



VULCAN MINE

Management Plan Explosives Site Security



Contents

1. PURPOSE3

2. DEFINITIONS.....3

3. RISK MANAGEMENT3

4. EXPLOSIVES MANAGEMENT.....4

 4.1. Controlling access4

 4.2. Access to keys.....4

 4.2.1 SSAN4

 4.2.2 Explosives.....4

 4.3. Reload and Magazine Storage4

 4.3. Checking and authorising persons with unsupervised access to Explosives or SSAN5

 4.4. Records.....5

 4.5. Accounting of SSAN5

5. SITE SECURITY6

6. PROCEDURES6

7. REFERENCES.....7

8. DOCUMENT CONTROL.....7



1. PURPOSE

The purpose of this Security Plan is to identify hazards associated with Security of Explosives at Vulcan Mine and to specify the management by reducing identified risks to an acceptable level.

2. DEFINITIONS

BBRA	Broad Brush Risk Assessment.
CMW	Coal Mine Worker.
JHA	Job Hazard Analysis.
MOP	Mine Operating Procedure.
OCE	Open Cut Examiner.
PHMP	Principal Hazard Management Plan.
SHET	Safety, Health, Environment and Training.
SOP	Standard Operating Procedure.
SSE	Site Senior Executive.
SWP	Safe Work Procedure.
TARP	Trigger Action Response Plan.
WRAC	Workplace Risk Assessment and Control.
VUL	Vulcan Mine

3. RISK MANAGEMENT

Security sensitive explosives includes blasting explosives (including precursors) and security sensitive ammonium nitrate (SSAN). This document forms an overarching document for SSAN & explosives security.

This plan has been developed following the site security plan requirements, as described in the Explosives information bulletin no. 53 Storage requirements for security sensitive ammonium nitrate (SSAN).

The Security Sensitive Explosive Security Plan was developed from VUL-RSK-116 Explosives Management risk assessment covering:

- Theft
- Unexplained loss
- Deliberate interference
- Unauthorised access



4. EXPLOSIVES MANAGEMENT

4.1. Controlling access

The Vulcan Mine Bulk Explosives Facility (SSAN storage facility) is located within the coal mine lease boundary, with controlled access to the site via boom gates, swipe access points and locked compounds when un-manned. General access control arrangements include:

- The magazine and reload compounds shall be inspected by the Open Cut Examiner (OCE) on each shift.
- All coal mine workers involved in explosives handling and shot firing at Vulcan Mine shall be appointed by the Site Senior Executive (SSE).
- Any person wishing to access the magazine or reload facility that is not authorised must be under direct supervision by an authorised person.
- All dangerous goods drivers shall be under escort and direct supervision by an authorised person.
- Only the Licence Holder's approved coal mine workers, appointed by the SSE, shall have unsupervised access to SSAN.
- Only Licensed Shotfirers/Magazine keepers appointed by the SSE with the Licence Holders permission, will have unsupervised access to the Explosives Magazine.
- All current appointments shall be kept on the Mine Record and the Mine Training Register.
- On occasions an Inspector of Explosives may have access to remove explosives from a magazine under the License Holders authority.
- Once satisfied the product must not be released from the magazine until the quantity is booked out in the magazine record and an official receipt of the product is received from the inspector.

The appointment structure for Vulcan Mine is outlined in Annex A to this document.

4.2. Access to keys

4.2.1 SSAN

Only the Licence Holder's approved coal mine workers, appointed by the SSE shall have access to the Bulk Explosives Facility and MPU keys. These keys will be securely stored in the SSAN compound office.

4.2.2 Explosives

Only Licensed Shotfirers appointed by the SSE will have access to the Explosives Magazine key safe and only Licensed Shotfirers appointed by the SSE will have access to the Explosives Magazine unsupervised.

All SSAN Keys of a secure nature shall be held in a designated key safe for SSAN Keys.

Each authorised person shall be provided with access to the Key Safe which they shall ensure is not passed on to any other person. A register of authorised access to the Key Safe shall be kept. If, for any reason, a person believes that someone else has gained unauthorised access, they shall immediately notify the Explosives Licence Holder who will resecure the safe and commence investigation.

4.3. Reload and Magazine Storage

Maximum quantities and their storage are as per the table below:-

Storage 1	IE Mag	10,000 units of Detonators 1.1B
Storage 2	HE Mag	6,000kg of Boosters 1.1D
Storage 3	SSAN (AN)	60 Tonnes 5.1
Storage 4	SSAN (ANE)	90 Tonnes 5.1



4.3. Checking and authorising persons with unsupervised access to Explosives or SSAN

Before authorising any person to have access to explosives or explosive precursors the Licence Holder shall check that the person is an 'appropriate person' as defined in the Explosive Act 1999 and the Explosive Regulations 2017 and the Explosive Information Bulletin 41 as:

- A person having access to explosives must have conducted an Explosive Security Clearance issued from the Queensland Government, and
- Any person appointed to an explosive handling role shall notify Vulcan Mine Management immediately if there is any change to their records of criminal history, domestic violence orders or ASIO clearance.
- Evidence of competency and security clearances must be supplied to Vulcan Mine Management before any person may be appointed to a role associated with explosive use on site. This evidence includes, but is not limited to:
 - Queensland Shotfirers Licence issued by the Explosives Inspectorate
 - RIIBLA201 Support Shot firing Operations
 - RIIBLA301 Conduct Shot firing Operations
 - Security Check (as per Explosives Information Bulletin 74)

4.4. Records

Records shall be maintained for:

- All deliveries and reconciliation of stock.
- The appointment of authorised persons.
- Inspections of facilities
- Incidents and investigations relating to security of explosives

This plan and records shall be available in the mines SHMS.

The explosives contractor is ultimately responsible for the accuracy and implementation of this plan and the above records.

The auditing process will consist of the following:

- Weekly audits of explosives magazine stock will be conducted by the Magazine Keeper and reconciled against the monthly stock usage spreadsheet / Shotfirer's spreadsheet. (Magazine Stocktake sheet)

4.5. Accounting of SSAN

The explosives contractor shall maintain accurate stock accounting records which will include:

- Transport delivery dockets of Vulcan Mine SSAN received to site
- Shotfirer to provide Delivery dockets for the shift's loading
- Shotfirer to provide end of shift totals, via email
- Closing Stock counts on a monthly basis for Vulcan Mine Ammonium Nitrate & Emulsion Phase;
- Magazine keeper closing monthly balance and reconciliation.
- Magazine keeper shall provide the Vulcan Mine Drill and Blast Engineer a breakdown of products used monthly.

The Drill and Blast Engineer shall match products used against the against blast plans and reconcile all explosives and SSAN used and stored on site.



5. SITE SECURITY

All SSAN shall be stored as required by this plan, to a minimum set out under AS4326 - The storage and handling of oxidizing agents, Information Bulletin 7 and 53 and the AEISG Code for Precursors.

The Bulk Explosives Facility shall;

- Be located at a distance that complies with AS 2187.1.
- Site distances as per below table:-

PWA	Required: 616m	Actual: 1416m
PWB	Required: 924m	Actual: 954m
VF	Required: 1847m	Actual: 2950m

- Be fenced with 2.1m chain mesh fencing with the bottom wire being no greater than 100mm from the ground at any point.
- All fencing is to comply with AS 2187.1 / AS 1725
- Locks used to secure the gates to the compounds shall be of a type that is intended to prevent unauthorised entry, in accordance to Australian Standard AS 4145.4: Locksets – Padlocks
- AN bins and MPUs shall be sealed with tamper-proof seals so that theft of product is easily detectable
- All ANE piping, hoses, inlets and outlets are to have security seals place on them when not in use to enable theft or tampering to be detected.
- Real time security monitoring of the licenced facility.
- The appointed magazine keeper shall conduct a magazine stock count at least once per week and reconcile this stocktake against monthly stock usage spreadsheet, ensuring that all stock is accounted for.
- The appointed magazine keeper shall conduct a full inspection of the facilities in compliance with the Explosives Regulations 2017 every 3 months.

6. PROCEDURES

Procedures associated with storage and handling of explosives can be found in VUL-SOP-116 (a,b,c,d,e,f) Transporting, Storage and handling Explosives including:

- An inventory system that records the delivery, issue and return of stock movements to reconcile incoming and outgoing quantities of SSAN.
- Confirm existing stock in magazines is counted and balances to the magazine record prior to receiving new stock into magazine.
- Only Appointed Shotfirers and Magazine Keepers shall issue or receive explosives and detonators.
- Wherever SSAN or explosives are used the area shall be demarcated as unauthorised access (e.g. blast area)

No explosives may be left unattended except:

- In a pre-split that is demarcated as unauthorised access, or
- In a loaded blast hole where the product cannot be removed, whether stemmed or unstemmed
- Locked in explosives storage boxes / magazines.

Any suspected loss or theft of explosives or SSAN or suspicious circumstances shall be investigated in line with VUL-MOP-015-Incident Reporting & Investigating

Reporting to authorities any unexplained loss, theft, attempted theft or any other security incident involving SSAN or Explosives by the SSE or their delegate.



7. REFERENCES

- AEISG Code of Practice Storage & Handling of UN3375
- Coal Mining Safety and Health Act 1999 (Qld)
- Coal Mining Safety and Health Regulation 2017 (Qld)
- Broad Brush Risk Assessment- Vulcan Project
- VUL-RSK-116- Explosives Management
- Explosive Information Bulletin 41 & 7
- Explosive Act 1999
- Explosives Regulation 2017
- AS4326 The Storage & Handling of Oxidising Agents
- AS2187 Explosives- Storage, Transport and Use storage
- AS4145 Locksets and Hardware for Doors and Windows

8. DOCUMENT CONTROL

Version	Date	Description	Document Controller
01		Development	Rachael Decker
02	31/03/2021	WRAC & review	Nicole Davey
03	20/03/2023	Document review	Allira Spencer
04	05/06/2025	Document review and update	Kelly Jensen

Annex A

Role	Pre requisite	Site Requirements	Authorities
Shot firer	-Current QLD Shotfirers Licence -RIIBLA301-Conduct Shotfiring -RIIBLA205A-Store, Handle & Transport	Competent in: -All Explosives SOPs & SWIs -VUL-APP-020 Shotfirer	To conduct Shotfiring activities at VUL Open Cut
Support shot firer	-RIIBLA201 Support Shotfiring -RIIBLA205 Store Handle & Transport -Explosive Security Clearance	-All Explosives SOPs & SWIs -VUL-APP-021 Assistant Shotfirer	To conduct Support Shotfiring activities @ VUL Open Cut under Shotfirer's direction
Magazine Keeper	-Current QLD Shotfirer's Licence -RIIBLA301-Conduct Shotfiring -RIIBLA205A-Store, Handle & Transport	-All Explosives SOPs & SWIs -Appointed site Shotfirer -VUL-APP-022 Magazine Keeper	To access and manage IE / HE stock in explosives magazine
Magazine Compound Access	-Current QLD Shotfirer's Licence -RIIBLA301-Conduct Shotfiring -RIIBLA205A-Store, Handle & Transport - RIIBLA201 Support Shotfiring (to support shotfirer)	-All Explosives SOPs & SWPs -Either Appointed Magazine Keeper or accompanied by one	Unsupervised access to and manage IE / HE stock in explosives magazine.
Explosives Receiver	-Current QLD Shotfirers Licence -RIIBLA301-Conduct Shotfiring -RIIBLA205A-Store, Handle & Transport	-All Explosives SOPs & SWPs -Appointed Magazine Keeper	To access and manage IE / HE stock in explosives magazine. To receive IE / HE stock from Explosives supplier