# Electrical safety audit Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Date conducted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1 Appointment of electrical supervisors |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 1.1 | One or more Electrical Supervisors have been appointed. |  |  |
| 1.2 | Electrical Supervisors hold requisite qualifications. |  |  |
| 1.3 | Electrical Supervisors have the requisite experience. |  |  |
| 1.4 | The manager has provided a written summary of responsibilities and duties to each appointed Electrical Supervisor. |  |  |
| 1.5 | Details relating to Electrical Supervisor appointments and cancellations are recorded in the Record Book. |  |  |
| 1.6 | Electrical Supervisors have acknowledged their appointments by signing in the Record Book and on any instrument of appointment. |  |  |

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| 2 Electrical workers licences |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 2.1 | Licence details of electrical workers employed or engaged at the mine are recorded. |  |  |
| 2.2 | Electrical installing work is undertaken by persons holding a current ‘Electrical Mechanics Licence’. |  |  |
| 2.3 | Electrical workers operate within the authority of the licence or permit held. |  |  |
| 2.4 | Contractors undertaking electrical installing work hold an ‘Electrical Contractor’s Licence’. |  |  |

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| 3 In-house electrical installing work and licence |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 3.1 | In-house electrical installing work is authorised by an ‘In-House Electrical Installing Work Licence’ and current ‘Certificate of Registration’. |  |  |
| 3.2 | An ‘In-House Electrical Installing Work Licence’ and a current ‘Certificate of Registration’ is displayed in a conspicuous place. |  |  |
| 3.3 | At least one eligible ‘Nominated Electrical Worker’ is currently employed by the ‘In-House Electrical Installing Work Licence’ holder. |  |  |
| 3.4 | Details of electrical installing work are recorded in an Electrical Log Book. |  |  |

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| 4 Appointment of high-voltage operators |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 4.1 | The manager has appointed one or more ‘High-voltage Operators’. |  |  |
| 4.2 | Persons appointed as ‘High-voltage Operator’ are competent. |  |  |
| 4.3 | The manager has provided a written summary of responsibilities and duties to each appointed ‘High-voltage Operator’. |  |  |
| 4.4 | Details of ‘High-voltage Operator’ appointments are recorded in the Record Book. |  |  |
| 4.5 | ‘High-voltage Operators’ have acknowledged their appointments by signing in the Record Book and on any instrument of appointment. |  |  |

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| 5 Electrical log books |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 5.1 | An Electrical Log book is kept at the mine. |  |  |
| 5.2 | Entries made in Electrical Log Books are properly completed. |  |  |
| 5.3 | Electrical Log books are solely used for the purpose of recording details that are required to be recorded pursuant to the Mines Safety and Inspection Act 1994 and Regulations 1995. |  |  |
| 5.4 | Entries in Electrical Log Books are acknowledged by a signature of the Registered Manager or delegate. |  |  |
| 5.5 | Electrical Log Books are kept safe and in good order from commencement of mining operations. |  |  |

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| 6 Electrical accidents and incidents |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 6.1 | Electrical accidents and dangerous occurrences are reported to the regulatory authorities. |  |  |
| 6.2 | Electrical accidents and dangerous occurrences are recorded in the Mines Record Book and Electrical Log Book. |  |  |
| 6.3 | Accidents and dangerous occurrences are appropriately investigated. |  |  |
| 6.4 | Electrical workers and assistants have been instructed in resuscitation methods for dealing with apparent death due to electric shock. |  |  |

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| 7 Electrical plans and records |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 7.1 | Plans showing the location and details of high-voltage cabling and equipment are kept at the mine. |  |  |
| 7.2 | Plans showing the locations and details of low-voltage and high-voltage cables installed in the ground are kept at the mine. |  |  |
| 7.3 | Plans which delineate and indicate the classification of ‘hazardous-areas’ in which explosion-protected equipment must be installed are kept at the mine. |  |  |
| 7.4 | A ‘Verification Dossier’ containing compliance certification and all other required information relating to explosion-protected equipment installed in ‘hazardous-areas’ at the mine, is kept and maintained. |  |  |

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| 8 Supervision of electrical work |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 8.1 | Appointed Electrical Supervisors verify that electrical work at the mine is supervised. |  |  |
| 8.2 | Electrical apprentices, permit holders and ‘B’ grade licence holders have been instructed regarding electrical work undertaken that requires supervision. |  |  |
| 8.3 | ‘Supervising Electrical Workers’ have been instructed regarding their supervising responsibilities. |  |  |
| 8.4 | Electrical workers are inducted in regard to equipment and systems of work applicable to each workplace. |  |  |
| 8.5 | ‘In-House Nominated Electrical Worker(s)’ check, test and certify electrical installing work carried out at the mine. |  |  |
| 8.6 | Work on or in close proximity to energised low-voltage conductors is only carried out in accordance with a procedure complying with the applicable Energy Safety Code of Practice. |  |  |

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| 9 High-voltage access permit procedure |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 9.1 | A written procedure has been established to safeguard work on or in close proximity to exposed high-voltage conductors. |  |  |
| 9.2 | Electrical workers have been instructed and assessed in regard to ‘ High-voltage access permit procedure’. |  |  |
| 9.3 | Work in close proximity to high-voltage conductors is not permitted unless authorised by a ‘High-voltage access permit’ issued by a ‘High Voltage Operator’. |  |  |
| 9.4 | ‘High-voltage access permits’ adequately describe the work to be undertaken and all necessary safety measures effected. |  |  |
| 9.5 | Isolation of high-voltage equipment for access, maintenance or repair purposes is conducted in accordance with a switching program prepared and checked by a ‘High Voltage Operator’. |  |  |
| 9.6 | ‘High-voltage access permits’ reference and are accompanied by a respective switching program. |  |  |
| 9.7 | Isolation of high-voltage equipment for access, maintenance or repair purposes is conducted by a ‘High Voltage Operator’. |  |  |
| 9.8 | ‘High-voltage access permits’ are not authorised prior to equipment being isolated, discharged, proved de-energised, short-circuited, connected to earth and tagged. |  |  |
| 9.9 | Work party members do not commence work before signing on to the ‘ High-voltage access permit’. |  |  |
| 9.10 | ‘High-voltage access permits’ are not cancelled prior to all work party members signing off of the access permit. |  |  |
| 9.11 | Records of ‘High-voltage access permits’ are kept for 2 years. |  |  |
| 9.12 | Suitable apparel, test instruments, earthing and operating equipment are provided and maintained for safely effecting high-voltage isolations. |  |  |

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| 10 Powerline corridor access permit procedure |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 10.1 | A written procedure has been established to safeguard against inadvertent contact or close approach to an energised overhead powerline by plant that is capable of breaching the requisite safety clearances. |  |  |
| 10.2 | The procedure addresses emergency response methods for dealing with inadvertent machinery contact with an overhead powerline. |  |  |
| 10.3 | Relevant plant operators have been instructed and assessed in regard to access procedures. |  |  |
| 10.4 | The procedure indicates the requisite minimum powerline clearance to be maintained when plant operates in a powerline corridor. |  |  |
| 10.5 | The procedure prohibits the operation of plant in a powerline corridor unless the requisite clearance can be assured. |  |  |
| 10.6 | The procedure prohibits the operation of plant elevating parts that do not afford the required clearances when fully raised, unless authorised by a ‘powerline corridor access permit’. |  |  |
| 10.7 | The manager has appointed in writing one or more competent person(s) for the purpose of issuing ‘powerline corridor access permits’. |  |  |
| 10.8 | Details of persons appointed to issue ‘Powerline corridor Access permits’ are recorded in the Record Book. |  |  |
| 10.9 | Persons appointed to issue ‘Powerline corridor access permits’ have acknowledged their appointments by signing in the Record Book and on any instrument of appointment. |  |  |
| 10.10 | The manager has provided a written summary of responsibilities and duties to persons appointed to issue ‘Powerline corridor access permits’. |  |  |
| 10.11 | ‘Powerline corridor access permits’ stipulate necessary safeguards to be effected that will assure the requisite safety clearances will be maintained. |  |  |
| 10.12 | Records of ‘Powerline corridor access permits’ are kept for 2 years. |  |  |

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| 11 Ground excavation permit procedure |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 11.1 | A written procedure has been established to safeguard persons required to excavate ground in the vicinity of cables buried in the ground. |  |  |
| 11.2 | Employees have been instructed and assessed in regard to the excavation permit procedure. |  |  |
| 11.3 | Excavation work in the vicinity of buried cables is not commenced unless authorised by a ‘Ground excavation permit’. |  |  |
| 11.4 | The manager has appointed sufficient competent persons for the purpose of issuing ‘Ground excavation permits’. |  |  |
| 11.5 | Details of persons appointed to issue ‘Ground excavation permits’ are recorded in the Record Book. |  |  |
| 11.6 | Persons appointed to issue ‘Ground excavation permits’ have acknowledged their authorisations by signing in the Record Book and on any instrument conveying that authority. |  |  |
| 11.7 | The manager has provided a written summary of responsibilities and duties to persons appointed to issue ‘Ground excavation permits’. |  |  |
| 11.8 | Persons appointed to issue ‘Ground excavation permits’ are required to consult current plans and specifically identify the worksite location prior to issuing a permit. |  |  |
| 11.9 | Persons appointed to issue ‘Ground excavation permits’ detail on the permit the safeguards that must be adhered. |  |  |
| 11.10 | Records of ‘Ground excavation permits’ issued are kept for 2 years. |  |  |

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| 12 Trailing cable operating procedures |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 12.1 | Written procedures have been established for safeguard trailing cables used at the mine. |  |  |
| 12.2 | Relevant plant operators have been instructed and assessed regarding trailing cable operating procedures. |  |  |
| 12.3 | Procedures describe the safeguards to be effected when trailing cables are anchored, extended, retrieved, energised and de-energised. |  |  |
| 12.4 | Procedures require the installation of signs and barriers to prohibit vehicle access into places where trailing cables are at risk from damage. |  |  |
| 12.5 | Procedures require any face sump pump, to be directly connected to an underground Jumbo-drill when the machine is operating at the face. |  |  |
| 12.6 | Is there a procedure in place to prohibit the manual handling of trailing and reeling cables while energised? |  |  |

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| 13 Statutory electrical maintenance |
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| **Point** | **Standard** | **Standard met** | **Comments** |
| 13.1 | Electrical equipment and cables that are likely to become hazardous are periodically examined and tested at intervals which verify safety and the results are recorded in an Electrical Log Book. |  |  |
| 13.2 | Portable electrical apparatus normally used in a heavy operating environment is examined, tested and tagged quarterly, and the results are recorded in an Electrical Log Book |  |  |
| 13.3 | Portable electrical apparatus brought to the mine by contractors for use in heavy operating environments is inspected prior to use to verify that the apparatus has been examined, tested and tagged in the previous three months. |  |  |
| 13.4 | The effectiveness of earthing systems, continuity of earthing conductors and the adequacy of electrical insulation is routinely tested, and the results are recorded in an Electrical Log Book. |  |  |
| 13.5 | Earth leakage devices required to be installed in a quarry operation, on parts of a dredge other than a floating treatment plant, and underground in a mine are tested monthly and the results are recorded in an Electrical Log Book. |  |  |
| 13.6 | Earth leakage devices required to protect alternating current circuits supplying portable, mobile or moveable apparatus are periodically tested and the results are recorded in an Electrical Log Book. |  |  |
| 13.7 | Earth continuity devices required to be installed in a quarry operation, on parts of a dredge other than a floating treatment plant, and underground in a mine are tested monthly and the results are recorded in an Electrical Log Book. |  |  |
| 13.8 | Earth continuity protection and monitoring devices required to be installed in a mine are tested periodically and the results are recorded in an Electrical Log Book. |  |  |

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