



VULCAN MINE

Standard Operating Procedure Assembly, Disassembly and Maintaining of Plant in its Operational Location



Contents

1.	PURPOSE.....	3
2.	SCOPE.....	3
3.	DEFINITIONS.....	3
4.	RISK MANAGEMENT	3
5.	General	4
5.1.	Safe and Controlled Park-up of Mobile Equipment	4
5.2	Isolation and Tagging.....	5
5.3	Positive Communications.....	5
5.4	Assembly of mobile and fixed plant.....	5
5.5	Maintenance of mobile and fixed plant.....	5
5.6	Disassembly of Mobile and fixed Plant	5
6	ROLES AND RESPONSIBILITIES.....	6
7	REFERENCES	7
8	REVIEW	7
9	DOCUMENT CONTROL	7



1. PURPOSE

The purpose of this procedure is to describe the requirements and ensure effective management of hazards and risks associated with assembling and maintaining fixed and mobile plant in its operational location.

Section 72(c) - Assembling and maintaining fixed and mobile plant in its operational location;

2. SCOPE

This procedure is applicable to all persons at the Vulcan Mine including employees, contractors and visitors.

The controls within this procedure are mandatory.

3. DEFINITIONS

Authorised Person	A person who has the required competencies and who has been appointed by the Site Senior Executive to carry out a designated scope of duties.
CMSHA	Queensland Coal Mining Safety and Health Act (1999).
CMSHA	Queensland Coal Mining Safety and Health Regulation (2017).
CWM	Coal Mine Worker.
Competent Person	A person who has, through a combination of training, education and experience, acquired knowledge and skills enabling that person to perform correctly a specified task.
HME	Heavy Mobile Equipment.
JHA	Job Hazard Analysis.
MOP	Mine Operating Procedure
OCE	Open Cut Examiner.
PHMP	Principle Hazard Management Plan
SHMS	Safety and Health Management System.
SOP	Standard Operating Procedure.
SSE	Site Senior Executive.
WRAC	Workplace Risk Assessment and Control.

4. RISK MANAGEMENT

Where Assembly, Disassembly and Maintenance are to be conducted onsite or where there is a potential of injury when performing Assembly, Disassembly and Maintenance the Risk Management process shall be followed to the level of the task being undertaken in accordance with ***VUL-MOP-049-Risk Management***.

The risk management process should consider the following points:

- Control measures for Assembly of Plant;
- Control measures for Maintenance of Plant;
- Control measures for Disassembly of Plant;
- Control measures for hot substances and fluids;
- Control measures for manual handling;
- Electrical equipment and usage;
- Mobile and fixed equipment and usage;
- Housekeeping of the work area;
- Service areas;
- Servicing, Lubricating and Refuelling of Plant;
- Ignition sources;
- Hazardous substances; and



- Fluid and or oil injection.

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 reasonably 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 Assembly, Disassembly and Maintenance. If personal protective equipment (PPE) is provided, the worker must so far as they are reasonably able, use or wear it in accordance with the information, instructions and training provided.

5. General

The Assembly, Disassembly and Maintenance, of mobile and fixed plant must be in accordance but not limited to the following;

- **VUL-SOP-Modifying fixed and mobile plant and equipment;**
 - **VUL-MOP-071-Equipment Compliance;**
 - **VUL-SOP-080-Fluid Above and Below Atmospheric Pressure;**
 - **VUL-SOP-076-Using Mobile Plant;**
 - **VUL-SOP-079-Electrical and Mechanical Equipment used to Maintain Plant;**
 - **VUL-SOP-072i-Transporting Heavy Plant and Supplies;**
 - **VUL-SOP-072e-Lifting Operations;**
 - **VUL-SOP-072a-Tyres, Wheels & Rims Management;**
 - **VUL-SOP-066-Braking Systems;**
 - **VUL-PHMP-02-Vehicle Interaction;**
 - **VUL-SOP-056-Hazardous Substances; and**
 - **VUL-SOP-072h-Servicing, Lubricating and Refuelling Plant.**
- Personnel must read the OCE Report, and/or consult with the OCE;
 - Work areas must be in place as per – **VUL-SOP-094-Check, Examine and Restrict Work Areas;**
 - Equipment and tooling required must be escorted to and from the assembly or disassembly area. As per **VUL-SOP-072(i)Transporting Heavy Plant and Supplies;**
 - The maintenance and work area shall be isolated. e.g. Suitable safety berms, barricading and signage;
 - Adequate lighting shall be provided in accordance with the **VUL-MOP-144-Lighting;**
 - Light vehicles shall not enter HME go-line unless entering to complete necessary maintenance activities where the unit cannot be relocated to the designated maintenance bay the go line must be closed prior to commencing activities by a general call over the mine radio; and
 - Tooling, equipment and supplies must be installed and removed from location once work has been completed.

NOTE - No person shall modify, maintain or service plant or equipment, including designated tasks, unless trained, competent and authorised and completed in accordance with VUL-SOP-068-Modifying Fixed and Mobile Plant.

5.1. Safe and Controlled Park-up of Mobile Equipment

The operator of mobile plant shall ensure the vehicle is fundamentally stable before leaving the operator's cabin as per **VUL-SOP-076-Using Mobile Plant.**

Where practicable, haul trucks must be emptied and mobile plant moved off benches or excavated faces prior to carrying out planned maintenance work in the pit. As per relevant Geotechnical hazards and **VUL-PHMP-03-Geotechnical/VUL-TAR-003-Geotechnical Failure.**

No maintenance or inspection should be performed within 10 metres (or greater, as designated) from the toe of a high-wall or excavated faces.

If the 10m exclusion zone for a breakdown situation requires the access to exclusion zone the OCE and shift production supervisor shall be contacted and risk assessment process followed.

If mobile equipment is to be repaired in operational location a 50 metres safe distance must be maintained by personnel and working machinery. If this cannot be achieved, high risk bunding shall be installed to minimise the risk to personnel.



5.2 Isolation and Tagging

All energy sources must be identified and controlled prior to work as per with ***VUL-SOP-078-Isolation and Tagging***.

5.3 Positive Communications

Do not approach mobile plant unless positive communication has been received.

The maintenance vehicle shall not approach within 50 metres of equipment until the operator confirms positive communications and parked fundamentally stable.

The maintenance vehicle shall not reverse on approach.

Maintenance personnel shall comply with the rules relevant to the area they are working, including notifying operators within operational circuits.

Off-going maintenance crews shall provide relevant feedback to their maintenance supervisor to ensure information can be passed on to the on-coming maintenance crew.

5.4 Assembly of mobile and fixed plant

Assembly of Mobile and fixed plant onsite must be in accordance but not limited to the following;

- New equipment to site must be inspected as per ***VUL-MOP-071-Equipment Compliance***.
- All work is to be in accordance with OEM specifications and recommendations.
- Equipment must be fit for purpose and meet site requirements.
- Contractors brought in to assist with labour support or OEM technical advice must be in accordance with VUL-CMR- System.
- A JHA must be completed for Assembly of Mobile and Fixed plant onsite.
- If specialised tooling must be used. It is to be used as per OEM manuals and fit for purpose. To meet Australian standards.
- PPE both specialised and general for task must be in reference to ***VUL-SOP-065-PPE***.
- Lifting of equipment and supplies must be followed by ***VUL-SOP-072e-Lifting Operations***.

NOTE - If specialised tooling and equipment is required, it must be appropriately risk assessed by a trained and competent person.

5.5 Maintenance of mobile and fixed plant

Maintenance of Mobile and fixed plant onsite must be in accordance but not limited to the following;

- Maintenance of Mobile and fixed plant shall be in accordance with site procedures and processes.
- Only trained authorised and competent CMW/s shall conduct maintenance activities.
- All maintenance techniques and activities must be as per OEM recommendations and requirements.
- Spills and contaminations of the work area must be cleaned up prior to handing back equipment.
- Mobile and fixed plant must have a prestart completed / Plant hazard check list completed prior to returning to work.

Mobile plant shall remain parked until maintenance personnel leave the area. The operator shall complete a walk-around inspection before moving off.

NOTE - If specialised tooling and equipment is required, it must be appropriately risk assessed by a trained and competent person.

5.6 Disassembly of Mobile and fixed Plant

Disassembly of Mobile and fixed plant onsite must be in accordance but not limited to the following;

- All work is to be in accordance with OEM specifications and recommendations.
- Equipment must be fit for purpose and meet site requirements.
- Contractors brought in to assist with labour support or OEM technical advice must be in accordance with VUL-CMR- System.



- A JHA must be completed for disassembly of Mobile and Fixed plant onsite.
- If specialised tooling must be used. It is to be used as per OEM manuals and fit for purpose. To meet Australian standards.
- PPE both specialised and general for task must be in reference to **VUL-SOP-065-PPE**.
- Lifting of equipment and supplies must be followed by **VUL-SOP-072e-Lifting Operations**.

NOTE - If specialised tooling and equipment is required, it must be appropriately risk assessed by a trained and competent person.

6 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.



7 REFERENCES

- Coal Mining Safety and Health Act 1999 (Qld)
- Coal Mining Safety and Health Regulation 2017 (Qld)
- RSHQ Significant Incident 27 Mine Worker Crushed Under Rear Dump Tray
- VUL-SOP-065-PPE
- VUL-SOP-072h-Servicing, Lubricating & Refuelling
- VUL-SOP-076-Using Mobile Plant
- VUL-SOP-078-Isolation and Tagging
- VUL-SOP-096b-Manual Handling Tasks & Ergonomics
- VUL-SOP-098-Reporting & Rectifying Defects
- VUL-SOP-056-Hazardous Substances
- VUL-SOP-080-Fluid Above and Below Atmospheric Pressure
- VUL-SOP-079-Electrical and Mechanical Equipment used to Maintain Plant
- VUL-SOP-144-Lighting
- VUL-SOP-138(a)(b)-Work on or Near Stockpiles
- VUL-SOP-072i-Transporting Heavy Plant and Supplies
- VUL-SOP-072e-Lifting Operations
- VUL-SOP-072a-Tyres, Wheels & Rims Management
- VUL-SOP-066-Braking Systems
- VUL-PHMP-02-Vehicle Interaction
- VUL-SOP-076-Using Mobile Plant
- VUL-PHMP-03-Geotechnical
- VUL-TAR-003-Geotechnical Failure
- VUL-SOP-056-Hazardous Substances

8 REVIEW

This document shall be reviewed at minimum two-yearly, or as follows:

- When there is a change of method and/or technology and/or legal or other requirement that may affect the accuracy of this document;
- When operational changes occur that effect the currency of the document;
- When there has been a significant event to which this document was relevant; and
- As a result of relevant audit findings.

9 DOCUMENT CONTROL

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