



VULCAN MINE

Mine Operating Procedure Equipment Compliance



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1. PURPOSE

The purpose of this Mine Operating Procedure (MOP) is to clearly define and outline the equipment compliance requirements for the Vulcan Mine Site and to ensure plant and equipment inspection processes are followed, including the provision and review of relevant documentation.

2. SCOPE

This MOP is applicable to all CMWs (Coal Mine Workers) at the Vulcan Mine Site and includes employees, contractors, employees of a contractor, a service provider, or an employee of a service provider to ensure the standards are achieved for equipment compliance to the SHMS (Safety and Health Management System)

The controls within this procedure are mandatory.

3. DEFINITIONS

Authorised Person	Any person that has been trained, assessed, and authorised to conduct equipment compliance inspections on behalf of Vulcan Mine; employee or contractor.
Checklist	A form used for prompting and documenting mandatory inspection of compliance criteria.
CMSHA	Queensland Coal Mining Safety and Health Act (1999).
CMSHR	Queensland Coal Mining Safety and Health Regulation (2017).
Contract Owner	The Vulcan Mine person who has been assigned the responsibilities to manage a specific third-party engagement.
Competent Person	A person who has, through a combination of training, education, and experience, acquired knowledge and skills enabling that person to correctly perform a specified task.
Compliance Criteria	Standards established via statutory, corporate and site requirements to control identified plant and equipment risks.
Inspections	Documented processes or reports which provide the results of plant and equipment examinations.
Electrical Contractor	As defined in Division 3 of the Electrical Safety Regulation 2013.
Maintenance Management System	A system for managing the maintenance of plant and equipment, which encompasses the compliance database, scheduling, and documentation.
MOP	Mine Operating Procedure
OEM	Original Equipment Manufacturer.
Owner	Person or organisation that owns the plant or equipment.
RSHQ	Resources Safety and Health Queensland
SSE	Site Senior Executive.
SHMS	Safety and Health Management System.
SOP	Standard Operating Procedure.
Supplier	Person or organisation providing plant or equipment.
SWP	Safe Work Procedure
Third-Party	Person or organisation external to Vulcan Mine responsible for the ownership and/or maintenance of approved plant or equipment on site, including hire plant or equipment.
WBV	Whole Body Vibration



4. RISK MANAGEMENT

A risk assessment shall be conducted for the introduction to site of new equipment both fixed and mobile in accordance with VUL-MOP-049-Risk and Hazard Management. This includes but not limited to the following below. The risk assessment shall take into consideration:

- VUL-SOP-021-Electrical work;
- VUL-MOP-066-Braking systems;
- VUL-SOP-067-Guarding;
- VUL-SOP-072a-Tyres, Wheels, and Rims Management;
- VUL-SOP-076-Using Mobile Plant;
- VUL-SOP-072c-Assembling and Maintaining Plant;
- VUL-SOP-072e-Lifting Operations;
- VUL-SOP-072g-Towing Mobile Plant;
- VUL-SOP-072h-Servicing, Lubricating and Refuelling;
- VUL-SOP-072i-Transporting Heavy Plant and Supplies;
- VUL-SOP-078-Isolation and Tagging;
- VUL-SOP-079-Electrical and Mechanical Equipment used to Maintain Plant;
- VUL-SOP-080-Fluid Above and Below Atmospheric Pressure;
- VUL-SOP-096b-Manual Handling Tasks and Ergonomics;
- VUL-SOP-098-Reporting and Rectifying Defects;
- That the equipment is fit for purpose and meets site requirements; and
- Chain of responsibility form on Auditing tool.

NOTE - Workers have a duty to take reasonable care for their own health and safety and to not adversely affect the health and safety of other persons. Workers must comply with reasonable instructions, as far as they are able, and cooperate with reasonable health and safety policies or procedures that has been notified to workers, including information, instructions, and training in relation to work carried out by the worker conducting equipment compliance and inspections. If personal protective equipment (PPE) is provided, the worker must as far as they are able, use or wear it in accordance with the information, instructions and training provided.

5. CHANGE MANAGEMENT

Change Management processes in accordance with shall be followed for any modifications to plant, equipment and or vehicles, including the attachment of equipment in accordance with;

- VUL-MOP-064(3)-Change Management Plan;
- VUL-SOP-068-Modifying Fixed & Mobile Plant; and
- VUL-FRM-02-02-Change Management Request.

6. TRAINING AND COMPETENCE

Authorised Personnel who are conducting plant and equipment compliance inspections shall hold the relevant competencies, appointment and or authorisations:

Equipment	Equipment Compliance Competencies	Brake Testing Competencies
Light Vehicle	RIISAM301	AURLTB002
Medium Vehicle	RIISAM301	AURHTB005
Medium Equipment	RIISAM301	AURKTB002
Surface Mobile Equipment	RIISAM301	AURKTB002
Ancillary Equipment	RIISAM301	
Electrical Equipment	RIISAM301 & Appointed Electrical Worker	



7. INCIDENT MANAGEMENT

If plant and equipment are involved in an incident or accident, the plant or equipment may require re-compliance inspections to return to work. This will be determined on a case-by-case basis and will be at the discretion of the SSE and or Asset Manager.

Should re-compliance be required, the plant or equipment must not return to work until compliance is completed, reviewed, and approved by the Vulcan Mine Asset Manager.

8. PROCEDURE

This MOP enables plant and equipment to be assessed against the site requirements, and if successful, to be issued with an Equipment Compliance approval sticker authorising the equipment to be used or operated on the Vulcan Mine Site. Once on site, all plant and equipment will be routinely inspected and audited to site standards outlined within this document and the Vulcan Mine SHMS to ensure plant and equipment are maintained.

8.1. Mandatory Requirements

The core mandatory requirements and expectations of Vulcan Mine are all plant and equipment are compliant to operate on the Vulcan Mine Site and in accordance with the Vulcan Mine SHMS.

Should a system gap be identified, the Asset Manager shall be notified immediately and a risk assessment in accordance with ***VUL-MOP-049-Risk Management***.

8.2. Site Entry Requirements

Prior to plant or equipment being approved for operation on the Vulcan Mine site, notification shall be provided to the Vulcan Mine Asset Manager and the Vulcan Mine Asset Manager must approve the plant or equipment:

- as being site compliant; and
- as being adequately maintained.

Plant and equipment compliance inspections are to be completed on the plant and equipment specific inspection forms and may require more than one inspection to be conducted depending on the type of plant and equipment.

Inspection forms are to be completed and recorded on Vulcan Mine's compliance audit tool and record keeping system.

Compliant plant or equipment must display a current Vulcan Mine compliance sticker.

8.2.1. Brake Testing

All brake testing shall be completed in accordance with ***VUL-MOP-066-Braking Systems*** and recorded in Vulcan Mine's compliance audit tool and record keeping system.

- A brake testing compliance sticker shall be fitted at time of inspection to notify operator of when the equipment's next periodic brake test is due as per ***VUL-MOP-066-Braking Systems***.

8.2.2. Tyres and Rims

Plant or Equipment with 24" rims or greater shall meet the requirements of ***VUL-SOP-72a- Tyres, Wheels, and Rim Management***.

8.2.3. Electrical

Electrical inspections on equipment with power outlets greater than extra low voltage shall be completed by an authorised licenced electrician and in accordance with ***VUL-SOP-078-Isolating, Locking-Out and Tagging Plant***.

All items of electrical equipment mobilised to site shall be subject to an inspection, test and tag periodic regime as required by statutory requirements.



8.2.4. NDT

As part of VUL-MOP-071-Equipment Compliance, fixed and mobile plant that is structural or has load bearing capabilities such as but not limited to the following equipment requires yearly non-destructive testing (NDT)

- Cranes and lifting equipment i.e.; Jigs and attachments for lifting;
- Special lifting and purpose made engineered equipment;
- Rims over 24-inch diameter as per VUL-SOP-072a-Tyres Wheels and Rim Management;
- High stress and load bearing sections of chassis around steering and braking components on heavy mobile plant and equipment;
- If specified by the manufacturer and scheduled in the OEM manuals;
- If the area of concern has been involved in damage to equipment post incident; and
- If the area has been identified and failed multiple times in a short period of time;

NOTE – NDT testing is to be conducted by trained and certified personnel and by a third party not immediate to site or equipment owners. A report by the third party is to be presented with the new equipment being brought to site. NDT testing is to be conducted post heavy vehicle contact or incident as to ensure the safe return of equipment to site and operators.

8.2.5. Portable Equipment

Regarding earthing requirements for portable generators, earth electrodes (stakes) should not be attached to portable generators and engine driven welders connected as per Figure 2.3 of AS/NZS 3012:2010 Electrical Installations. If any generator is supplied with an operating manual which contradicts the above, it should not be used until clarification has been obtained from the EEM (Electrical Engineering Manager).

Where a generator is connected to a switchboard, an earth electrode (stake) must be connected to the switchboard main earth, which in turn must be connected to the main neutral via the M.E.N. as per Figure 2.1 of AS/NZS 3012. The stake must be installed in accordance with AS/NZS 3000:2007 Wiring Rules.

- Ensure RCDs on portable generators are checked daily as a minimum
- RCDs used with or connected to portable generators shall have RCD and equipotential bonds tests
- Inspection test by a competent person is performed 3 monthly as a minimum; and
- All hired electrical equipment shall be inspected upon delivery and thereafter tested at monthly intervals.

As the periodic check and test intervals above are the legislated minimum, a more frequent schedule should be implemented under severe operating conditions.

8.2.6. Occupational Health

Whole Body Vibration (WBV)

Plant and Equipment being introduced to site shall be risk assessed with base line testing for WBV to determine any potential of long-term exposure to elevated levels of whole-body vibration (WBV) associated with the operation of mobile equipment. If determined yes, monitoring shall be implemented.

Noise testing and Cabin pressurisation as per RS20 exposing CMW (Coal Mine Workers) to silica dust.

8.3. Compliance Checklists

Plant and Equipment compliance checklists are built in Vulcan Mine's compliance audit tool and record keeping system.

Plant and Equipment must meet 100% compliance and shall be approved by the Asset Manager prior to being approved to operate on site.

Compliance Checklists are available for all equipment classifications and are available on Vulcan Mine's compliance audit tool and record keeping system.

If additional equipment category compliance checklists are required to be developed, a formal request must be submitted to the Asset Manager in accordance with **VUL-MOP-064(3) -Change Management**.



All compliance checklists are to be completed in Vulcan Mine's compliance audit tool and record keeping system.

Photos and documentation are required to be uploaded. These include, but not limited to:

- Hour meter;
- Isolation points;
- Jump start receptacles;
- Height of equipment label on windscreen;
- Call signs on all sides and on the rear;
- Yellow high visibility tape 50mm minimum;
- Mine programmed 2-way radio – Fitted (except for Haulage trucks operating on the Vulcan ROM or short-term contractors (less than a month));
 - **NOTE:** Fitted 2-way radio may be exempted at the discretion of the SSE or Asset Manager.
- Modification plates;
- Fire extinguishers with test date;
- Pressure vessel test dates;
- Safety relief valves and test dates;
- Maintenance records;
- Operational and maintenance manual;
- Prestart book;
- Flashing beacon; and
- Overall photos of plant or equipment.

8.3.1. Multiple Classifications

Plant or Equipment may overlap multiple classifications and will therefore require multiple Site Compliance Checklists to be completed. For example, a trailer mounted generator will need to be inspected against both the Trailers and the Transportable Diesel Welder/Generator/Lighting Tower checklists.

8.3.2. Not Classified

Equipment being introduced to site that is not covered by the equipment compliance classifications must have an SSE approved risk assessment that identifies appropriate controls. This must include, but not be limited to:

- | | |
|--------------------------------------|----------------------------|
| • Communications | • |
| • Isolation | • Guarding |
| • Access and egress | • Access Scissor Points |
| • Lighting | • Access Crush Zone |
| • Braking systems | • Tyres & Rims |
| • Marking, signs, and identification | • Structural Integrity |
| • Steering systems | • Control functions |
| • Exposure to dust and gases | • Pressure vessels |
| • Warning devices | • Electrical |
| • Fire extinguishers | • Protective structures |
| • Fire Suppression | • Engine and fluid systems |

8.4. Approval to Site Processes

When equipment compliance inspection forms and supporting evidence has been completed, reviewed, and approved by the Vulcan Mine Asset Manager, approval can be given for the plant or equipment to commence operations on the Vulcan Minesite.

Non-compliant items shall be rectified or may receive approval by the SSE subject to a risk assessment.

Note: Any certified equipment that does not meet its certification requirements shall be placed "Out of Service" until rectified in accordance with **VUL-SOP-078-Isolating, Locking-Out and Tagging Plant**.



8.5. Compliant Plant and Equipment Onsite

All plant and equipment on the Vulcan Mine site must have:

- A current Site Compliance Checklist(s) showing it has passed all required compliance inspections;
- A copy of the brake test result, if applicable;
- Fitted two-way radio(s) tuned to the site-specific channel(s);
- A current Compliance Sticker;
- Access to records to verify equipment is maintained in a compliant state.

For plant and equipment to continue operating on site, all plant and equipment shall undergo site compliance every year, or post incident.

8.6. Contractor Plant and Equipment Onsite

All contractor plant and equipment being brought to site must comply with the relevant compliance requirements as outlined in this MOP.

All plant and equipment shall be recorded on the Contractors CMR in accordance with the **VUL-PLN-043-Contractor Management** and within Vulcan Mine's compliance audit tool and record keeping system.

8.7. Non-Compliant Plant and Equipment Onsite

If non-compliant plant or equipment is found to be working on site, the following steps must be taken:

- To be moved to a safe area and tagged "out of service" in accordance with **VUL-SOP-078-Isolating, Locking-Out and Tagging Plant**
- The Supervisor Asset Manager, Contract Manager, and if applicable, the Contractor Owner notified;
- The event is to be treated as an incident and shall be investigated accordingly:
 - The Asset Manager is responsible for incident investigation involving plant or equipment owned or maintained by Vulcan Mine; and
 - The relevant Contract Owner is responsible for incident investigation involving plant or equipment owned or maintained by third parties.

8.8. Removal from Site

When plant or equipment is removed from site, the Vulcan Mine Asset Manager will ensure relevant registers are updated accordingly.

8.9. Returning to Site

If plant and equipment is removed from the Vulcan Mine site for overhaul or major maintenance or changes to contracts, the plant and equipment shall be subject to re-introduction to site, depending on the nature of the work and subject to the approval of the Asset Manager.

8.9.1. Confined Spaces

All plant or equipment with identified confined spaces must be inspected by a competent person to determine the space's classification and recorded within the relevant site Confined Space Register.

9. RECORDS

The Vulcan Mine's compliance audit tool and record keeping system shall capture the following information:

- The Compliance Equipment sticker ID.
- Name of the Company/Department the Compliance sticker is issued to.
- The Date of issue.
- The Date of re-inspection.
- The following Equipment details (as applicable):
 - Call sign/ID number.
 - Registration number and date of registration.
 - Make, type and model.
 - Maximum height in operating condition.

The following records shall be maintained and recorded for each item of plant and equipment (at a minimum):



- Plant Hazard Assessments
- Maintenance records
- Inspection records/logbooks
- Certifications/Modification certificates (if applicable)
- Current Brake test results
- Annual/Periodic compliance testing
- Periodic test results (e.g., Non-Destructive Test)

A copy of the completed relevant Compliance Inspection Form is given to the Equipment Owner.

A soft copy of the original shall be uploaded to and recorded in Vulcan Mine's compliance audit tool and record keeping system.

10. ROLES AND RESPONSIBILITIES

SSE	Shall review and approve this procedure.
HST Manager	Shall ensure that all provisions of this procedure are implemented, and that compliance is achieved.
Superintendents	Shall be responsible for their area of operations and the implementation and application of this procedure; Provide adequate training, information, structure and supervision to ensure that this procedure is implemented; Carry-out a periodic review of activities to ensure the appropriate application and understanding of this procedure; and Ensure immediate and appropriate steps are taken to investigate and rectify any risks to health and safety arising from these activities.
Supervisors	Ensure all CMWs are familiar with, have access to and comply with the requirements set out in this procedure.
All CMWs (including visitors and contactor)	Shall comply with the requirements of this procedure.

11. RELATED DOCUMENTS

- VUL-MOP-064(3)-Change Management Plan
- VUL-SOP-068-Modifying Fixed & Mobile Plant
- VUL-MOP-066-Braking Systems
- VUL-SOP-72a- Tyres, Wheels, and Rim Management
- VUL-SOP-078-Isolating, Locking-Out and Tagging Plant
- VUL-PLN-043-Contractor Management

12. REFERENCES

- AS5062 Fire protection for mobile and transportable equipment
- AS/NZ 3788 Pressure equipment – in-service inspection
- AS4457 Earth-moving machinery – Off-the-road wheels, rims, and tyres – Maintenance and repair – Wheel assemblies and rim assemblies
- AS/NZS 1418 Cranes, hoists, and winches
- AS60974 Arc welding equipment
- AS4024 Safety of machinery
- AS/NZS4871 Electrical equipment for mines and quarries
- Coal Mining Safety and Health Act 1999 (Qld)
- Coal Mining Safety and Health Regulation 2017 (Qld)
- Electrical Safety Act 2002
- Electrical Safety Regulation 2013
- RSHQ Safety Bulletin 7 Contractor's equipment - compliance issues #2
- RSHQ Safety Alert 115 Forklift tyre frame failure
- RSHQ Mines Safety Alert Newsflash Mobile Plant – Access Entrapment
- RSHQ Safety Alert 200 Management of contractors and contractors' obligations
- RSHQ Significant Incident 23 Non-compliant flame proof motor



13. REVIEW

This document shall be reviewed at a minimum every three years or when triggered by any of the following events:

- a) A site or external accident or incident directly related to the document contents;
- b) A legislated change directly related to the document contents;
- c) If directed an RSHQ Mines Inspector or Industry Safety and Health Representatives;
- d) As a result of an inspection, audit, hazard identification, safety observations, risk assessment or other processes where the actions recommended are directly related to the document contents; or
- e) A change required by the Vulcan Mine SSE; or

14. DOCUMENT CONTROL

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01	28/03/2022	Initial Draft	Shane Walters
02	29/03/2022	Review with subject matter experts	Michael Cavanagh
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