

MOPANI COPPER MINES PLC

MANAGEMENT PLAN

CONTRACTOR MANAGEMENT

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Revision No.:	10.0	Approver:	Chief Services Officer
Implementation Date:	31st October 2005	Date Approved:	

PURPOSE

To establish a management plan that ensures the Health and Safety Management of Contractors in accordance with Legislation and Internal Policy.

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DOCUMENT REVISION CONTROL

REVISION			DATE OF ISSUE
NUMBER	NUMBER/S	CHANGE EFFECTED	oth MA OOO 4
0.1	All	First Draft	6 th May 2004
1.0	All	Copy for Signature	14 th June 2004
1.1	Page 3	Section 2 – Department Managers Responsibilities	20 th October 2005
	Page 4	Section 3.2 – First Aid and medical requirements	20 th October 2005
	Page 5	Section 3.3.1 – Department Manager	20 th October 2005
	Page 5	Sub Section 3.3.3.1 – Contractor Principal's responsibilities	20 th October 2005
	Page 6	Section 3.4.3 – Competency and Training	20 th October 2005
2.0	As per 1.1	Copy for Signature	27 th October 2005
3.2	Page 5	Delete "Red Cross Society"	27 th December 2010
3.4	Page 7	Insert a clause on Contractor Assessment Schedule	27 th December 2010
4.0	Page 17	Insert 'Contractor Assessment Schedule Checklist	27 th December 2010
4.1	All	Company Logo has been officially changed with effect from 1 st September 2011 without variation in document content. A waiver has, therefore, been granted to effect these changes without recourse to appending fresh signatures for this particular change	1 st September 2011
5.0	All	Released for official use	1st September 2011
5.1	Page 4	Deleted changed job titles of Mine Manager Nkana Mine Site, Metallurgical Manager Smelter / Concentrator, Manager Engineering Nkana UG. Made changes as follows: Included the following in the reviewer list: Chief Services Officer, Manager U/G Engineering – SOB & Central Shaft, Manager U/G Engineering – Mindola SV, North & O/Pits, Manager – Human Resources, Medical Superintendent, Manager – Refinery-Mufulira, Manager Technical Services, Manager – Employee Relations, Manager – Finance, Mine Superintendent – Open Pits, Manager – Synclinorium Shaft Project, Manager – Information Technology, Mine Manager/Holder – Mindola & North & Open pits, Mine Manager – SOB & Central Shafts	27 th December, 2011
5.1	Page 5	Inserted the "Scope". "Our" & "their" deleted and replaced with MCM and Contractor employees and "HSE risk" replaced with "HSE risks"	27 th December, 2011
5.1	Page 6	"Form FM-SA-077" included under HSE Terms and Conditions.	27 th December, 2011
5.1	Page 6	Under HSE Terms and Conditions, included the condition that an employee record card/register shall be kept by each contractor for ease of accessibility and record inspection.	27th December 2011

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Deleted "First Aid Certificates issued by Red Cross and Mopani Copper Mines" and replaced with "Chamber of Mines Zambia Council for First Aid". 5.1 Page 6 Included, "HSE will register validity of First Aid Certificates" Contractor Score Card -FM-SA-077 included under	nber, 2011
Centificates" Contractor Score Card -FM-SA-077 included under	
Contractor Score Card -FM-SA-077 included under	nber, 2011
5.1 Page 8 Contractor Score Card - M-SA-677 included under 27th Decen	nber, 2011
6.0 Copy for signatures 30th Janu	ary, 2012
Company Logo has been officially changed with effect from 26 th March 2015 without variation in document content. A waiver has, therefore, been granted to effect these changes without recourse to appending fresh signatures for this change	2015
7.0 All Released for official use 29 th Apr	ril 2015
7.1 All Change of Company logo. Use of current management plan template. Change of references to PRO, Procedure and BOP to MPL, Management Plan and SWP respectively. 18th Jun	ne 2019
Changes approved without recourse to fresh signatures as the changes do not significantly impact the intent of the document.	
The entire document was revised. Some of the new clauses include: Contractor vetting to assess competence and resources, Responsibilities of various departments from departmental manager to the Training Department Entry to Site and Onsite Induction Site Preparation, Safety and Health Management System Risk Management, Exit from Site)21
8.2 All Change of MCM logo 15 th Novem	nber 2021
9.0 All Copy for signatures 29 th Nover	mber 2021
9.1 All Company Logo has been officially changed with effect from 20 th May 2024, inclusion of new reviewers/approvers.	024
9.2 All Changed Document Approver from General Manager Engineering and Asset management to Chief Services Officer.	nber 2024
9.3 All Copy for Management review 03 rd Decem	nber 2024
10.0 All Copy for Signatures 10 th Decem	nber 2024

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REVIEW AND APPROVAL SIGNATURES

ROLE	RESPONSIBILITY	NAME	SIGNATURE	REVIEW DATE
ORIGINATOR	Technical Advisor Sustainable Development Academy	Kingson Sangwapo	Sangwapo kin	35d8-12-2024
REVIEWER 1	Manager Training & Development	Dr Christopher Chileshe	Christopher Chil	18-12-2024
REVIEWER 2	Manager QA & AS	Obed Mahenga	Malienga Obe,	<u>∤</u> 18-12-2024
REVIEWER 3	Head HSE & ESG	Glenda Kasonde	kasonde Gen	la ¹⁸⁻¹²⁻²⁰²⁴
REVIEWER 4	Manager Security	Tilimboyi Singani	Singani tilimb	og 0-12-2024
REVIEWER 5	Manager Medical	Dr Henry Mugala	Mugala Henry	26-12-2024
REVIEWER 6	Manager Internal Audit	Davis Mumba	Mumba Davies	30-12-2024
REVIEWER 7	Company Secretary	Alick Gondwe	Alick Gondwe	02-01-2025
REVIEWER 8	Supply Manager	Gershom Tanga	tanga Gershov	a 02-01-2025
REVIEWER 9	Contracts Manager	Grant McGillan	McGillan Gr	an 05-01-2025
REVIEWER 10	Head of Processing	Joel Kgomo	kgomo Joel	22-01-2025

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REVIEWER 11	Head of Engineering	Thiru Muthusamy	Thiru Muthusan	_{ny} 05-02-2025
REVIEWER 12	Head HSE and Governance	Ulrich Sibilski	Sibilski Ulrich	05-02-2025
REVIEWER 13	Head of Mining	Rajeev Bora	Bora Rajeen	05-02-2025
APPROVED BY	Chief Services Officer	Oscar Matebele	Matebele Osca	11-02-2025 ^

1. SCOPE

This management plan applies to all contractors engaged at Mopani and establishes the standard way of managing contractors in accordance with Zambian legislation, occupational Health and Safety Act No.36 of 2010 and internal policies of the company.

2. OBJECTIVES

This management plan has been established to:

- i) Ensure that contractors working at Mopani Copper Mines conduct themselves in such a manner as to minimize their exposure to health, safety and environmental (HSE) risks.
- ii) Ensure that contractors working at Mopani Copper Mines conduct themselves in a manner that will not expose MCM or contractor employees, the environment, and the community to any adverse HSE risks.
- iii) To make contractors aware of their duties and responsibilities regarding health, safety, and the environment in terms of Zambian legislation and other applicable regulations, procedures and standards adopted by Mopani Copper Mines.
- iv) To ensure that all Mopani Copper Mines employees are aware of their duties and responsibilities regarding the management of contractor health and safety.
- v) To ensure that all Contractors adhere to the requirements of the Sustainable Development Academy (SDA) and are aware of the process from the time an order is issued up to worksite.

3. RESPONSIBILITIES

POSITION TITLE	ROLE	DESCRIPTION OF TASK
Manager Training and Development	Develop, review, and amend this document	Develop and review this management plan on an annual basis.

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POSITION TITLE	ROLE	DESCRIPTION OF TASK
	Training	Brief the principal contractor on this management plan and train their employees.
Department Managers	Control	To ensure that people in their areas of responsibility, requiring the services of a contractor comply with this management plan.
	Enforcement	Ensure that Contractor Principals submit required information as and when required in terms of this management plan.
Person requesting contractor service	Adherence	To ensure that contractor employees comply with this management plan
SDA Coordinators	Assistance and monitoring	To provide contractors with technical assistance regarding HSE programme development and to monitor their operation regularly through site auditing of working file.
Contractor Principal	Adherence, evaluation, and control	To enforce the use of this management plan in their area of work, carry out inspections regularly and action deviations noted.
·	Develop and implement	Develop and implement a HSE programme within their organisation.

4. MANAGEMENT PLAN STATEMENTS

Mopani Copper Mines PLC is committed to managing, so far as is reasonably practicable, works undertaken on its behalf by contractors, or their subcontractors, in such a manner as to reduce risks to the employees and to the Company's property, environment and assets, to a tolerable level. The Company aims to deliver this commitment by:

- a) Carrying out appropriate checks of each of its contractors prior to the letting of any contract (or establishment of any framework agreement) to ensure, so far as is reasonably practicable, that it only engages suitably competent contractors to carry out works on its behalf.
- b) Providing contractors with the necessary information, induction training, supervision, and instruction to undertake their work in accordance with this and all other relevant health and safety policies and any specific legislative requirements that might apply.
- c) Only allowing contractors to commence work once they have provided, and where necessary implemented, suitable and sufficient risk assessments to manage any significant risks associated with their works.
- d) Monitoring contractor performance at appropriate intervals and taking appropriate corrective action where health and safety issues are identified.

Reviewing overall contractor performance at the end of each contract and implementing, where practicable, any significant findings.

4.1 CONTRACTOR VETTING TO ASSESS COMPETENCE AND RESOURCES

A careful analysis should be undertaken when selecting a contractor. This should be done in line with POL-038 and MPL-034. The selection of the contractor should not, be based solely on grounds that he/ she is the cheapest to hire and not because a contractor is able to quote

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a figure much higher than his/her competitors. Sometimes, however, institutions will set themselves up as being able to perform a specialized task but lack the necessary expertise.

4.2 HSE TERMS AND CONDITIONS

- a) As a minimum requirement, all contractors will sign for and comply with the HSE requirements as laid out in this management plan and form FM-SA-034 "Contractor Site Rules (annexure 1) and Checklists and FM-SA-077(annexure 2), FM-SA-077A" (annexure 3). After each induction, the contractor principal will sign a FM-SA-101 (annexure 4) at SDA as an acknowledgment that they understand the contents of "Contractor Site Rules and Checklist FM-SA-034"and agree to comply therewith.
- b) An employee record card/ register shall be kept by each contractor in the working file for ease of accessibility and record inspection.

4.3 RESPONSIBILITIES

4.3.1 DEPARTMENTAL MANAGER

Departmental Managers are responsible for all contractors working in their departments.

4.3.2 RESPONSIBLE PERSON

The person requesting the contractual service, hereafter known as the Responsible Person, will be responsible for enforcing compliance with Mopani Copper Mines procedures, standards, and legislation in their area of responsibility for the duration of the contract which amongst other things includes:

- a) Ensuring that the contractor attends safety induction at MCTC and complies with Fatal Hazard Protocols, Life Saving Behaviors and all applicable legislation and associated regulations including Mopani Domestic Regulations.
- b) Ensuring that the contractor carries out the on-site safety induction prior to commencement of work after induction training.
- c) Inspects contractor equipment before allowing them on site.
- d) Ensuring that the contractor carries out weekly inspections.
- e) Ensuring that the Contractor working file is always updated as required (FM-SA-492) (annexure 2)
- f) Only allowing contractors to commence work once they have provided, and where necessary implemented, suitable and sufficient risk assessments to manage any significant risks associated with their works.
- g) Monitoring contractor performance at appropriate intervals and taking appropriate corrective action where health and safety issues are identified.

Reviewing overall contractor performance at the end of each contract and implementing, where practicable, any significant findings.

4.3.3 CONTRACTOR PRINCIPAL

4.3.3.1 The Contractor Principal will be responsible for:

Ensuring submission of a list of all employees (employee Matrix) to SDA at the end of each month along with the following information:

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- a) Occupational Health and Safety Institute (OHSI) medical certificate number and expiry date.
- b) Chamber of Mines Zambia Council for First Aid (CMZCFA) First Aid Certificate number and expiry date.
- c) Blasting License Certificate number and expiry date.
- d) Training courses completed for current position i.e. Drill Rig, Rock breaker, LHD etc.
- e) The types and numbers of all permits issued by Mopani allowing the individual to operate mobile machinery.
- f) Ensuring that they are paying members of the Workers Compensation Fund and have insurance providing accident and industrial disease cover for employees.
- g) Ensuring that the treatment of injuries and chronic natural and occupational illnesses are managed by MCM doctors at the most appropriate facility and at the contractor's cost. Contractors are encouraged to register their employees with respective hospitals at either mine site.
- h) Ensure that all First Aid Box & canister contents are inspected by MCM First Aid Audits Section /appointed first aider / canister keeper, maintained and replenished by MCM responsible personnel provided with such first aid outfit.
- i) Ensuring that employees (including casual labour and sub-contractors) who are employed by them are medically fit to do the work for which they have been employed and that they do not suffer from any disability or condition that will compromise their health and safety or that of others and that they are in possession of a valid OHSI medical (Pneumoconiosis) Certificate.
- j) Ensuring that employees (including casual labour and sub-contractors) are competent to carry out the work for which they have been contracted.
- k) Fully and promptly report in writing details of all accidents and incidents that involve a threat to the personnel, plant, and equipment whether of the Contractor, the Company or a third party, irrespective of whether loss, damage, injury, or death occurred or not.
- Carrying out inspections of compliance on a weekly basis and forwarding the results of these inspections to the Responsible Person.
- m) Ensuring that all employees including sub-contractors undergone relevant safety induction (at MCTC and on-site safety induction).
- n) The implementation of a HSE management system that will enable them to conduct assigned work in accordance Zambian legislation and Mopani procedures, standards.
- o) Attending the Monthly Contractor HSE Meeting held at the respective department.
- p) The contractor shall in the performance of its obligations and exercise of its rights under the contract, comply with all laws and regulations and all company policies and procedures in so far as the same shall apply to the services or to the Site.
- q) The contractor shall familiarize themselves and comply with all requirements of the Medical Surveillance MPL (MPL 368).
- r) Ensuring that the contractor HR officer and or Contractor Principal is conversant with the Workers Compensation Act, the OHSI Act and other relevant legislation.
- s) Contractor employees who are in possession of OHSI medical certificates other than B1 and or B6

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4.3.3.2 The Contractor must implement systems and procedures to ensure that:

- a) The necessary competencies required by employees are identified (by occupation), along with selection, placement, and any training requirements.
- b) Specific competency profiles and selection criteria (fitness for work) are developed for all roles where significant health or safety risk exists.
- c) A formal training needs analysis is carried out based on the competency profiles and a training matrix is developed for the project.
- d) Roles requiring technical certification, registration or licensing are identified and documented, and these roles are filled only by suitably qualified personnel.
- e) Minimum core health and safety skills required by employees in leadership and supervisory roles are identified and suitable training is provided including hazard identification and risk assessment, incident investigation, and health and safety interactions (i.e. observation and coaching techniques)
- f) Competency-based training is provided, and it includes operational controls (procedures and work instructions), management of change, and emergency response.
- g) All employees hold and maintain the required competencies (including appropriate qualifications, certificates, and licences) and are under competent supervision.
- h) A site-specific induction and orientation programme that highlights health and safety requirements, procedures, and significant hazards, risks and associated control measures is in place for all new employees and visitors (understanding must be assessed)
- i) Personnel are trained and / or briefed on new or amended standards, rules, safe work procedures, risk assessments, etc.
- j) Refresher training is carried out as required.
- k) Records of education, qualifications, training, experience, and competency assessments are maintained on site for all employees.
- I) The effectiveness of training is reviewed and evaluated.

If it is determined through observation that an employee is not yet competent to carry out a particular task in a safe and capable manner, the employee will be required to cease work immediately and must either be reassigned or be retrained at the Contractor's expense.

The Contractor must provide proof that the training institutions and trainers that are used are appropriately registered with a governing authority.

An accredited authority to determine if they are acceptable in terms of meeting the requirements of local legislation must evaluate foreign qualifications held by employees in safety critical roles.

4.3.3.3 EMPLOYMENT OF PERSONNEL OF COMPANY AND OTHER CONTRACTORS

- a) The Contractor shall not, while it is associated in any capacity with the company from date of the contract, either for its own account or as representative or agent for a third party, persuade, induce, encourage, procure or solicit any employee or independent contractor engaged by the company:
- b) To become employed by, contracted by, or have an interest directly or indirectly in any manner whatsoever, in any business which is in competition with the business carried on by the company.

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- c) To terminate that employee or contractor's employment or association with the company or
- d) To furnish any information or advice acquired by that employee or contractor as a result of their association with the company, to any unauthorized person.
- e) The contractor shall not employee an employee or casual worker who was or is engaged or employed by another Contractor of the Company within a period of three
 (3) months after the employee or casual worker has left the service of the other Contractor without the prior written approval of the company.

4.3.4 CONTRACTOR HEALTH AND SAFETY OFFICERS

- a) The Contractor with a minimum of 50 number of employees must appoint a full-time qualified and competent Health and Safety Officer for the duration of the contract.
- b) Each Contractor Health and Safety Officer shall be responsible for:
 - i. Reviewing all applicable legal and project health and safety requirements and providing guidance to Contractor and subcontractor personnel (particularly the Site Manager and Site Supervision) to help always ensure compliance.
 - ii. Assisting with the implementation of effective hazard identification and risk management processes for all work to be carried out by the Contractor.
 - iii. Participating in the Baseline Risk Assessment for the Contractor's scope of work (prior to site establishment) and ensuring that identified control measures are implemented and maintained through monitoring and review.
 - iv. Participating in all Issue-Based Risk Assessments conducted for the work to be carried out by the Contractor and ensuring that identified control measures are implemented and maintained through monitoring and review.
 - v. Conducting Contractor health and safety induction training for all Contractor and subcontractor personnel.
 - vi. Compiling and maintaining all health and safety related documents and records required of the Contractor.
 - vii. Communicating relevant health and safety information to Contractor and subcontractor personnel (e.g., incidents and lessons learnt, leading practices, hazards, risks, and control measures, etc.)
 - viii. Carrying out Safety VFL (two per week)
 - ix. Evaluating (on a daily basis) the content of the SLAM conducted by the Contractor's appointed supervisors.
 - x. Attending monthly Contractor Health and Safety Meetings and monthly Project Health and Safety Meetings.
 - xi. Assisting with the implementation of the Contractor's Health and Safety Management Plan and associated Safe Work Procedures
 - xii. Assisting with the implementation, testing and maintenance of an effective Emergency Preparedness and Response Plan for all Contractor and subcontractor activities
 - xiii. Responding to workplace incidents (as appropriate)
 - xiv. Participating in incident investigations

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- xv. Maintaining accurate health and safety statistics (for the Contractor and all subcontractors), and compiling health and safety performance reports as required
- xvi. Carrying out health and safety inspections
- xvii. Auditing the health and safety management system and workplace activities of the Contractor and each subcontractor on a monthly basis to assess compliance with the project health and safety requirements.
- xviii. Tracking and reporting on the implementation of corrective actions (arising from incident investigations, audits, inspections, etc.).

The Contractor must ensure that each Health and Safety Officer is adequately equipped to enable him to perform his duties effectively.

Before placing a Health and Safety Officer on the project / site(s), the Contractor must ensure that the candidate has skill test competent letter from MCTC through SDA.

4.3.5 CONTRACTOR VISITORS

4.3.5.1 Terms and conditions for visitors

This application is designed to allow visitors to come onto Mopani premises for a maximum period of two weeks. The Visitors must also complete form FM-SA-509 Induction & medical declaration form

Visitors are defined as those people who will not be engaging in work that is normally considered to have safety implications, and who are likely to be accompanied on site by a suitably senior Mopani employee at all times. For example, auditors, consultants, salespeople, meeting participants and State authority personnel (e.g. Government, Police, and MSD etc.) would be normally be classified as visitors. Anyone who falls outside of this definition, and who will be operating under a contract with Mopani, would be defined as a Contractor and would be required to go through the process defined under the Sustainable Development Academy (SDA) in Mufulira.

It is the sole responsibility of the person requesting the visit to determine whether they should be given access as a Visitor or a Contractor and if uncertain, clarity should be sought with the Safety department before submitting this form. The requester will be held accountable for all decisions made in this respect.

If an attempt is made to use this Visitor access application in order to bypass the normal Contractor engagement process required by the SDA, the requester may face disciplinary action. It is therefore vital that a proper discussion regarding the genuine nature of the visit is held between the requester and Safety prior to submitting the Visitor request.

Although every effort will be made to ensure applications are processed in accordance with requirements, to ensure that access is granted when needed it is advised that where possible a minimum of 48 hours' notice be allowed to fully process the application.

The requester must arrange for visitors to be accompanied by a Mopani employee at the card issuing point when the card is first issued, otherwise the card will not be issued to the visitor. For visitor's cards that are issued for a period of more than one day, the visitor may enter site without being accompanied on subsequent days.

The requester is solely responsible for ensuring that their visitor has been suitably inducted according to Safety requirements. A short induction video is available for viewing on the

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intranet, however for visitors who will be visiting higher risk areas, advice should be sought from Safety as to the required process.

Visitors (including reps and suppliers) must be pre-approved by Mopani management, must be advised in advance of the mandatory Personal Protective Equipment (PPE) requirements for the project / site(s), and must arrive with all of this PPE.

When leaving the project / site(s), each visitor must return his or her visitor access card to the security personnel posted at the entrance or exit. A visitor will not be permitted to leave the project / site(s) until he or she produces the access card that was issued.

Visitors are not permitted to perform any work on the project / site(s).

Any request (typically made by a government official) to carry out a site inspection must be referred to the nominated Mopani management representative.

4.3.5.2 Visitor' Vehicles (Procedure MPL 040)

- a. All visitors' vehicles without valid vehicle permits (discs) will be required to park in the parking areas provided outside the entrance gates to the property.
 - i) At Nkana, the parking area is located adjacent to the Central Training block on the eastern side of First Avenue.
 - ii) At Mufulira this is the area located approximately 20 meters east of the entrance gate and on the northern side of the Old Boma (or Plant) road.
- b. Due to the present limited parking facilities at Gate 3, no visitors will be permitted to make use of this entrance unless they are returning items that originated from Mopani on a Transfer Permit and were booked out at Gate 3.
- c. Visitors will be required to make use of the company shuttle service to travel from and return to the entrance gates whilst on Mopani property.
- d. A double cab vehicle with a driver will be available between the hours of 07h30 and 12h30 and 13h30 to 17h00 on weekdays and between 07h30 and 12h00 on Saturday's for this purpose (personnel and light equipment).

4.3.5.3 Visitors Site Management requirements

To reduce delays and congestion at the entrance gates, site managers or their authorized delegates are requested to provide a minimum of 12 hours pre-warning of visitors by means of e-mails to: -

- Kitwe Chief Inspector (Logistics) and copied to the Chief Security Officer and SDA Coordinator
- Mufulira Security Officer (Identity Card Office) and copied to the Chief Security
 Officer and SDA Coordinator.

Advising of the following particulars: -

- date visitor expected.
- time visitor expected to arrive.
- visitors full name (s).
- visitors company name.
- name of the Mopani official expecting to interview the visitor and his telephone as well as cell phone number (if any).
- vehicle registration number and make and the reason for the requirement for the vehicle to enter (only if it is essential) that the visitor enters site with his motor vehicle); and
- any equipment that the visitor is expected to bring with him.

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4.3.5.4 Visitors requirements

- a. Visitors will be required to present themselves at the respective entrance gate security office and furnish their particulars as required for the completion of the Access Permit / Goods Declaration form.
- b. Any goods that are to be introduced onto site will be examined and their transportability determined (fragility / weight / size / etc.) by the Security Officer.

Various actions will follow depending on the circumstances.

- A visitor whose arrival has been pre-authorized will be issued with a "department specific" visitors permit in exchange for either his driver's license / NRC card / Passport or other form of identity which will be locked in a safe at the entry point whilst the visitor is on site, and:
 - a. If he has no goods requiring transportation proceed onto site and wait at the entrance gate shuttle pick up point for the next routine shuttle to take him to his destination: or
 - b. If he has goods that require transportation and the goods are capable of being transferred to the shuttle vehicle, a visitors permit / goods declaration form will be completed, and the visitor will convey the items with him on the shuttle; or
 - c. If the goods cannot be trans-shipped onto the shuttle vehicle, then the visitor will be permitted to enter the site with his vehicle carrying the goods once he has been issued with the necessary permit/ declaration forms duly completed.
- Visitors permits will be issued strictly in accordance with authorized venues and any deviations by visitors to unauthorized venues may lead to criminal prosecutions.
- Visitors in possession of delivery notes, invoices or transfer permits are required to present these documents for scrutiny and authorization (date stamped and signed) by Security department at the entry point.
- Passengers travelling with visitors will not be permitted to enter site purely on the premise that they are "traveling together". Such individuals will be required to await the return of the bona-fide visitor.
- The visitors' drivers' license / NRC card / Passport or other form of identity will be returned to him upon surrendering the access permits issued to him upon his exit.
- Visitors whose arrival has not been pre-authorised will comply with the above requirements and his access will be permitted only once the manager (or his authorised deputy) has been contacted and confirms that such a visit is approved.

Any inability to contact the departmental manager or his authorized deputy by telephone, or if the visit is not confirmed, will result in the visitor being refused entry. In such circumstances, the visitor will be required to leave the property and make a fresh appointment with the departmental manager concerned through SDA and Security department.

4.3.6 RESOURCES, ACCOUNTABILITIES AND RESPONSIBILITIES

The Contractor must appropriately allocate resources, responsibility, and accountability to ensure the effective implementation, maintenance and continual improvement of the Contractor's health and safety management system while at Mopani.

For each role that carries health and safety accountability and / or responsibilities (including legislative requirements), a role description detailing the accountability and / or responsibilities must be documented.

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All health and safety appointments (i.e. the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements) must be done in writing. Documented proof of each appointment (i.e. a signed appointment letter) must be retained.

The Contractor must comply with the requirements of all applicable legislation concerning health and safety related appointments for the project.

A health and safety organizational chart specific to the project must be documented and maintained. All roles that carry health and safety accountability and / or responsibilities must be included, and all individuals that carry health and safety appointments must be clearly identified.

The provision of dedicated health and safety professionals on the project must be appropriate for the nature and scale of the work to be carried out.

The Contractor is solely responsible for carrying out the work under the contract whilst having the highest regard for the health and safety of all persons on the project / site(s).

Health and Safety is the responsibility of each individual on the project / site(s), but in particular, it is the responsibility of the Contractor's management team who must set the tone.

Visible commitment is essential to providing and maintaining a safe workplace. The Contractor's managers and supervisors at all levels must demonstrate their commitment and support by adopting a risk management approach to all health and safety issues. These individuals must consistently take immediate and firm action to address violations of health and safety rules and must actively participate in day-to-day activities with the objective of preventing harm.

The Contractor's management representatives are responsible and accountable for health and safety performance on the project.

All costs associated with meeting the responsibilities shall be borne by the Contractor.

Any cost associated with any work stoppage due to non-compliance with a health and safety requirement shall be for the Contractor's account.

4.3.7 MEDICAL REQUIREMENTS

- (a) In accordance with Mining Regulation number 1205 (i) all Business Partners; Foremen and Superintendents must have a valid First Aid Certificate issued by the Chamber of Mines Zambia Council for First Aid (CMZCFA).
- (b) In accordance with Mining Regulation number, 1205 (i) All Business Partners employees from Section Boss and above, including Underground Manager level, working underground, must have a valid First Aid Certificate issued by the Chamber of Mines Zambia Council for First Aid.
- (c) The contractor principals of those companies who wish to work in scheduled areas at MCM must register with the SDA and the Occupational Health Sections at Mufulira and Nkana Sites. This will enable MCM personnel to screen the First Aid and Occupational Health and Safety Institute (OHSI) medical certificates of all their employees, before the company receives clearance to work at Mopani Copper Mines, irrespective of the duration of the contract.
- (d) OHSI medical certificates are renewable every twelve (12) months or as advised by the OHSI.
- (e) First Aid certificates are valid for three years, subject to renewal by the CMZCFA.
- (f) Medical Reports and OHSI medical certificates of Rejection for employees of Business Partners who wish to work at MCM shall be presented and registered to the Occupational Health Sections at Mufulira and Nkana Sites.

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- (g) Applications for B3 (Special), B1(Restricted) and B2 (Restricted) OHSI medical certificates shall be applied for by MCM officials for all personnel wishing to work at MCM sites.
- (h) A B3 medical certificate is offered and given to candidates who have been rejected by the OHSI for various reasons, including but not confirmed to Hypertension, Overage (over 60 years old), Minor cardiac problem, Diabetes, overweight. The candidate should be free from tuberculosis and or pneumoconiosis (Stage III) and be medically fit for work for an aggregate of not more than one hundred hours in any given one period of thirty days.
- (i) A candidate possessing a Special and or Restricted OHSI medical certificate does not qualify for periodical medical surveillance at OHSI. A request for the Special and or Restricted certificate should be sought before the last valid Special and or Restricted OHSI medical certificate lapses.
- (j) All Business Partners employees injured on duty at Mopani will be treated at the appropriate Mopani medical facility. This treatment will continue until they have been declared fit to resume work. No injured person shall be transferred from a Mopani medical facility without the written consent of the Medical Manager.
- (k) All costs relating to medical treatment will be borne by the Business Partner in full.
- (I) All Business Partner employees shall be subject to a similar medical surveillance program as for MCM employees.
- (m) The cost of the medical surveillance program shall be borne by the Business Partner.
- (n) The medical surveillance program at MCM shall be in line with the Mines Regulations of Zambia, The Employment Code Act Number 3 of 2019, the Workers Compensation Fund Act Number 10 of 1999, the Occupational Health and Safety Institute Act of 2010, best practice in line with evidence-based medicine and MCM policy.
- (o) Pre-employment and periodical medical examinations shall be based on Occupational Risk Exposure Profiles (OREPS).
- (p) All Business Partner employees shall be subject to an Exit medical examination upon termination of work at a MCM site irrespective of the mode of exit.
- (q) Business Partner employees referred to third party medical institutions for specialist's care shall be expected to follow up the referral as soon as is reasonably practicable, but not later than two (2) weeks from the date of delivery of the referral letter to the Contractor Principal.
- (r) All Business Partner employees with known chronic ill health that may have an effect on their work and or be aggravated by work, shall register with a MCM health institution at the respective mine site; for continuous follow up.
- (s) Business Partner employees who stay away from work as results of ill health for a period longer than two (2) weeks shall be subject to a fitness test (medical surveillance) before they can resume work.

Business Partners transferring between Departments and or Sections with new hazard exposure shall undergo medical examinations in line with OREPS.

4.3.8 SCREENING PROCESS (SECURITY)

a) Screening takes place between 08:00 – 16:00 Mondays to Friday's.

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- b) The issuing of access cards takes place between 08:00 and 16:00, Mondays to Fridays.
- c) Employer (Contract Company) to take the completed Access Control Form along with Routing form to Access control security Office of the respective site with the following:
- d) NRC Card (for Zambia Nationals/ Residents) or Passport (for others).
- e) Valid silicosis certificate for any work undertaken in a scheduled area irrespective of the time the job will take.
- f) Employee will be screened, and the result will be given to his employer. No explanation will be given to the applicant for rejections.
- g) If the screening and biometric has been successful, then employee must report to MCTC on the schedule date for safety induction.

4.3.9 HR BIOMETRIC

After screening has been done by security, the Contractor Representative / employees shall be granted access to MCTC by HR Biometric Clerk to enable him/her proceed to SDA for document verification by SDA Clerk prior to induction booking by Front Desk Clerk.

4.3.10 SUSTAINABLE DEVELOPMENT ACADEMY AT MCTC

- a) Sustainable Development Academy will be responsible for the following:
- b) Ensuring all contracting companies proceeding for induction training are registered with SDA and submit all necessary documents.
- c) Verification of employees documents before allowing them to proceed for Plant access card to security.
- d) Keep records of contractor company documents and employee's details
- e) Audit contractor company documents and employees details and ensure they are updated at all times.
- f) Recommend the required medicals (e.g. working at height) for respective employees before they proceed for induction.
- g) Issue contractor pack to each contractor after training induction before they proceed to worksite. The contractor pack should include this Management Plan MPL-006, FM-SA-034, MPL 298B (annexure 6), and MPL-007 Contractor Penalty System.
- h) Liaising with Departmental Safety Officers to ensure onsite induction is done for new contractors and return signed records before they get to site.
- i) Keep records of all site inductions by contractors and performance details.
- j) Guide contractor manager in ensuring they maintain a working file on site which should contain the following documents:
 - i) Proof of onsite safety Induction
 - ii) Employees Training Matrix
 - iii) Schedule of Planned Task Observations
 - iv) Proof of Planned Task Observations done
 - v) Schedule of Planned Inspections
 - vi) Proof of Planned Inspections done
 - vii) Proof of MCom Meetings held.

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- viii) Copies of Pre-Use Inspections
- ix) List of Hazardous Chemicals and SDS's
- x) Proof of workers Training on SDS's
- xi) PPE Register
- xii) Risk assessments.
- xiii) Proof of Emergency Drills
- xiv) Contractor Employee Time Sheet
- xv) List and proof tagging (including mine licences)
- k) On contract termination, a contractor shall ensure:
 - a) A copy of Final report clearance signed by Departmental Manager is submitted to SDA.
 - b) All terminated contractor workers should be issued with clearance letters which should be sent to SDA via email or be delivered to SDA by Contractor Human Recourse Officer to enable them join other companies if they so wish.

4.3.11 TRAINING BOOKING

Training Booking are done from the following two mine sites.

- i) Nkana Mine Site call on Phone Number 8247011 at Central Training
- ii) Mufulira Mine Sit call 8441045 at MCTC.

4.4 COMPETENCY AND TRAINING

- a) Prior to commencement of work, the contractor shall be subjected to the Contractor Assessment Schedule (Appendix 2 on item 9.2) and Contractor Score Card (FM-SA-077) to ascertain basic safety capabilities and records shall be kept at SDA.
- b) Where required, a one-off skills test, at a fee of ZMK700.00 per person, will be done for new employees to determine whether an individual has requisite level of skill to effectively perform the job required (e.g. Engineering Artisans up to Foreman level, PICs up to Mine Captains and Safety Officers).
- c) No person will be allowed to operate mobile machinery on MCM property unless they have been issued with an operators permit. This excludes suppliers, delivery personnel and people using private transport.
- d) Safety Induction Training will be done as stipulated in MPL 298B item 4.2 (Annexure 6)
- e) Each trade certificate will be verified by Contractor academy and approved by engineering personnel at MCTC.
- f) Each employee (including subcontractor employees) must be suitably trained and competent, and must understand the health and safety hazards, risks and control measures associated with his work.

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4.5 ENTRY TO SITE AND ONSITE INDUCTION

The Contractor must comply with all access control policies, procedures, and systems applicable to the project / site(s) as per **POL-050** Site Access and Security.

Failure to comply with these requirements may result in the offending employee(s) being removed from the project / site(s) and being denied any subsequent access.

An access card valid for the full contract period will be issued to an employee once:

- a) Current documentation has been provided (to the satisfaction of SDA representative) verifying that the employee is competent and has the necessary qualifications, certificates, licences, job skills, training, and experience (as required)
- b) The employee has completed an entry medical examination in accordance with MPL-014B Occupational Health Assessments.
- c) The employee has completed all required training and Mopani induction training at MCTC, the following will take place:
- d) SDA personnel will make final document verification and clear him on the access control form to be presented to Security access control office.
- e) Once the access card is issued to a contractor, he/she will also be given access to respective Department.
- I) On arrival at the site the contractor will present a contractor file to the responsible official showing the following:
 - i) Training and Qualifications regarding the work to be carried out and what additional training might be given such as site-specific induction, specific task training, as well as any other training required.
 - ii) Membership of a Relevant Trade or Professional Organization i.e. Engineering Institute of Zambia
 - iii) **Documentation (Safety Policy, Method Statement, Etc.)** Examples of the company's health and safety documentation, such as the safety policy, risk assessments, method statements, etc. should be examined to ensure that the company has health and safety management systems in place.
 - iv) **Previous Experience** Details of previous similar work carried out, including names/ addresses, should be examined to enable the standard of work and the safety culture of the company to be verified by a third party.
 - v) Evidence of a Comprehensive Safety Management System Such evidence could include:
 - vi) Records of safety inspections; audits along with risk assessments records; accident books; defect reporting procedures; records of maintenance (including portable appliance testing) for equipment to be brought on site; and appointment of safety personnel. These would all provide evidence of an active safety management system.
 - vii) **Previous Health and Safety Performance -** Details of any health and safety awards would reflect positively on previous health and safety performance.
 - viii) Any other requirement shall be as listed on FM-SA-492 Contractor File Index
- m) Site induction will be done as follows:
 - i) The Responsible Person will take contractors on a site tour. The objective of this tour will be to highlight the hazards associated with the area in which they are to work as well as to know the relevant standards, procedures, risk assessment recommendations and SWPs required managing them.

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- ii) All contract workers will be entered into a safety site induction register, which the individual will sign, and record of inducted contractors kept in the working file.
- n) The following requirements shall be met by the contractor regarding entry to site:
 - i) Contractors will only be allowed on site if they are in the possession of valid induction, valid Silicosis and the right personal protective equipment required at the site where they are to work as determined by Mopani copper mines in Management Plan, MPL-030 (PPE/C).
 - ii) The contractor's employees shall only be present at those locations of the site where they are working or where they are carrying out a specific order.
 - iii) Entry to the site is permitted only with a valid contract verified by SDA or visitor ID
 - iv) Private property that is not needed during work may not be brought onto the site.
 - v) All non-consumable items of equipment that will be or may be required to leave Mopani property must be declared at the entrance gate when such items are being brought onto site and the relevant declaration form completed. The contractor will be required to produce his copy of the declaration form when such items are being removed. Failure to declare items of equipment may result in them being forfeited and deemed Mopani property.
 - vi) Vehicles may be parked only where they cannot hinder or block the flow of traffic, the tracks, the fire service, fire extinguishing facilities (e.g. hydrants), rescue facilities (e.g. Emergency showers), escape routes and entrances or exits.
 - vii) A vehicle permit for the site is issued only based on a justified request and in compliance with Mopani procedures.

The contractor will be responsible to ensure that all mechanical and electrical equipment required on site is safe for use: registered and that, a competent person inspects it at weekly intervals. This includes:

- 1) Motorized equipment.
- 2) Hand tools.
- 3) Portable electric equipment.
- 4) Ladders, scaffolds, Bosun's chairs.
- 5) Lifting equipment
- 6) Compressed gas cylinders and associated equipment.
- 7) Explosive powered tools (permit from department manager required)
- 8) Any other equipment required.

The contractor will provide a typed list of all mechanical and electrical equipment required on site and submit it to the Responsible Person for inspection of the equipment prior to work commencing. This will include the serial numbers of the equipment. The Inspection report shall be filed in the contractor working File. New equipment brought onto site after commencement of work will be subject to the same management.

4.6 SITE PREPARATION

Engineering works requiring site establishment and laydown shall be carried out in accordance with the terms and conditions of the contract.

Before a contractor is allowed to commence work, the Responsible Person must declare the site at which work takes place to be safe. This includes the issuing of permit to work by the responsible department in terms of MPL-005 (Permit to Work).

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Work will only commence when the Responsible Person or his delegates have conducted an inspection on all equipment, machinery, and temporary structures.

4.6.1 Summary of Key Site Procedures (Control of the Work Environment)

4.6.1.1 Manual Handling

Manual handling tasks can present a significant amount of risk to workers if the task is not appropriately considered and controlled.

4.6.1.2 Manual Handling and Ergonomics

- Identification of manual task risks will be assessed via Risk Assessments, Workplace Inspections, Workplace Observations, and other initial task assessment tools.
- ii) Participation of persons who perform manual tasks is required at all stages of the risk management process. Workers shall proactively identify, assess, and control ergonomic hazards and manual tasks in their work environment.

4.6.1.3 Heat Stress (Working in a Hot Environment)

- i) When work is done in hot area arrangements should be made for regular breaks, where practical.
- ii) Where the risk cannot be eliminated, considerations of controls should include ensuring work team have access to drinking water to enable each worker to drink a minimum of 1-2 litres per hour to keep them adequately hydrated, having a plan for rotation of the workforce, work/rest cycles, changing working hours to avoid peak heat load periods, providing insulated / protective clothing.
- iii) Where there is evidence to suggest that employees are working in an environment where heat illness may potentially occur, other control strategies shall be implemented as required. These controls could include for example, task mechanisation, installation of heat shields, and insulation of radiant heat sources.
- iv) Employees shall take immediate action to correct, make safe and report any unsafe acts and conditions.

4.6.1.4 Workplace Lighting

Not having sufficient lighting can increase the likelihood of an injury occurring. Natural light shall be used wherever possible, and glare should be minimized. Certain tasks may be better planned for daylight hours.

Lighting-Artificial & Natural - Measuring and monitoring MPL-200 and Occupational Health Management MPL-014B.

Interior artificial lighting shall be provided in all workplaces in accordance with SWP-OH-010 and shall meet the illumination requirements set out by Mopani.

4.6.1.5 Noise - Hearing Conservation and Noise reduction Management Plan, MPL-347

The daily noise dose (DND) of any job shall not exceed 1 (DND 1 is the equivalent of 85dB (A) (LAeq, 8h of 85dB (A)), and for workers on a 12-hour shift 82dB (A) (LAeq, 12h of 82dB (A)). This is in accordance with AS/NZ 1269.1:1988 with the limit being scaled down to account for longer exposure duration.

Note: These exposure limit values take account of any reduction in exposure provided by hearing protection.

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4.6.1.6 Hearing Conservation Program: MPL-347

Noise exposure can cause hearing loss, which can be temporary or permanent. Noise Induced Hearing Loss (NIHL) is generally a gradual process due to excessive noise exposure over time. Permanent hearing damage can also be caused by sudden extremely loud sounds referred to as peak noise. Noise exposure can also lead to tinnitus, which is a ringing, whistling, buzzing, or humming in the ears.

There shall be no area where an employee works at any time, in excess of a peak sound pressure level (LPeak) of 140dB (lin), or an instantaneous sound pressure level of 115 dB (A) and or the daily exposure of 87dB, unless the employee is wearing approved Hearing Protective Devices (HPD).

- i) Workers performing tasks where the noise levels exceed 85 dB (A) with single HPD protection shall wear a combination of muffs and plugs during those tasks.
 - All HPD's are to be supplied by the Contractor.
- ii) Muffs shall be used in preference to plugs where contamination of ear plugs from the hands or otherwise is likely.

4.6.1.7 Personal Protective Equipment/ Clothing (PPE/C): MPL-030

PPE/C selection shall be suitably matched to individual wearers, their duties, and the nature of the environment they are working in. PPE/C shall be used with consideration of manufacturers' instructions and worn at all times in specified areas and during specified tasks. Hearing protection signs shall be displayed to indicate areas where noise levels exceed 82dB (A) and the use of hearing protection is required.

- a. Hearing Protection Devices (HPD) shall meet AS-1270 with a minimum noise reduction rating of 24dB (SLC 80).
 - Earmuffs are to be supplied by the Contractor.
- b. Noise Hazard areas will be signed accordingly, specifying the required PPE for that area.

4.6.1.8 Adverse Weather Conditions

From October through to April in Zambia, there is a reasonable likelihood of experiencing a substantial rain event. During this period, the likelihood of thunderstorms and lightning is at its highest.

The risks posed to workers are lightning strikes, reduced visibility while driving or working near mobile equipment, deteriorated road conditions, and flying debris.

4.6.1.9 Adverse Weather

- a) Lightning is an unpredictable phenomenon and there is nowhere outside that is safe from lightning. When you are exposed to local thunderstorm and lightning activity, you should always be aware of your own situational safety.
- b) If operating heavy, or mobile equipment when a storm approaches, operators shall:
 - i) Try to find a known safe area in which to park up.
 - ii) Excavator/ digger operators lower the bucket so that it is well coupled to the ground and move to a designated safe area.
 - iii) Drill rig operators to lower boom and move to a designated safe area or a nearby-protected area.
 - iv) Do not touch any metal parts when exiting vehicles.

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- c) Specific roles and tasks are at greater risk from adverse weather events, particularly lightning strike. Consideration of these risks during storm events shall be included in relevant procedures and risk assessments.
- d) The HSE Department shall ensure operational areas develop Business Continuity Plans targeted at minimising any business disruption caused by a severe weather event.

4.6.1.10 Working Alone

Lone Worker guideline

When working alone injury severity can potentially increase due to delays in medical attention.

- (a) An employee shall not work in an isolated situation without a pre-defined system of contact.
- (b) Tasks or hazardous activities that fit the lone or isolated worker definitions shall be identified and a safe system of work and communication documented.
- (c) A person shall not work alone in any place designated as hazardous. For other areas, lone employees shall be visited or communicated with at intervals of not more than two hours.

4.6.1.11 Working at Height Safety: MPL-023

The potential exists that serious injuries or fatalities may result from an inability to control the risks associated with tasks were working at height is involved resulting in an inability to achieve Safety & Health strategic objectives and targets. Working at heights includes but is not limited to; elevated work platform, vehicles, scissor lift, scaffolding, hung scaffolding, swinging stages, personnel lift boxes or sully boxes, boson chair, walkways, ladders, and any time when using fall prevention systems.

Fall Prevention and Height Safety

A person shall not work more than two meters above the surrounding work level without approved edge protection (guardrail system) and/or have in place an approved fall prevention system.:.

- i) A fall prevention system shall be used, if it has been assessed that there is no other method or safer means to complete the working at heights task. Selection shall consider fall clearance and swing/fall pendulum hazards.
 - a. A recovery/ rescue plan must be in place every time fall arrest equipment is used.
 - b. All height safety harnesses are to have attached suspension trauma safety straps.
- ii) A fall restraint system shall only be used where the worker is totally restrained from reaching a position where a free fall or limited free fall (not greater than 600mm) is possible. Where free fall, or limited free fall is possible, or the surface slope is over 15°, then a fall arrest system shall be used. A fall arrest system incorporates a fall arrest harness with an attachment point at the front (chest region) or the back between the shoulder blades (dorsal region).

Persons attached to a Fall Arrest type system cannot work beyond a 30° circular zone.

NOTE: Fall arrest systems are designed to limit the impact of a fall to no more than 6kN force; this is the force that is generated by a 100kg person accelerating at 6 times the force of gravity. Given falls of 600mm can generate forces in excess of 12kN; personal energy absorbers shall be used.

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- iii) Suspension trauma can occur when persons are suspended after a fall therefore a rescue/recovery plan shall be included in every instance where fall arrest equipment is used.
- iv) The person in charge of the work shall notify other personnel in the area, who may be affected by the activities of those working at heights, before that work commences.
- v) Tools, equipment, and personal items shall be secured against falling from work areas above ground level. Wrist restraints, tool lanyards and safety helmet chinstraps shall be considered.
- vi) The Scope of Work defines the fall safety equipment, which will be provided by the principal.
- vii) All employees to work on heights should have a medical certificate from the medical department to Work at Heights.

4.6.1.12 Barriers & Barricades: MPL-338/ MPL-338B

- a) Barricades shall be erected where there is a danger of a person falling or being struck by falling objects.
- b) Employees to prevent entry where there is a risk to personnel to enter a risk area shall install barricades and signage.

4.6.1.13 Permit to work Systems: STD- EN-123B / MPL-005

A Permit shall be obtained where necessary for all HRW as indicated in the above documents.

4.6.1.14 SCAFFOLDING: MPL-336

All scaffolding shall be designed, inspected, installed, and used in accordance with the relevant Standards and statutory requirements.

Scaffolds shall only be erected, altered, maintained, or demolished by a suitably Qualified. Certified and Authorised Person.

- a) Scaffolds shall only be erected, altered, maintained, or dismantled by suitably qualified, certified, and competent person.
- b) Scaffolder shall ensure all components are fit for purpose and in good working order
- c) Scaffolding shall be erected/dismantled in accordance with 'scaffold design' and task risk assessment.
- d) Scaffolding shall be controlled by the "TAG" system.
- e) A TAG shall be displayed at each entry point to the scaffold.
- f) Upon commencing erection / dismantling a sign, stating that the scaffold is not fit for use shall be attached to the scaffold in a prominent position.
- g) Scaffold exclusion zone shall be established whilst scaffold is being erected, dismantled, or modified. The scaffolder in control of the work shall approve entry into the area.
- h) Climbing on the outside of a scaffold to gain access to another level is prohibited.
- i) Edge protection (handrails, mid-rails, and toe boards) shall be provided at every open edge of a work platform.
- j) Scaffold is to be erected/ dismantled using the one-metre lift system.
- k) Boards and edge protection installed before the next level of the scaffold is erected.
- I) Under no circumstances shall any item be thrown or dropped from the scaffold.

4.6.1.15 Lifting & Cranage: MPL-118

Lifting Equipment Operators, Riggers shall be trained and competent to operate lifting equipment before operating lifting or directing the movement of loads when handled by

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overhead travelling cranes or mobile cranes. Competency may be achieved through a current, operating permit or an approved internal competency where applicable. Access to areas where lifting operations are performed shall be restricted and protection provided, or procedures developed to ensure persons in the vicinity are not subject to danger. Loads shall not be lifted over persons; this includes persons in mobile equipment.

The Scope of Work defines the lifting tools and equipment, which will be provided by the principal.

4.6.1.16 Aisles, Walkways & Storage Demarcation

Access ways, including walkways and roadways shall be clearly marked and free of obstruction. Refer to STD-SA-002 Demarcation and Colour Coding

4.6.1.17 Housekeeping

Good housekeeping is the foundation of a safe, healthy, and pleasant workplace. It is essential that all areas be kept clean, orderly, and with all necessary things in the proper and right places. This includes any outside storage areas, yards, and car parks. Sections shall conduct inspections of their areas and ensure compliance with the housekeeping procedure.

Trip hazards should be actively identified and removed to minimise the risk to all workers. When setting up a work area, workers should consider where they would place tools and equipment, so it minimises the risk to themselves and to others.

4.6.1.18 Working with Hand Tools

Contractor shall ensure that all hand tools are to be tested by MCM personnel and certified. Hand tools shall be kept in a serviceable condition through correct use, maintenance, and storage. Tools, which are not fit for purpose, pose an increased amount of risk to the user, and can result in hand and body injury.

4.6.1.19 Hand Tools: MPL-MPL-365, SWP-MW-827 & SWP-MW-587

For the purpose of this procedure, hand tools shall refer to non-electrical powered tools, explosive powered tools, abrasive wheels, grinding machines, and compressed air tools. The risk associated with the use of hand tools is hand and/or body injury. The procedures detail the expectation for safe use of hand tools at MCM.

- i) Workers shall ensure hand tools are kept in a serviceable and clean condition.
- ii) Workers shall wear personal protective equipment as required to prevent injury or incident.
- iii) Workers shall ensure hand tools are fit for purpose and duty.
- iv) Employees shall thoroughly inspect hand tools before, during and after use.
- v) Employees shall ensure faulty or damaged hand tools are tagged out for repair or replacement.
- vi) Approval shall be obtained from the Department Manager, prior to the use of an Explosive Powered Tool.

Explosive Powered Tools shall be operated, inspected, repaired and maintained by authorised personnel who are trained and assessed competent in the safe use of the Explosive Powered Tools.

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4.6.1.20 Abrasive Wheels and Grinding Machines

- i) Abrasive wheels shall be thoroughly inspected before installing into the grinding machine and before each start up.
- ii) Abrasive wheels shall only be used for the application they were designed for, and material and RPM compatibility.
- iii) Abrasive wheels shall be changed when the wheel is damaged (chipped, cracked, warped etc.).

4.6.1.21 Compressed Air Tools

- i) Compressed air tools shall only be driven by filtered compressed air with an airline lubrication system, the compressed air tool shall be lubricated prior to use if there is no in line lubrication system.
- ii) Generally, at Mopani, the compressed air pressure is 700kPa, however when using compressed air tools, the designated tool pressure shall be attained using a suitable regulator.
- iii) Compressed air tools shall be disconnected when not in use. They shall not be disconnected from the air supply until all the residual pressure has been released or contained by an automatic shut-off device.

4.6.1.22 Hazardous Chemicals

A spill of hazardous chemicals can result in serious injury to personnel but also a significant impact on the environment. The following standards shall be followed when handling hazardous chemicals.

Chemicals and Hazardous Substance Management, MPL-012

The procedure describes the requirements for the assessment of exposure and control requirements for workplace exposure to hazardous chemicals.

- i) In preparation for a task, a printed Material Safety Data Sheet (SDS) may be more practical than accessing online data. If this is the case, the responsible person should ensure the SDS is up to date.
- ii) All new chemicals shall be registered.
- iii) All new chemicals are to be approved by the Occupational Hygienist prior to being brought on site.
 - The requester should complete Request to Trial/Use New Chemical / Hazardous Materials, attach the SDS, and present to the Occupational Hygienist for approval.
- iv) A formal chemical risk assessment shall be done for all tasks and areas using hazardous substances. The assessment shall evaluate the physical, chemical and toxicological properties in light of the actual, proposed or likely use. The Occupational Hygienist shall be involved in the assessment.
- v) Workers who have received training in the safe handling of hazardous substances and the application of associated control measures shall at all times perform their duties in accordance with the training received.
- vi) Workers shall take immediate action to correct, make safe and report any unsafe condition.

4.6.1.23 Safety Data Sheets (SDS):

Any hazardous chemical product brought onto site shall not be used if there is no SDS available. A new SDS should be sought, or the product should be sent back, and supplier changed.

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- a) SDS's shall be electronically stored. In the event the hazardous chemical is stored remotely where the user does not have ready access, the SDS shall be made available in hard copy.
- b) SDS is stored online shall be approved by the Occupational Hygienist.
- c) The area Supervisor and/or area manager are responsible to ensure that the hazardous chemical used in their workplace has a current and available SDS.
- d) All workers shall comply with the SDS's handling and storage methods for the hazardous chemical they are handling.

4.6.1.24 Storage of Dangerous Goods:

All containers of dangerous goods on site shall be clearly labelled according to the content. As a minimum, the label should include the product and chemical name, the dangerous goods diamond and risk phrase or warning.

4.6.1.25 Waste Management: MPL-016

NOTE: The waste management procedure will be provided to the contractors in hard copy. Copies are also obtainable from MCM Supervisors, Safety or Environmental officers.

A large amount of resources and effort has been absorbed into minimising MCM Environmental impact through recycling and correct disposal of out wastes.

Waste Management should be followed when disposing of all waste types.

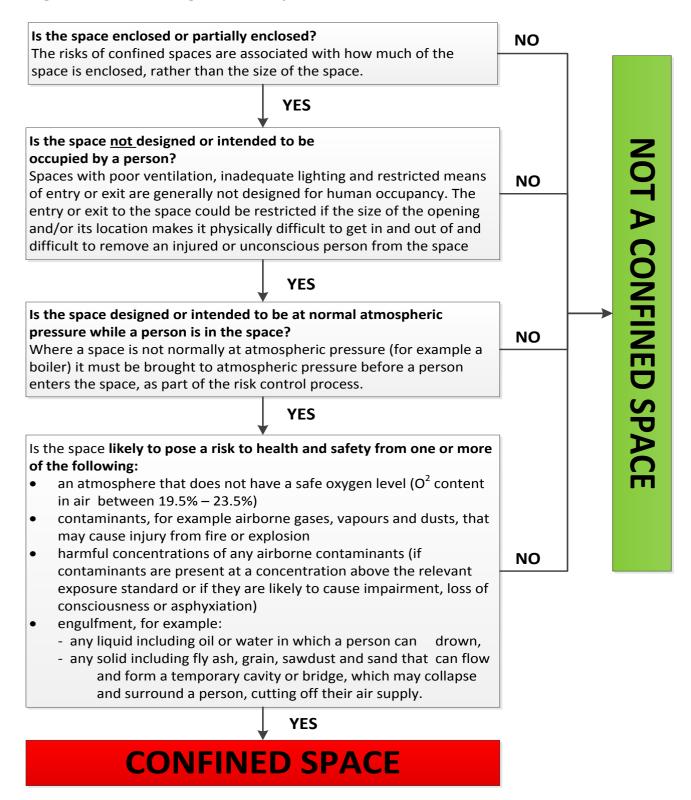
Hazardous chemical wastes should be stored in appropriate containers and disposed of according to the SDS.

4.6.1.26 Confined Space MPL-003

The decision tree below is to be used when determining if a space is classified as a confined space.

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Fig: 3.1 Determining confined spaces



There is a requirement for personnel and contractors to enter Confined Spaces to undertake tasks. With the requirement to enter Confined Spaces, there is the potential for incidents that may result in serious or fatal injuries. For this reason, Confined Space Entry Procedure has been developed and shall be followed by all persons without exception.

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4.6.1.27 Confined Space Entry:

This management plan sets out the particular requirements to ensure the health and safety of any persons required to enter, or work in or on a Confined Space. For the purpose of this procedure, a person whose head i.e. breathing zone or upper body is within a Confined Space is considered to have entered the Confined Space.

All declared or potential confined spaces shall be:

- a) identified
- b) risk assessed.
- c) Individual naming convention
- d) registered in a Confined Spaces Register
- e) Clearly identifiable through signage on or adjacent to the confined space to advise on restrictions on entry. Where access to a confined space is possible by multiple entrances, signage shall be posted at each entrance.
- f) secured to prevent unauthorised entry.

No person shall enter a Confined Space unless:

- i) Confined Space Entry Permit is completed and issued. The Confined Space Entry permit includes any control measures or precautions necessary for safe entry and execution of the work. Persons working in the Confined Space are to be advised of and understand and comply with the requirements of the Confined Space Entry Permit
- ii) A record of entry and exit for the Confined Space are to be displayed at the entry to the Confined Space. Interim entry and exit of personnel from a confined space can be managed by use of a confined space tag board but the Confined Space certificate must be signed upon initial entry and when leaving the area.
 - a. MCM personnel shall only complete a Confined Space Entry Permit.
 - b. The person ensuing permit shall be trained and certified.
 - c. The Confined Space Entry Permit includes any control measures or precautions necessary for safe entry and execution of the work.
 - d. The persons performing the task are advised of, understand, and comply with the requirements of the Confined Space Entry.

4.6.1.28 Electric Welders

There is the potential for persons to receive serious electric shock or be electrocuted if high standards of electrical safety are not applied during the use, care, and maintenance of electric welders. This hazardous activity applies to all instances where MCM Operations personnel or contractors are required to use electric welders, this included portable and fixed electric welders.

4.6.1.29 Electrical Safety for Arc Welding:

To eliminate the occurrence of electric shocks, radiation, or hot metal burns from welding equipment and to minimise the hazards associated with all welding activities Welding Safety shall be followed for all welding tasks.

All persons performing welding activities (or those assisting) shall wear PPE/C, in accordance with Personal Protective Equipment and shall include:

- i) Clear safety glasses.
- ii) Non-flammable outer clothing with long sleeves (sleeves rolled down and buttoned up).
- iii) Heavy-duty leather welding gloves (gauntlets).

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- iv) Welding face shield with approved and correctly rated lenses.
- v) Approved safety footwear that has no exposed bare steel toecaps and spats or approved safety footwear that is designed to prevent hot materials entering the boots.
- vi) Other insulating medium shall be used to insulate the welder depending on the welding situation e.g. lying down for overhead welding.

All welding units on site shall have a current signed compliance sticker or test tag attached to the unit or its power lead to indicate it has been tested.

- The compliance sticker or test tag shall indicate, as a minimum, the date when the next test is due and the name and signature of the electrician who carried out the test.
 - i) The operator of the welder and their immediate Supervisor shall be responsible for ensuring that welding machine has a current compliance sticker or test tag before use.
 - ii) All welding devices shall have a Hazard Reducing Device (HRD) fitted. The type of HRD required is dependent of the type of welding for e.g. Shielded Metal Arc Welding (stick welding) requires a Voltage Reducing Device (VRD) to be installed.
- b) When performing welding tasks persons should adhere to the following points:
 - i) Double work leads shall be used.
 - ii) Where a person is holding one of the parts being welded, the main clamp shall be attached to the structure or component that the held piece is being welded to, whilst the fly lead shall be attached to the part being held by the person.
- c) Electrodes shall be removed from the welding machine while not in use to eliminate the danger from electrical contact with persons or conductive objects.

To eliminate housekeeping hazards electrode buds shall be disposed of in an appropriate manner.

4.6.1.30 Permit to Work Systems, MPL-005

MCM Permit to Work (PTW) system comprises a suite of documents, which defines the minimum requirements, authorisations and responsibilities for all High-risk Task activities covered by the PTW system. Where applicable, the relevant Permit to Work Permits for the high-risk activity will be involved.

- i) Release of Equipment:
 - a) The purpose of this arrangement is to define the minimum requirements for operational personnel to release operational equipment to maintenance or technical personnel in plant environments.
 - b) The Superintendent or his nominee will take out a Release of Equipment Permit for the duration of the works.
- ii) Permit to Work System:
 - a) The Permit to Work System is to be followed for all critical tasks as outlined in MPL-005. All work carried out is to comply with Permit to Work and High-Risk Work Verification (HRWV) process.

4.6.1.31 Working on Electrical Equipment, MPL-248

Working on or working with live electrical equipment poses a number of risks to personnel that may result in grave consequences in the form of serious or fatal injuries.

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Electrical Safety Management:

To perform electrical work at MCM persons must be trained, authorized, and should have the appropriate Electrical Work permit for the task to be performed:

Only electrical work that is within the limits of the Permit held may be performed.

General Electrical Safety Requirements:

Using Electrical Equipment

- i) Before using electrical tools, appliances or extension leads, the user shall inspect them for damage and check the currency of their test tags.
- ii) Electric tools, appliances or extension leads with no test tag or with an out-of-date tag shall not be used.
- iii) In wet or damp conditions air or battery, powered tools shall be used in preference to mains powered tools or equipment.
- iv) The use of step-down leads, adaptor plugs, or the modification of plugging equipment (i.e. filing down the earth pin) is strictly prohibited.

4.6.1.32 Isolation, Lockout & Tagging, MPL-009

Isolation, Lockout & Tagging

Defines the minimum system requirements for isolation of plant and equipment from hazardous substances, mechanical, electrical, or other energy sources to protect all workers from personal injury and equipment from damage.

All persons working on any plant or equipment shall ensure that the plant or equipment is isolated and apply their own Personal Isolation Tag and Isolation Lock and confirm the isolation is effective as defined in the management plan, MPL-009.

Approved locking devices shall be used to ensure the isolation point cannot be inadvertently energised on equipment, energy sources and work areas.

1. Locking Devices: Personal Isolation Locks

- a. Personal Isolation locks shall be used to provide protection for each individual working on isolated equipment.
- b. All locks used for isolation purposes shall only be supplied with a single key for operation.
- c. The name of the isolation lock is taken from the tag, which is attached to it at the time of use.

2. Locking Devices: Lockout Scissors

- a. Lockout callipers are used to allow multiple Personal Isolation Locks to be attached to a single isolation point.
- b. Personnel shall ensure that Lockout callipers are closed completely before attaching their Personal Isolation Locks.

3. Personal Danger Tags & Personal Isolation Locks

Personal Danger Tags shall be used in conjunction with Personal Isolation Locks to protect personnel working on isolated equipment.

- a. All persons working on the isolated equipment shall remove their Personal Danger Tag and Personal Isolation Lock when they are no longer working on the task.
- b. If the job is incomplete, the Personal Danger Tag and Personal Isolation Lock shall be removed, and an Out of Service Tag shall be placed on the isolation point(s).

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- c. The person who placed them shall only remove personal Danger Tags and Personal Isolation Locks.
- d. Personnel who fail to remove their Personal Isolation Lock or Personal Danger Tag shall be required to return to site to remove them.
- e. Where all attempts to contact the person have failed or the Supervisor can verify the person has left the site and cannot return, the Supervisor shall obtain the documented permission of the person's Superintendent and Manager using Authority to Remove Lock prior to removing the Personal Danger Tag and Personal Isolation Lock.

4. Out of Service Tags

- Out of Service Tags shall be used to protect equipment and to alert others of potential danger.
- b. Out of Service Tags shall only be removed by one of the following:
 - i. The person who placed it.
 - ii. The person responsible for the repair.
 - iii. With the approval of the Supervisor of one of the above people.

5. Information Tags

Information Tags shall be used to pass on information about equipment condition.

- Where equipment displays an Information Tag, it shall be read and understood before it is operated.
- b. Personnel who are familiar with the operation of the equipment when the information is no longer relevant shall only remove information Tags.
- c. Information Tags shall be used for expired fire extinguishers.

6. Group Isolation Tags

- Group Isolation Tags shall not be used as a substitute for Personal Danger Tags.
- b. Group Isolation Tags shall only be placed and removed by an Authorised Tagger.
- c. An Authorised Tagger is a person who holds appropriate skills and experience for the activity and the work area and has been appointed in writing by the Department Manager to perform group isolations. This will be, in most cases the Mopani Supervisor involved with the job.

7. Group Isolation

- a. Authorised Taggers shall use Group Isolation to isolate equipment for others to work on.
- b. Prior to commencing work, each person working under group isolation shall place a Personal Danger Tag and Personal Isolation Lock on the Lock Box. At completion of the task or shift, the worker is to remove their Personal Danger Tag and Personal Isolation Lock from the lock box. The process for group isolation will be as follows:
 - i) Authorised Tagger will complete the isolations according to the Group Isolation List. Group Isolation Tags and Group Isolation Locks shall be applied to all isolation points.
 - ii) Authorised Tagger places keys in to lock box.
 - iii) Authorised Tagger attaches Group Isolation Tag and Authorised Tagger Control Lock to the lock box.
 - iv) Each person working under the Group Isolation will place a Personal Danger Tag and Personal Isolation Lock to the lock box.
 - v) Each crewmember shall remove their Personal Danger Tag and Personal Isolation Lock at the end of their shift or at the completion of the iob.
 - vi) At the end of the shift, if the job is not complete the Authorised Tagger is to handover to the incoming Authorised Tagger.

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4.6.1.33 Pressure Vessels and Compressed Gas Cylinders, MPL-216

Pressure Vessels and Compressed Gas Cylinders

This management plan defines how pressure vessels and compressed gas cylinders shall be operated, stored, and maintained.

i) Gas Cylinder Storage

Gas cylinders should be stored with the following considerations:

- All gas cylinders shall be considered and treated as full, regardless of their contents.
- b. Gas cylinders shall be stored and secured in an upright position, which protects them from heavy traffic, direct heat, corrosive conditions, and the elements
- c. Cylinders shall be secured by chaining or securing approximately two thirds of the way up to prevent them from falling over.
- d. Full and empty cylinders shall be stored apart and be clearly marked.

ii) Gas Cylinder Handling and Transport

When handling and transporting gas cylinders' consideration should be given to the following points:

- a. Large cylinders are heavy. Workers must assess the risk before moving gas cylinders and implement controls where required. A control for example could be using two people to lift, wearing gloves.
- b. Appropriate gloves must be worn when handling and connecting cylinders.
- c. Cylinder valves shall be closed before moving cylinders.
- d. Cylinders being transported in a vehicle shall be secured to prevent movement.
- e. Acetylene cylinders shall only be transported and used in an upright position.
- f. Cylinders being transported shall not protrude from the confines of the vehicle.

iii) Gas Cylinder Use

When using gas cylinders' consideration should be given to the following points:

- a. Workers shall only use gas cylinders that are identifiable by colour and have a legible label. Gas cylinders, which are not identifiable, or do not have a legible label must be returned to the supplier.
- b. Cylinders that are in use shall be upright and secured in a trolley, to a bench or other secure location (e.g. manifolded pack).
- c. When using oxygen/acetylene system on a trolley or fixed to a bench, a metal plate shall be positioned that extends to a minimum height of 300mm above the height of the acetylene cylinder.
- d. Regulators on acetylene cylinders shall be positioned so that they are facing away from the oxygen cylinder.
- e. Copper hose connections or fittings shall not be used with acetylene gas.
- f. Steel hose connections or fittings shall not be used with oxygen gas.
- g. Flashback arresters and non-return valves shall be fitted at both the torch connection and regulator connection for all oxygen and acetylene equipment.
- h. Any leaking gas cylinders shall be taken out of service immediately and removed to a well-ventilated area.

4.6.1.34 Management of Hot Work, MPL-029

4.6.1.34.1 Management of Hot Work

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This management plan specifies the minimum requirements and risk control measures for protecting persons from hazards associated with Hot Work activities.

The management plan defines Hot Work as any activity that may introduce a source of ignition or heat to an area where flammable or combustible materials or oxygen is stored or handled in quantities that, in the case of a fire, would not be controlled by local firefighting equipment. Hot Work activities include, but are not limited to:

- a. welding
- b. use of equipment with naked flames
- c. use of equipment with heated elements
- d. use of equipment that may produce a spark during operation.
- e. work which may produce incendiary sparks.
- f. use of cartridge-operated tools and other explosive devices

The following conditions must be met before commencement of Hot Work:

i) As per Permit to Work Systems, Hot Work permit shall be authorised before hot work may commence.

Hot Work permit can be generated by a competent person (initiator) but shall only be approved by an authorised Hot Work Permit Authoriser.

- ii) In addition, Hot Work permit Special Considerations, Hazardous Zone or Area shall be authorised for areas requiring special consideration or before performing hot work in areas, which have potentially explosive atmospheres.
- iii) Hot Work permit shall be used for hot work conducted anywhere other than in Designated Hot Work Areas.

Temporary Hot Work Areas can be established and approved by the area Manager/ Superintendent if all conditions specified in i), ii) and iii) above have been met. Permanent Hot Work Areas shall be approved by the Department Manager and registered.

All personnel required to perform activities defined in this management plan shall have the skills and knowledge to identify the hazards associated with the hot work activity and monitor the control measures that have been implemented for their protection.

4.7 SAFETY AND HEALTH MANAGEMENT SYSTEM

At Mopani Copper Mines Plc, the Management System is known as Safety and Health Management System. All company HSE Standards, Procedures, and Forms are located on the company intranet site.

The exception is to contractor specific documents, which are to be kept onsite. Work related procedures should be made available on Mopani SharePoint document centre pointing to a specific contractor.

The information on the HSE management systems is made up of 'live' documents, which are reviewed and updated as required to ensure the most up-to-date information.

Contractors may have limited access to the standards, procedures, and management plans for Mopani through their HSEC team. Should any additional specific information be issued, the contractor will be notified, and a copy provided.

The responsible MCM manager shall ensure that the contactor is provided with information on how to access respective sites.

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The Contractor must prepare, implement, and maintain a project-specific Health and Safety Management Plan. The plan must be based on the requirements set out in this specification as well as all applicable legislation. It must cover all activities that will be carried out on the project / site(s), from site establishment through to decommissioning and rehabilitation.

The plan must demonstrate the Contractor's commitment to health and safety and must, as a minimum, include the following:

- a) A copy of the Contractor's Health and Safety Policy
- b) Arrangements concerning the identification of applicable Legal and Other Requirements, measures to ensure compliance with these requirements, and measures to ensure that this information is accessible to relevant personnel.
- c) Procedures concerning Hazard Identification and Risk Assessment, including both Baseline and Issue-Based Risk Assessments
- d) Details concerning Health and Safety Objectives a process must be in place for setting objectives (and developing associated action plans) to drive continual improvement.
- e) Details concerning Resources, Accountabilities and Responsibilities this includes the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements, including the appointment Site Manager, Site Supervisors, Site Engineer, Foremen, Artisan, Health and Safety Representatives, and First Aiders
- f) Details concerning Competence, Training and Awareness a system must be in place to ensure that each employee is suitably trained and competent, and procedures must be in place for identifying training needs and providing the necessary training.
- g) Communication, Participation and Consultation arrangements concerning health and safety, including VFL, M-Com, SLAM, PTO, project health and safety meetings, and notice boards.
- h) Documentation and Document Control project-specific documentation required for the effective management of health and safety on the project must be developed and maintained, and processes must be in place for the control of these documents.
- i) Processes and procedures for maintaining Operational Control, including rules and requirements (typically contained in Safe Work Procedures) for effectively managing health and safety risks, particularly critical risks associated with working at height, confined spaces, mobile equipment, and light vehicles, lifting operations, hazardous chemical substances, etc.
- j) Emergency Preparedness and Response procedures
- k) Management of Change a process must be in place to ensure that health and safety risks are considered before changes are implemented.
- Subcontractor Alignment procedures a process must be in place for the assessment of subcontractors and suppliers with regard to health and safety requirements and performance (before any contract or purchase order is awarded)
- m) Measuring and Monitoring plans, including a plan for the measuring and monitoring of employee exposure to hazardous substances or agents (e.g. noise, dust, etc.) to determine the effectiveness of control measures.
- n) Incident Reporting and Investigation procedures describing the protocols to be followed regarding incident reporting, recording, investigation, and analysis.
- o) Non-conformance and Action Management procedures concerning the management of corrective actions.

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- p) Performance Assessment and Auditing procedures concerning health and safety performance reporting, monthly internal audits to assess compliance with the project health and safety requirements, and daily site health and safety inspections.
- q) Details concerning the Management Review process followed to assess the effectiveness of health and safety management efforts.

Prior to mobilization, the Health and Safety Management Plan must be brought as a hard copy, to the nominated Mopani management representative for review. The plan will be audited for completeness and, if found to be adequate, will be accepted (typically "with comments"). Work may not commence until the plan has been accepted.

4.7.1 SAFEMINING

SafeMining is an initiative of Mopani aimed at focussing its Operations and Projects, including all managers, employees, and contractors on elimination of fatalities and serious injuries. The Life-Saving Behaviours and Fatal Hazard Protocols listed in this document are fundamental components of SafeMining.

4.7.2 Life Saving Behaviours

Life-Saving Behaviours are intended to save lives and by following them, we protect people from potential fatal consequences. Life-Saving Behaviours have a direct link, based on previous fatalities, to the behaviours broken (exhibited) just prior to a fatal incident occurring.

Violations of Life-Saving Behaviours involve a serious life-threatening unsafe act that was wilfully committed with the full awareness of the consequences to oneself, others, or the business.

Mopani's proactive approach to preventing fatalities and caring for employees requires that severe sanction be taken, prior to any injury occurring, for wilful violations of Life-Saving Behaviours. The approach, implemented with fairness and consistency, will positively motivate everyone to value safety, protect themselves, their fellow employees, and the company's assets.

The Life-Saving Behaviours apply to all Mopani employees, temporary employees, contractors, and visitors to Mopani operated sites.

All employees must clearly understand that a wilful violation of these Life-Saving Behaviours shall result in disciplinary proceedings and will lead to a minimum sanction of a final written warning and /or suspension and maximum sanction is dismissal. Sanction should be applied based on a fair treatment process. Contractors and visitors should be asked to leave the site immediately.

The foundation of the Life-Saving Behaviours is that all of us within Mopani are entitled to work in a safe work environment and to go back home free of harm and uninjured.

The following behaviours are focused on, and they relate specifically to behaviours that have the potential to result in a fatality.

- 1. Always come to work drug and alcohol free.
- 2. Always use or wear critical safety equipment.

Note: critical safety equipment are items that are designed to prevent life threatening injuries and are referred to within the Fatal Hazard Protocols or defined by the Operation / Project as critical, e.g. seat belts, fall restraint or arrest equipment, etc.

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- 3. Always wear appropriate fall protection equipment when working above two (2) metres.
- 4. Only operate equipment if trained and authorised.
- 5. Always isolate and 'test for dead' prior to working on energy sources.
- 6. Never modify or over-ride critical safety equipment without approval.
- 7. Always seek and obtain clear approval before entering mobile equipment operating zones.
 - **Note**: the operating zones must be defined by the Operation / Project; they typically include 2 3m from heavy mobile equipment on the surface.
- 8. Never enter Danger Zones. Danger Zones include under unsupported roof; under suspended loads; within barricaded or signposted no-go areas, or within identified pinch or crush points of machinery, confined spaces, and other zones defined by the Operation / Project based on legislation, industry norms and risk assessments.
- 9. Always report injuries and HPRIs.

4.7.3 Fatal Hazard Protocols

A number of Fatal Hazard Protocols (FHPs) have been developed that establish minimum requirements for the management of these hazards consistently across our business. These Protocols have not been developed to replace or override local health and safety legislation, or associated legislation and other external requirements. The content and intent of these Protocols is to provide minimum and best practice requirements.

It should be acknowledged that these Protocols may not include all of the Fatal Hazards that may exist or be faced by our Operations / Projects, but the outcomes do focus attention on the hazards that have resulted in fatalities and High Potential Risk Incidents (HPRIs). The other hazards and associated risks are being, or will be, addressed through risk management processes in accordance with the Mopani Risk Management Framework. These Protocols are to be read and used in conjunction with the Mopani Code of Conduct/ and relevant operating procedures.

Below are some of the FHP, s applicable at Mopani. The list is not exhaustive, as Mopani will keep updating us on the FHPs that will be coming into effect from time to time.

- 1. Energy Isolation
- 2. Working at Heights
- 3. Confined Spaces & Irrespirable / Noxious Atmospheres
- 4. Mobile Equipment
- 5. Ground / Strata Failure
- Electrical Safety
- 7. Emergency Response
- 8. Lifting & Cranage
- 9. Fire & Explosion
- Explosives & Short firing
- 11. Tyre & Rim Management
- 12. Inrush & Outburst
- 13. Molten Metal Material
- 14. Tailings Storage Facility Management
- 15 Structural Failure
- 16 Shafts and Winders
- 17 Security Failure
- 18 Natural Disasters
- 19 Pandemic and Communicable Diseases
- 20 Road Transportation Safety
- 21 Loss of Containment
- 22 Community Discontent

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- 23 Stacking, Storage and Forklifting
- 24 Conveyor Belt Installation

4.8 RISK MANAGEMENT

The risk management approach to health and safety during the Contract period shall be one where the hazards are identified, the risk of equipment damage, injury to personnel and environmental harm is assessed, and controls are implemented prior to work commencement, as per MCM Risk Management plan, MPL-269.

The MCM team will assess all risk using the Mopani Risk Assessment matrix, for each part of the Process. The MCM coordinating team will then provide baseline risk assessment for execution of the work tasks within the schedule. The successful contractor/workgroup will then review both the Risk Assessment and HRWV to ensure all hazards/risks are identified, finalise both the Risk Assessment and HRWV based on the work method being performed, and submit a final copy for approval.

The controls captured in the risk assessment shall be captured for the specific job task.

Any material changes made to the scope that introduce and/or affect HSE risk will be managed under the Change Management Plan – MPL 198. The single point of accountability will need to be informed immediately of these changes.

4.9 EXIT FROM SITE

4.9.1 Site Clearance after work completion

- a) When the work is completed, the workplace must be cleared immediately. Material residues and all objects and fixtures must be removed and transported away from the Site. Storage areas, workplaces, and access routes must be returned to their original
 - condition.
- b) The Responsible Person, Contractor, SDA Field Officer, and Safety coordinator will inspect the area to ensure that it is safe before requesting the withdrawal of any permits issued in terms of MPL-005, Permit to Work.

4.9.2 Security

- a) On contract termination, all equipment and machinery will be removed from site in accordance with the requirements as laid down by the Mopani Security department.
 - b) The contractor is responsible for returning the company access card to security or an officer at the gate when the work is interrupted or finished. The access card must be returned on the last working day.
 - c) Loss Loss or failure to return a security badge on termination or expiration of the Contract shall render the Contractor liable to pay US\$50.00 or such other amount as may be determined by the Company from time to time, for each lost or unreturned security badge as laid down by General terms and conditions of contract FM-SU-019 paragraph 21.2.

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5. HEALTH, SAFETY AND ENVIRONMENT

5.1 HEALTH AND SAFETY REQUIREMENTS

PPE	00					
Requirement (Place a tick below the	Goggles	Respirator	Hard Hat	Gloves	Vest/ Apron	Safety Belt
appropriate PPE required) ■						X
	Earmuffs/Plugs	Safety Boots	Face Shield	Welding Hood	Gum Boots	Overalls
	COLUMN CO	APPROVED	COMMITTEE STATE OF THE STATE OF	HOME EQUIPMENT	GRICALING / STRATA	***************************************
	Energy Isolation	Working at Height	Confined Spaces	Mobile Equip.	Ground/Stra ta Failure	Electrical Safety
	"COLONGIUM"	394	energene energene Av	- Control of the cont	NATIONAL PROPERTY.	**************************************
RELATED FATAL AND	Emergency Response	Lifting and Cranage	Fire and Explosio n	Explosiv es and Shotfirin g	Tyre and Rim Manageme nt	Inrush
HAZARD PROTOCOLS	Molten Material	Tailings Storage Facility Management	Structural Failure	Shirth and Mirchen	Security Failure	Natural Disasters
-	Molten Metal	Tailings Storage Facility Manage ment	Structura I Failure	Shafts and Winders	Security Failure	Natural Disasters
	Pandemic and Communicable Diseases	Road Transportation #### Safety	Loss of Containment	Community Discontent	Stacking, Storage and Ferklift	Conveyor Belt Installation
	Pandemic and Communicable diseases	Road Transpor tation Safety	Loss of Contain ment	Commu nity Disconte nt	Stacking, Storage and Forklift	Conveyor Belt Installation
					3	
LIFE SAVING BEHAVIOUR	Always Come to Work Drug and Alcohol Free	Always use or Wear Critical Safety Equipment	Fall Pro Equipm When	riate otection nent	Only Operate Equipment if Trained and Authorised	Isolate and Test for Dead Prior to Working on Energy Source
S■						
	Never Modify to Ove Critical Safety Equip Approval		Always Seek and Obtain Clear Approval Before Entering Mobile Equipment Oper Zone		Never Enter Danger Zones	Report Injuries and High Potential Risk Incidents

5.2 ENVIRONMENTAL REQUIREMENTS

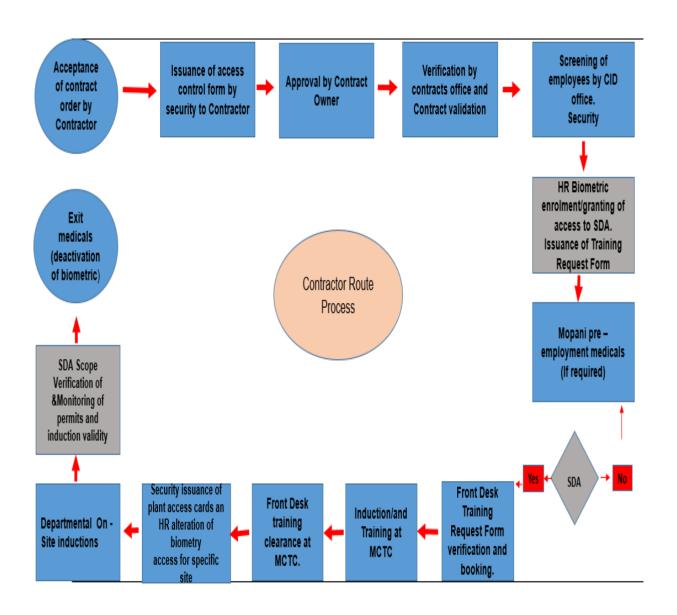
The contractor must comply with the relevant laws, Procedures, orders and regulations and site internal regulations.

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6. QUALITY

None

7. FLOWCHART



8. DEFINITIONS AND ABBREVIATIONS

TERM	DESCRIPTION		
MCM	Mopani Copper Mines		
MCTC	Mopani Central Training Centre		
POL	Policy		
MPL	Management Plan		
BES	Biometric Enrolment System		

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TERM	DESCRIPTION	
SDA	Sustainable Development Academy (at MCTC)	
HSE	Health Safety Environment	
HR	Human Resource	
OHSI	Occupational Health and Safety Institute	
NRC	National Registration Card	
HR Clerk	Human Resource Clerk	
HOD	Head Of Department	
SWP	Safe Work Procedure	
SDS	Safety Data Sheet	
STD	Standard	

9. REFERENCES

REFERENCE	AUTHOR	TITLE	
MPL-005	Manager HSE	Permit to Work Management Plan	
MPL 298 B	Manager Development and Training	Contractor Induction Training and Placement	
MPL 046	Mining Training Manager	Mining Training Manager	
MPL-267	HSE	Behaviour Management Plan	
FM-SA-040	HSE	Contractor Fines	
FM-SA-451	HSE	Contractor Selection Guidelines	
MPL-269	HSE	Risk Management, Catastrophic Hazard Management and Fatal Hazard Protocol Management Plan	
MPL 198	HSE	Change Management Plan	

10. APPENDICES

- Annexure 1 FM-SA-509 Induction, Medical Declaration Form
- Annexure 2- FM-SA-492 Contractor file index
- Annexure 3- Contractor Safety Rules
- Annexure 4 Contractor Site Rules and Checklist
- Annexure 5 Contractor Score Card
- Annexure 6- Induction Training and placement

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Annexure 1



FM-SA-509 Induction, Medical [

Annexure 2



FM-SA-492 Contractor File Inde:

Annexure 3



FM-SA-101 Contractor Site Rule

Annexure 4



FM-SA-034 CONTRACTOR SITE I

Annexure 5

Annexure 6





10.1 SCHEDULED AREAS - NKANA

ALL UNDERGROUND AND OPEN PIT AREAS CONCENTRATOR

- 1) Foreign Ore Bin
- 2) Primary Crusher
- 3) Secondary Crusher
- 4) Tertiary Crusher
- 5) Screens
- 6) Fine ore storage Bins
- 7) Mill bins.
- 8) Rod mill feed chute platform.
- 9) Sample Preparation Room
- 10) Concentrate and Tailings Laboratory
- 11) ETS weighbridge
- 12) Administrative Block
- 13) Safety and Training Offices
- 14) Lime Plant
- 15) Tailings Dams
- 16) New proposed Leaching Plant

COBALT

- 1) Lime Plant
- 2) Concentrate Shed
- 3) Roaster Area
- 4) Roaster Gas cooling Plant
- 5) Filter Building
- 6) Change houses.
- 7) Copper Tank house
- 8) Cobalt Tank house

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- 9) Cobalt finishing Area
- 10) Engineering Workshops
- 11) Degassing Plant
- 12) Administrative block

CENTRAL SHAFT SURFACE

- 1) Change Houses
- 2) Drill Sharpening Shop and adjoining offices.
- 3) Administration Block
- 4) Canteen
- 5) First Aid Post
- 6) Mine Police Post building
- 7) Winder Houses.
- 8) Buffer stores

ANALYTICAL SERVICES

- 1) All Laboratories and Offices
- 2) Concentrate Preparation Rooms
- 3) Buffer store

ENGINEEERING

- 1) Electrical Workshop
- 2) Electrical Distribution
- 3) Boiler Shop
- 4) Fitters Shop
- 5) Foundry
- 6) Loco shop

INSTRUMENTATION

- 1) Central Maintenance
- 2) Blacksmith
- 3) Central Vehicle Workshop
- 4) Engineering Services Workshop
- 5) Engineering Offices
- 6) Salvage Yard

HUMAN RESOURCES

1) Central training

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- 2) Mine Police offices
- 3) Nkana Swimming Pool and surrounding.
- 4) Nkana Tennis Club
- 5) Canteen next to Mine stores
- 6) Rugby Club and field
- 7) Old volleyball and Netball court along Mindola Road

MINDOLA SHAFT SURFACE

- 1) Change Houses
- 2) Administrative Block
- 3) Core shed.
- 4) Salvage yard.
- 5) Engineering Workshops
- 6) Canteen
- 7) Storage bins, Conveyors etc.
- 8) Winder houses
- 9) Buffer stores
- 10) First Aid Station and adjoining offices

MINE STORES

- 1) All areas in Mine Stores boundary
- 2) Refueling Bay at North Gate
- 3) Refueling Bay at Mine Garage

MINE SIDING

- 1) Road weigh bridge
- 2) Rail bridge
- 3) EWS weigh Bridge.
- 4) Nkana weigh Bridge.

NORTH SHAFT

- 1) Administrative Block
- 2) Winder House
- 3) Change Houses
- 4) Buffer Stores
- 5) First Aid post

SOB SHAFT SURFACE

1) Change Houses

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- 2) Drill Sharpening Shops
- 3) Buffer Store
- 4) Canteen
- 5) Crushers, Conveyors and Bins
- 6) Administration Block
- 7) Winder Houses
- 8) Mine Training Offices
- 9) First Aid Post
- 10) Compressor Building

ENGINEERING WORKSHOPS

This will include the area within 100 metres from the perimeter of any such building, installation plant or place.

10.2 APPENDIX 2 SCHEDULED AREAS - MUFULIRA

- 1) All underground workings
- 2) All active rock dumps.
- 3) Mining and Concentrator change houses.
- 4) The 1970 Sinkhole area on the Tailings Dump No. 3.
- 5) The Surface Rock Drills shop.
- 6) The Concentrator crushing plants with all the associated conveyors.
- 7) The Concentrator Lime Store
- 8) The Smelter
- 9) The Refinery Lead casting area
- 10) The Assay Laboratories
- 11) The Weighbridge

CONTRACTORS ASSESSMENT SCHEDULE

This will include the area within 100 metres from the perimeter of any such building, installation plant or place.

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