.

Extract from www.slp.wa.gov.au, see that website for further information

(3) When all the counterfoils are checked and cleared, the returning officer may then remove the ballot paper envelope from the returned envelope, open all the ballot paper envelopes and remove the ballot papers and then proceed with the scrutiny and counting of votes.

(4) If the right of a person to vote is not established or if a counterfoil is not signed by the elector —

(a) the returning officer must endorse the envelope "rejected" and write on the envelope the reasons for the rejection; and

(b) the elector's name is not to be marked off the electoral roll.

17. Method of count

(1) The method of counting the ballot papers is to be the optional preferential system.

(2) If only one candidate is to be elected the method and procedure for conducting the count is to be as provided in the *Electoral Act 1907* for Legislative Assembly elections with modifications for the optional preferential system of counting.

(3) If 2 candidates are to be elected —

(a) the count of votes is to proceed until one candidate has received an absolute majority and the name of the person who receives that majority is to be the first person placed on the list of persons for appointment;

(b) the ballot papers are again to be sorted according to the first preference votes of the remaining candidates and the second preferences of the candidate referred to in paragraph (a) are to be added to the first preferences of the remaining candidates; and

(c) the count is then to proceed on as in the counting of votes for the election of one candidate until a candidate receives a majority.

(4) If on any count 2 or more candidates have received the same number of votes, the returning officer is to draw lots to determine which candidate's preference votes are to be distributed first.

Extract from www.slp.wa.gov.au, see that website for further information

18. Informal ballot papers

(1) A returning officer is to reject a ballot paper as informal if the ballot paper —

(a) does not bear the initials of the returning officer or the facsimile of those initials;

(b) has any mark or writing on it by which the voter can be identified; or

(c) is marked in any manner other than that set out in the instructions on the ballot paper unless the ballot paper clearly and unmistakably indicates the elector's intention.

(2) If during the scrutiny, the returning officer is informed by a scrutineer that he or she objects to a ballot paper being admitted as formal to the count or rejected as informal, the returning officer is to decide whether the ballot paper is formal or informal and endorse on the back of the ballot paper the words "admitted" or "rejected" (as the case may be).

(3) The returning officer is to be the sole and final judge of whether a ballot paper is formal or informal.

19. Recount of ballot papers

(1) The returning officer may, at the written request of a candidate setting out the reasons for the request, or of the returning officer's own motion, recount the ballot papers, before the certificate of the result of the election is prepared.

(2) The returning officer may refuse a candidate's request for a recount.

20. Declaration of result

(1) When the returning officer is satisfied that all formal votes have been counted and correctly allocated, the returning officer is to declare the outcome of the election in the presence of scrutineers and any candidates who may be present at the time.

(2) The returning officer is to prepare a certificate of the result of the elector which is to include —

(a) the number of ballot papers, other than duplicate ballot papers, issued;

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(b) the number of duplicate ballot papers issued;

(c) the number of ballot papers admitted as formal;

(d) the number of ballot papers rejected as informal;

(e) the number of unused ballot papers;

(f) the number of ballot papers printed; and

(g) the number of votes admitted as recorded in favour of each candidate.

(3) The certificate of the result of the election is to be forwarded by the returning officer to all candidates and to the State mining engineer.

21. Disputes

(1) A candidate may, by notice in writing given to the Minister, dispute the manner of the conduct of an election or the result of an election within one month after the declaration of the result of the election.

(2) The Minister may determine any dispute referred to the Minister under subclause (1) and the determination of the dispute by the Minister is final and conclusive.

22. Destruction of election papers

(1) On the completion of the scrutiny and the counting of votes, the returning officer is to enclose in a sealed container the following —

(a) all nomination papers;

(b) all ballot papers admitted as formal;

(c) all ballot papers rejected as informal;

(d) all counterfoils admitted and rejected;

(e) all envelopes received after the close of the ballot;

(f) the marked electoral roll; and

(g) all unused ballot papers, counterfoils and other documents prepared in connection with the election,

which are to be placed respectively in separate containers, sealed, signed and dated by the returning officer.

Extract from www.slp.wa.gov.au, see that website for further information

(2) The returning officer may authorise the destruction of all of the items sealed under subclause (1) after the expiration of 3 months after the date of the election.

23. Fees and costs of the election

(1) The returning officer and any other officers assisting the returning officer are entitled to such remuneration as is determined by the Electoral Commissioner.

(2) All costs, charges and expenses incurred by the returning officer in connection with the election are to be paid by the department.

Extract from www.slp.wa.gov.au, see that website for further information

Schedule 1A — Forms

[Heading inserted in Gazette 4 Apr 2005 p. 1112.]

Form 1

[r. 2.4B(1)]

Mines Safety and Inspection Act 1994

section 31AY(3)

Referral of improvement notice for review

To the State Mining Engineer

1. I ..... *(full name)* refer to you for review[1] the improvement notice number ..... issued by ..... *(name of issuing officer)* on ..... *(date of issue)* in respect of the .... *(name and location of mine)*.

2. A copy of the improvement notice is attached.

3. I am referring the notice in my capacity[2] as —

   ❒ the person issued with the notice

   ❒ the principal employer at the mine

   ❒ the manager of the mine.

4. The referral is made on the following grounds —

   .....

   .....

   .....

   .....

   (attach separate sheets if required).

   .....

   Signature of referrer

Extract from www.slp.wa.gov.au, see that website for further information

Address: .....

Date: .....

Note:

[1] By section 31AY(3)(a) of the Act the time limit for referring an improvement notice for review is the time before which the notice must be complied with (as specified in the notice).

[2] Section 31AY(4) of the Act requires a referrer who is not the manager of the mine to give a copy of this form duly completed to the manager as soon as is practicable.

[Form 1 inserted in Gazette 4 Apr 2005 p. 1112-13.]

Extract from www.slp.wa.gov.au, see that website for further information

Form 2

[r. 2.4B(2)]

Mines Safety and Inspection Act 1994

section 31AY(3)

Referral of prohibition notice for review

To the State Mining Engineer

1. I ..... *(full name)* refer to you for review[1] the prohibition notice number ..... issued by ..... *(name of issuing officer)* on ..... *(date of issue)* in respect of —
   - the ..... *(name and location of mine)*

     OR
   - the occupation of the residential premises at .... *(show the address or location of the premises)*.

2. A copy of the prohibition notice is attached.

3. I am referring the notice in my capacity[2] as —

❒ the person issued with the notice

❒ the principal employer at the mine

❒ the manager of the mine.

4. The referral is made on the following grounds —

.....

.....

.....

(attach separate sheets if required).

.....

Extract from www.slp.wa.gov.au, see that website for further information

Signature of referrer

Address: .....

Date: .....

Note:

[1] By section 31AY(3)(b) of the Act the time limit for referring a prohibition notice for review is 7 days after the day of its issue, but the State mining engineer has power to extend that limit.

[2] Section 31AY(4) of the Act requires a referrer who is not the manager of the mine to give a copy of this form duly completed to the manager as soon as is practicable.

[Form 2 inserted in Gazette 4 Apr 2005 p. 1113-14.]

Extract from www.slp.wa.gov.au, see that website for further information

Form 3

[r. 2.6B]

Mines Safety and Inspection Act 1994

section 56(10)(b)

Notice of election of safety and health representative(s)

To the State Mining Engineer

1. NOTICE IS GIVEN that I conducted an election for [a safety and health representative] *or* [..... *(specify number)* safety and health representatives] on ..... *(specify date)* and the person(s) named in the Schedule(s)[1] to this notice [was/were] elected.

2. Other information relating to the person(s) elected is also set out in the Schedule(s). In providing some of that information I have relied on information given to me by the person(s) elected.

3. I have given notice of the result of the election[2] to —

- the person(s) elected; and
- the employer[3] concerned.

.....
Signature of person who conducted the election

Full name: .....

Official title: .....

SCHEDULE

1. Full name of person elected: .....

   Telephone: ..... Fax: ..... Email: .....

   Occupation: .....

   Period in current position: .....

   Period with current employer: .....

Extract from www.slp.wa.gov.au, see that website for further information

2. Name of employer: .....

   Business address: .....

   Suburb/town: ..... Postcode: .....

   Telephone: ..... Fax: ..... Email: .....

3. The elected person was elected for the following mine or mines —

   .....

   .....

   .....

   .....
   (for each mine give the name and location, the nearest town and the postcode)

   to perform functions in respect of the following matter(s), area(s) or kind(s) of work —

   .....

   .....

   .....

   .....

   OR

   The elected person was elected for the following group of employees[4] —

   .....

   .....

   .....

   .....
   (*describe the group and give particulars of the mine or mines concerned*).

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4. The elected person —

   (a) [has not previously been elected as a safety and health representative] *or* [has previously been elected ..... (*specify how many times*) as a safety and health representative];

   (b) [has attended] *or* [has not attended] an accredited introductory training course for safety and health representatives.

Note:

[1] If more than one person was elected attach a separate Schedule for each person.

[2] Such notice to be given within 7 days after the election was completed.

[3] References in this form to an employer may include a principal — see section 55B of the Act.

[4] Under section 55B(3) of the Act, a contractor or a person employed by a contractor may be treated as an employee, if a scheme so provides.

[Form 3 inserted in Gazette 4 Apr 2005 p. 1115-17.]

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Schedule 2 — Fees

[r. 2.31 and 2.33]

[Heading inserted in Gazette 17 Jun 2008 p. 2568.]

Item	Description	Fee ($)
1.	Application for a certificate referred to in regulation 2.31	140.00
2.	Issue of a replacement certificate	140.00

[Schedule 2 inserted in Gazette 17 Jun 2008 p. 2568; amended in Gazette 16 Jun 2009 p. 2192.]

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Schedule 3

[Regulation 6.40]

Maximum periods of inspection of registered classified plant

Column 1 Item No.	Column 2 Description of plant	Column 3 Period
1	Boilers categorized as hazard level A, B, C or D according to the criteria identified in AS 3920: Part 1	2 years
2	Pressure vessels categorized as hazard level A, B, C or D according to the criteria identified in AS 3920: Part 1, with the exception of — (a) air or gas receivers with a maximum operating pressure of 210 kPa or less; (b) air or gas receivers that have a capacity not exceeding 0.15 cubic metres; (c) pressure vessels fitted to mobile earthmoving equipment; (d) pressure vessels fitted on a train; (e) gas cylinders covered by AS 2030; (f) serially produced vessels covered by AS 2971; (g) pneumatic loaders of explosives.	3 years
3	Tower cranes	Prior to use after each jump or one year whichever is less
4	Lifts	2 years
5	Hoists, with platform movement in excess of 2.4 metres and designed to lift people (Powered)	2 years
6	Boom-type elevating work platforms	2 years

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Column 1 Item No.	Column 2 Description of plant	Column 3 Period
7	Gantry cranes with a safe working load greater than 5 tonnes or which are designed to handle molten metal or dangerous goods	4 years
8	Bridge cranes with a safe working load greater than 10 tonnes or which are designed to handle molten metal or dangerous goods	4 years
9	Vehicle hoists	2 years
10	Mobile cranes with a safe working load greater than 10 tonnes	2 years.

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Notes

1 This is a compilation of the *Mines Safety and Inspection Regulations 1995* and includes the amendments made by the other written laws referred to in the following table. The table also contains information about any reprint.

Compilation table

Citation	Gazettal	Commencement
Mines Safety and Inspection Regulations 1995	8 Dec 1995 p. 5629-932	9 Dec 1995 (see r. 1.2 and *Gazette* 8 Dec 1995 p. 5935)
Mines Safety and Inspection Amendment Regulations 1996	19 Jan 1996 p. 235-7	20 Jan 1996 (see r. 2 and *Gazette* 19 Jan 1996 p. 201)
Mines Safety and Inspection Amendment Regulations (No. 2) 1996	9 Feb 1996 p. 485	9 Feb 1996
Mines Safety and Inspection Amendment Regulations (No. 3) 1996	1 Nov 1996 p. 5780	1 Nov 1996
Mines Safety and Inspection Amendment Regulations (No. 4) 1996	13 Dec 1996 p. 6931-2	13 Dec 1996
Mines Safety and Inspection Amendment Regulations 1997	28 Feb 1997 p. 1329-30	28 Feb 1997
Mines Safety and Inspection Amendment Regulations (No. 2) 1997	4 Jul 1997 p. 3498-9	4 Jul 1997
Reprint of the *Mines Safety and Inspection Regulations 1995* as at 17 Oct 1997 (includes amendments listed above)		
Mines Safety and Inspection Amendment Regulations 1998	13 Nov 1998 p. 6218-21	13 Nov 1998
Mines Safety and Inspection Amendment Regulations (No. 2) 2000	23 Jun 2000 p. 3202-3	1 Jul 2000 (see r. 2)
Mines Safety and Inspection Amendment Regulations 2000	27 Jul 2001 p. 3797-8	27 Jul 2001
Corporations (Consequential Amendments) Regulations 2001 Pt. 8	28 Sep 2001 p. 5353-8	15 Jul 2001 (see r. 2 and Cwlth. *Gazette* 13 Jul 2001 No. S285)
Reprint of the *Mines Safety and Inspection Regulations 1995* as at 5 Apr 2002 (includes amendments listed above)		
Mines Safety and Inspection Amendment Regulations 2002	3 Sep 2002 p. 4475	3 Sep 2002
Mines Safety and Inspection Amendment Regulations 2003	28 Feb 2003 p. 668-9	28 Feb 2003
Mines Safety and Inspection Amendment Regulations (No. 2) 2003	27 Jun 2003 p. 2402-3	1 Jul 2003 (see r. 2)

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Citation	Gazettal	Commencement
Mines Safety and Inspection Amendment Regulations 2004	13 Feb 2004 p. 541-5	13 Feb 2004
Mines Safety and Inspection Amendment Regulations (No. 3) 2004	29 Jun 2004 p. 2538	1 Jul 2004 (see r. 2)
Mines Safety and Inspection Amendment Regulations (No. 2) 2004	7 Jan 2005 p. 72-3	7 Jan 2005
Reprint 3: The *Mines Safety and Inspection Regulations 1995* as at 4 Mar 2005 (includes amendments listed above)		
Mines Safety and Inspection Amendment Regulations 2005 [5, 6]	4 Apr 2005 p. 1099-117	4 Apr 2005 (see r. 2)
Mines Safety and Inspection Amendment Regulations (No. 2) 2005	28 Jun 2005 p. 2925	1 Jul 2005 (see r. 2)
Mines Safety and Inspection Amendment Regulations 2006	27 Jun 2006 p. 2279-80	1 Jul 2006 (see r. 2)
Mines Safety and Inspection Amendment Regulations (No. 2) 2007	15 Jun 2007 p. 2788	r. 1 and 2: 15 Jun 2007 (see r. 2(a)); Regulations other than r. 1 and 2: 1 Jul 2007 (see r. 2(b))
Mines Safety and Inspection Amendment Regulations 2008	29 Feb 2008 p. 684-92	r. 1 and 2: 29 Feb 2008 (see r. 2(a)); Regulations other than r. 1 and 2: 1 Mar 2008 (see r. 2(b) and *Gazette* 29 Feb 2008 p. 669)
Reprint 4: The *Mines Safety and Inspection Regulations 1995* as at 20 Mar 2008 (includes amendments listed above)		
Mines Safety and Inspection Amendment Regulations (No. 2) 2008	17 Jun 2008 p. 2567-8	r. 1 and 2: 17 Jun 2008 (see r. 2(a)); Regulations other than r. 1 and 2: 1 Jul 2008 (see r. 2(b))
Mines Safety and Inspection Amendment Regulations (No. 2) 2009	16 Jun 2009 p. 2191-2	r. 1 and 2: 16 Jun 2009 (see r. 2(a)); Regulations other than r. 1 and 2: 1 Jul 2009 (see r. 2(b))

[2] The Standards Association of Australia has changed its corporate status and its name. It is now Standards Australia International Limited (ACN 087 326 690). It also trades as Standards Australia.

[3] Repealed by the *Industrial Relations Commission Regulations 2005* r. 121.

[4] Formerly referred to the *Workers' Compensation and Rehabilitation Act 1981*, the short title of which was changed to the *Workers' Compensation and Injury*

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Management Act 1981 by the *Workers' Compensation Reform Act 2004* s. 5. The reference was changed under the *Reprints Act 1984* s. 7(3)(gb).

5 The *Mines Safety and Inspection Amendment Regulations 2005* r. 10(2)-(4) read as follows:

"

(2) If immediately before the commencement of subregulation (1) —

(a) there is a form that has the approval of the Mines Occupational Safety and Health Advisory Board for the purposes of the definition of "assessment form" in regulation 3.23; or

(b) there is a form that has the approval of that Board for the purposes of the definition of "respiratory questionnaire" in that regulation,

the approval is to be treated as if it had been given by the Mining Industry Advisory Committee.

(3) Any advice given by the Mines Occupational Safety and Health Advisory Board before the commencement of subregulation (1) for the purposes of paragraph (b) of the definition of "designated work" in regulation 3.23 is to be treated as if it had been given by the Mining Industry Advisory Committee.

(4) In this regulation —

Mines Occupational Safety and Health Advisory Board has the meaning given by section 4(1) of the Act as in force before the commencement of section 115(2) of the *Occupational Safety and Health Legislation Amendment and Repeal Act 2004*.

".

6 The *Mines Safety and Inspection Amendment Regulations 2005* r. 13(2)-(3) read as follows:

"

(2) Any advice given by the Mines Occupational Safety and Health Advisory Board before the commencement of subregulation (1) for the purposes of regulation 9.2 is to be treated as if it had been given by the Mining Industry Advisory Committee.

(3) In subregulation (2) —

Mines Occupational Safety and Health Advisory Board has the meaning given by section 4(1) of the Act as in force before the commencement of section 115(2) of the *Occupational Safety and Health Legislation Amendment and Repeal Act 2004*.

".

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Defined Terms

[This is a list of terms defined and the provisions where they are defined. The list is not part of the law.]

Defined Term	Provision(s)
absorbed dose	16.1
action level	7.1
adequate	4.33(2)
ADG Code	7.20
ADR	1.3
AFFF	10.47(1)
alter	6.1
an escape route	10.10(1)
applicant	2.21(1), 2.22(1), 2.23(1), 2.24(1), 2.25(1), 2.27(1), 2.28(1), 2.30(1), 3.47(1)
appointed member	2.7
approved	7.1, 16.1
approved person	3.23
AS	1.3
asbestos removal work	9.1
assessment form	3.23
atmospheric contaminant	9.1
audiometric test	3.23
Australian Code for the Transport of Dangerous Goods by Road and Rail	7.20
Australian Design Rule	1.3
authorised limit	16.1
authorised medical officer	3.23
authorised person	5.31(4), 8.21(6)
automotive diesel fuel	10.47(1)
best practicable technology	16.1
biological monitoring	3.23
Board	2.7, 3.43
boiler	6.1
boom-type elevating work platform	6.1
booster	8.1
bridge crane	6.1
building maintenance equipment	6.1
building maintenance unit	6.1
bulk AN-based explosive	8.1
bulk depot	9.1
butt	8.1
cable	5.1
certificate	1.3, 15.1
charge	8.1

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chest x-ray 3.23
Class I winding engine driver's certificate 1.3
Class II winding engine driver's certificate 1.3
classified plant 6.1
Code of Signals 1.3
collective effective dose 16.1
commencement day 1.3
commissioning 6.1
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confidential information ..... 3.38(1)
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contamination level 16.1
controlled area 16.1
controller 15.1
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demolition blasting ..... 8.56(1)
Department of Occupational Safety and Health 1.3
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designated employee 16.1
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diesel engine ..... 10.47(1)
diesel unit ..... 10.47(1)
district inspector 1.3
dose 16.1
dose constraint 16.1
dose limit 16.1
dredge 14.1
dust plan 9.1
earth moving machinery ..... 4.15(1)
effective dose 16.1
election ..... Sch. 1 cl. 1
electrical inspector 5.1
electrical installation 6.1
electrical log book 5.1
electrical plant 6.1
electrical supervisor 5.1
electrical work 5.1

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elevating work platform 6.1
emergency ..... 11.13(3)
emergency exit 4.23
employee ..... 2.4A(1)
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equivalent dose 16.1
erector 6.1
exemption 1.3
exhaust treatment device ..... 10.47(1)
existing employee 3.23
existing mine 1.3
exposure 16.1
exposure standard 9.1
extra-low voltage 5.1
factor of safety 1.3
fault 6.1
FFFP ..... 10.47(1)
filter self rescuer 4.23
fired heater 6.1
first class mine manager's certificate 1.3
flame safety lamp plan 10.2
FOPS ..... 10.46(1)
function ..... 2.4(1)
gantry crane 6.1
gas cylinder 6.1
guard 6.1
hazardous area 5.1
hazardous substance 1.3
Health Department 1.3
health surveillance record 3.23
high voltage 5.1
high voltage operators ..... 5.18(1)
hoist 6.1
hot material ..... 8.54(1)
importer 6.1
in-cab signalling 15.1
industrial lift truck 6.1
industrial robot 6.1
inhalable dust 9.1
initial health assessment 3.23
initiating system 8.1
installer 6.1
interlocked 6.1
introductory course ..... 2.6(1)
ionising radiation material 16.1

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Defined Terms

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laser....6.1
laser product....6.1
licensed surveyor....1.3
lift....6.1
locomotive....15.1
low voltage....5.1
lung function test....3.23
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manager....3.16A(1)(a)
manufacturer....6.1
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material safety data sheet....7.20
medical practitioner....1.3
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Perth Chest Clinic 3.23
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pressure equipment 6.1
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registration number ..... 10.47(1)
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scaffolding equipment 6.1
scrutineer ..... Sch. 1 cl. 1
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short term exposure limit 9.1
socket 8.1

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Defined Terms

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specified occupational exposure work 3.23
specified period ..... 16.20(2)
STEL 9.1
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the new shift ..... 10.30(b)
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transitional course ..... 2.6(1)
TWA concentration 9.1
underground manager ..... 3.16A(1)(b)
underground supervisor's certificate 1.3
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ventilation officer 9.1
vertical or sub-vertical openings ..... 10.35(2)
waste management system 16.1
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work box 6.1
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