

Occupational Health and Safety Plan for Sierra Rutile Limited, Sierra Leone

Sierra Rutile Limited



Sierra Rutile Limited

March 2018

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List of abbreviations

CEO	Chief Executive Officer
COO	Chief Operating Officer
EHS	Environmental, Health and Safety
EHS Guideline	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
EP	Equator Principles
EPA Act	Environment Protection Agency (EPA) Act, 2008
EPA-SL	Environmental Protection Agency of Sierra Leone
EPFIs	Equator Principles Financial Institutions
ESHIA	Environmental, Social and Health Impact Assessment
ESHMP	Environmental, Social and Health Management Plan
ERCP	Emergency Response and Contingency Plan
GIIP	Good International Industry Practice
H&S	Health and Safety
HSEC	Health, Safety, Environmental and Community
IFC	International Finance Corporation
ILO	International Labor Organization
ILO-CIS	International Occupational Safety and Health Information Centre
LOTO	Lockout/ tagout
MLCPE	Ministry of Lands, Country Planning and the Environment
NMA	National Minerals Agency
OHS	Occupational Health and Safety
OHSAS 18000	Occupational Health Safety Assessment Series (OHSAS) 18000
OHSP	Occupational Health and Safety Plan
PPE	Personal Protective Equipment
PS	Performance Standards
SLEP (MM) Reg. 2013	Environmental and Social Regulations for Mining, 2013
SOP	Standard Operating Procedure
SR Area 1	Sierra Rutile Area 1
SRK	SRK Consulting (South Africa) (Pty) Limited
SRL	Sierra Rutile Limited
SWI	Safe Work Instructions
UN	United Nations
UNGP	United Nations Guiding Principles on Business and Human Rights
WHO	World Health Organization

1 Introduction and background

Sierra Rutile Limited (SRL) is an existing mining operation located in the Bonthe and Moyamba Districts of the Southern Province of Sierra Leone. The mine has been in operation for over 50 years and produces rutile, ilmenite and zircon rich concentrate.

In 2015, the Environmental Protection Agency of Sierra Leone (EPA-SL) issued a notification to SRL (reference number EPA-SUHA.96/214/a/HNRM), instructing them to undertake an Environmental, Social and Health Impact Assessment (ESHIA) and develop an Environmental, Social and Health Management Plan (ESHMP) for their current and proposed mining activities including the proposed expansion areas within Area 1. This included the Gangama and Lanti deposits and other deposits within SRL's current operations in Sierra Rutile Area 1 (SR Area 1).

SRK Consulting (South Africa) (Pty) Ltd (SRK) was appointed by SRL to undertake the ESHIA / ESHMP process to meet Sierra Leonean legal requirements as well as SRL's corporate policies, which are aligned with Good International Industry Practice (GIIP). The Draft ESHIA / ESHMP Report was submitted to the EPA-SL in March 2018.

As part of the process of implementing the outcomes of the ESHIA / ESHMP, an Occupational Health and Safety Plan (OHSP) is required to be prepared. This document constitutes the OHSP which is an appendix to the ESHIA / ESHMP Report and will form part of SRL's Health, Safety, Environmental and Community (HSEC) Management System.

1.1 Purpose of this plan

SRL has developed this OHSP to provide guidance for developing site specific practices and procedures which will be developed and implemented. The following measures will be put in place for the successful implementation of this plan:

- Health and safety directives;
- Corporate policies;
- Standard Operating Procedures (SOPs) and guidelines;
- Safe Work Instructions (SWIs);
- Reference documents;
- Training materials; and
- Associated documentation including forms, checklists and drawings.

During all phases of the operation, including normal operation, commissioning and decommissioning:

- The OHSP will be adhered to at all times;
- The OHSP will undergo annual review, updating, approval and signing off by designated management personnel;
- A record will be kept of significant changes made through annual review, and persons responsible for these changes; and
- The OHSP distribution list will provide information about personnel, departments and external role-players with responsibilities in terms of the plan. Aspects of the plan may, for security reasons, have restricted distribution.

SRL is committed to operating at the highest standards to protect the health and safety of its workers, the public, and the environment. Therefore, SRL will develop and maintain the OHSP in compliance with applicable laws and industry standards.

This OHSP will be implemented as part of SRL's HSEC Management System.

2 Governance framework

This OHSP has been developed in accordance with national and international regulations and guidelines. The regulations and guidelines are discussed in the following sections.

2.1 National standards and guidelines

The following Acts and Regulations are applicable this project and are further discussed in the subsections that follow:

- *Mines and Minerals Act, 2009*; and
- *The Mines and Minerals Operational Regulations, 2013*.

2.1.1 *Mines and Minerals Act, 2009*

The key provisions of the Mines and Minerals Act relate to mineral rights and access to surface rights (including compensation for land owners), radioactive materials, protection of the environment, community development, health and safety, and transparency in the extractives industry. The Minister for Mineral Resources and the National Minerals Agency (NMA) are the current relevant authorities for enforcing the Act.

Part XV – Protection of the Environment

General and specific provisions for varying mining activities are provided in Part XV – Protection of the Environment of the Act (§131 – 137). The majority of this part in the Act is applicable for mining licence holders seeking a small or large-scale mining licence. There are however certain sections that apply to all mining licence holders. The relevant sections are as follows:

- §132 (1), which requires the mining licence holder to exercise duty of care to protect the environment and minimise pollution, and states “a holder of a mineral right is subject to all laws of Sierra Leone concerning the protection of the environment” (§132 (2)).

Part XVII - Health and safety

This section of the Mines and Minerals Act provides provisions for holders of mineral right in terms of health and safety (§142 – 147). It addresses workplace health and safety requirements and provisions including a policy for compensation of injured workers.

In addition, *Section 142 (d) states: “Every holder of a mineral right shall ensure that persons who are not employees, but who may be directly affected by the activities at the mine are not exposed to any hazards to their health and safety”.*

2.1.2 *Mines and Minerals Operational Regulations, 2013*.

The *Mines and Minerals Act of 2009* have been supplemented by detailed regulations, which contain key provisions for mining projects. Specifically, the Mines and Minerals Operational Regulations of 11 July 2013, provide for requirements in relation to surface, open pit and underground mining operations, reporting of mineral resources, health and safety standards, waste disposal, as well as explosives and blasting.

Part V – Occupational Health and Safety

Sections 26 to 41 provides provisions for holders of mineral rights in terms of occupational health and safety. It addresses duties to protect worker safety, administrative requirements, training, safe work procedures and practices, emergency preparedness and contractors and site visitors.

2.2 International standards and guidelines

The international standards and guidelines as applicable to this project are presented in the subsections that follow.

2.2.1 United Nations

The United Nations (UN) has established the United Nations Guiding Principles on Business and Human Rights (UNGP) which in 2011 unanimously endorsed a global standard for preventing and addressing the risk of adverse impacts on human rights linked to business activity. UN agencies including the International Labor Organization (ILO), the International Occupational Safety and Health Information Centre (ILO-CIS) and the World Health Organization (WHO) work in partnership with the ILO. Key instruments of the ILO include the following:

- **Conventions:** The ILO has a wide array of Fundamental, Governance (Priority) and Technical ILO Conventions, many of which are applicable to global OHS, notably C155, C161, and C187. A further relevant Convention is that dealing with safety and health in mines (C176 Safety and Health in Mines Convention). While C155, C161, C187 and C176 are not ratified in Sierra Leone, as indicated in <http://www.ilo.org/>, their embodied principles may be implemented;
- **Codes of Practice:** The ILO Codes of Practice are non-binding and do not replace national law, but they provide guidance to entities including employers on protecting employees on specific hazards and health risks, including in the mining sector. They further provide guidance on the establishment of effective OHS management measures;
- **Safe Work:** The ILO runs the Programme on Safety and Health at Work and the Environment (Safe Work) which sets out to ensure, amongst other aspects preventive policies and programmes are developed to protect workers in hazardous occupations and sectors;
- **Global Strategy to Improve OHS:** In 2003 the ILO launched the Global Strategy to Improve OHS.

2.2.2 Occupational Health Safety Assessment Series (OHSAS) 18000

OHSAS 18000 is an international occupational health and safety management system specification. OHSAS 18000 comprises two parts, OHSAS 18001 and 18002 and embraces a number of other publications. OHSAS 18000 is the internationally recognized assessment specification for occupational health and safety management systems. This management system operates on the basis of policy, planning, implementation and operation, checking and corrective action, management review, and continual improvement.

2.2.3 IFC Performance Standards

The IFC 2012 Performance Standards (PS) are an international benchmark for identifying and managing environmental and social risk, and has been adopted by many organizations as a key component of their environmental and social risk management.

There are eight IFC PS's in total, seven of which are relevant to the SR Area 1 operations, namely:

- PS 1: Assessment and Management of Environmental and Social Risks and Impacts;
- PS 2: Labour and Working Conditions;
- PS 3: Resource Efficiency and Pollution Prevention;
- PS 4: Community Health, Safety and Security;
- PS 5: Land Acquisition and Involuntary Resettlement;
- PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; and
- PS 8: Cultural Heritage.

The IFC PS, and the Equator Principles which generally follow the requirements of the IFC, have been adopted for this project. The PS that relates to Occupational Health and Safety (OHS) is PS 2.

PS 2: Labour and Working Conditions

PS2 recognises that the pursuit of economic growth through employment creation and income generation should be accompanied by protection of the fundamental rights of workers. This PS is guided by international conventions and instruments, including those of the ILO and the UN. OHS-focused objectives of PS2 set out:

- To promote compliance with national employment and labour laws;
- To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the clients supply chain; and
- To promote safe and healthy working conditions, and the health of workers.

In terms of PS2, SRL will provide a safe and healthy work environment, taking into account inherent risks and hazards. Steps will be taken to minimize accidents, injury and disease arising from, associated with or occurring in the course of work. In line with international best practice, SRL will address the identification of hazards, preventative and protective measures, training, documentation and reporting as well as emergency response.

2.2.4 Environmental Health and Safety Guidelines

The World Bank Group Environmental, Health and Safety Guidelines (EHS Guideline) are technical reference documents with general and industry-specific examples of GIIP, as defined in IFC's PS 2 (above). The IFC uses the EHS Guideline as a technical source of information during project appraisal.

The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology.

Occupational Health and Safety is addressed in the General EHS Guidelines document under Section 2.

Industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document. Of relevance for SRL's operations is the EHS Guideline for Mining (2007).

EHS Guidelines for Mining

The EHS Guidelines for Mining are applicable to underground and open-pit mining, alluvial mining, solution mining, and marine dredging. Section 1.2 contains recommendations for OHS management. This document aims to address the OHS management strategies contained in the EHS Guideline for Mining.

2.3 Corporate policies, framework and standards

In addition to complying with international and national Regulations and standards, Iluka, SRL's parent company, has its own of policies, standards, procedures and guidelines. All Group standards and procedures provide auditable criteria, against which compliance can be measured. These structures define commitments, directions and intentions. They provide emphasis, set direction and are equivalent to organisational law; driving decision making within the business. Below is a description of the Iluka framework, policies, standards and procedures.

2.3.1 Iluka Health, Safety, Environment and Community Management System Framework

The HSEC Management System framework defines the requirements, processes and tools to assist with achieving Iluka's sustainability objectives which are:

- High levels of performance aimed at sustainable outcomes;

- Sound governance, planning, control and risk management systems; and
- Positive and enduring legacies with mutually beneficial outcomes.

The HSEC Management System Framework comprises of the following key areas:

- Health – identifying, assessing and monitoring health hazards;
- Safety – managing personal and operational safety risks;
- Environment – conducting activities such that adverse impacts on existing and potential environmental values are minimised. This includes the efficient use of resources, in particular energy, water and land, and effective plans for the cessation of operations and rehabilitation of disturbed areas; and
- Community – engaging our communities and ensure their views form part of our decision-making process.

The system covers the lifecycle of Iluka activities from exploration, planning and project development, through to operation, closure and rehabilitation.

2.3.2 Iluka Health, Safety, Environment and Community Policy 2017

The HSEC Policy provides a declaration on the importance Iluka places on conducting its business safely, without detrimental health effects and with regard to the community and the value of the natural environment. Iluka HSEC Policy commits the Company to operate in a sustainable manner by targeting high levels of performance and pursuing leading practice in the areas of health, safety, environment and community reflecting the Company's values of Commitment, Integrity and Responsibility. The main aspects of the HSEC Policy are to:

- Assess and manage environment, workforce and community risks associated with Iluka's activities;
- Comply with all legislative requirements, which are recognise as the minimum standard to achieve;
- Set clear, achievable and measurable performance targets;
- Seek to continuously improve performance;
- Maintain a HSEC management system covering all areas of the business;
- Provide appropriate training to staff; protect the health and safety of the people by identifying and taking appropriate action to mitigate workplace fatalities, injuries and illnesses;
- Acknowledge the cultures, customs and values of people in communities where we operate;
- Engage early in open, inclusive and meaningful communication and incorporate stakeholder views in the decision-making processes;
- Seek to make a positive difference to the social and economic development of the areas in which the Company operates;
- Develop effective plans for the cessation of operations and rehabilitation of disturbed areas;
- Use resources efficiently, in particular energy, water and land; and
- Maintain a product stewardship approach towards the use of the Company's products.

The HSEC Policy aligns with Iluka's overarching commitment to deliver high levels of health, safety, environment and communities performance while providing a commitment to ensure that health, safety, environment and communities standards reflect the relevant leading practise.

2.3.3 Iluka Group standards

The Iluka Group standards specify uniform mandatory performance requirements that govern decisions and behaviour in support of the Iluka policies. They describe what shall be done and provide a basis for verifying compliance through audits and assessments. Iluka has 14 Group standards, those relevant to OHS are discussed:

- Standard 1: Risk and hazard management: environment, workforce and community risks associated with Iluka operations are assessed and managed. Controls are implemented,

communicated and monitored for their suitability and effectiveness. Planned and unplanned changes are managed effectively;

- Standard 3: Training and Awareness: employees and contractors are appropriately trained and are competent to perform work;
- Standard 4: Contractor Management: contractor selection, engagement and management are systematically conducted to ensure alignment and conformance with Iluka policies and objectives. Contractor capability and performance are regularly monitored to identify opportunities for continual improvement;
- Standard 6: Process Safety: a systematic approach to process hazard management is implemented, ensuring necessary preventive controls and defences are installed and maintained to prevent catastrophic release, fire, and explosion. Process integrity is effectively managed by the application of robust design, engineering, operating and maintenance systems;
- Standard 10: Radiation Management: risks with the potential to result in adverse outcomes during exploration, pre-feasibility, operations and closure are appropriately managed to levels as low as reasonably achievable;
- Standard 11: Workplace Health and Hygiene: employees and contractors are assessed for their fitness to work. Health hazards within Iluka workplaces and the communities in which Iluka operate are identified and effectively managed. Health promotion initiatives are undertaken to actively encourage safe and healthy lifestyles;
- Standard 12: Incident Reporting and Investigation: HSEC near hits and incidents are reported and appropriately investigated to establish root cause and identify contributing factors. Preventive and corrective actions are implemented to prevent recurrence and share learnings;
- Standard 13: Emergency and Crisis Preparedness: identified risks with the potential to result in emergency and crisis situations are appropriately managed. Iluka's capability to respond to such events is developed, documented, maintained and verified; and
- Standard 14: Audit and Assurance: Iluka's management system is effective in managing sustainability performance, has been successfully implemented and progress is measured to drive continual improvement.

3 Organizational and management responsibilities

Responsibility for sustainability management, in particular the implementation of the SRL HSEC Management System, will be the responsibility of numerous levels and functions in the organisation. As this OHSP is a component of the HSEC Management System, and the responsibility for the OHSP will follow the structures outlined in the ESHIA. Ultimate responsibility for the implementation of the OHSP and the safe and environmentally sustainable operation in SR Area 1 is vested in the Chief Executive Officer (CEO) of Sierra Rutile. Operational implementation will be devolved to:

- Chief Operating Officer (COO) of Sierra Rutile;
- Mining and Processing Managers;
- Environmental, Health and Safety (EHS) Manager, who in turn oversees:
 - The Practice Manager (Clinic);
 - Environment and Radiation Superintendent; and
 - Safety Superintendent.

The responsibilities of key management personnel are summarized for each position in this section. The discussion is meant to provide an overview of key responsibilities and is not a complete list of responsibilities for each position.

3.1 Organisational structure

3.1.1 Chief Operating Officer

The COO is the senior executive on site and is responsible for all actions and activities at the mine. The COO is the primary operational decision maker, and works closely with the Mining and Processing Managers and the EHS Manager in relation to OHS matters.

3.1.2 Mining and Processing Managers

The Mining and Processing Managers are second-in-command in managing and responding to OHS matters (e.g. at a mining face or at one of the processing plants). The Mining and Processing Managers will work closely with the COO to coordinate efforts and limit the hazards to employees, the public and the environment.

3.1.3 Environmental, Health and Safety Manager

The EHS Manager will collaborate strongly with the COO and the Mining and Processing Managers regarding OHS matters. The EHS Manager is responsible for implementing the OHSP and maintaining its currency with site conditions, management changes and improvements in response techniques. He/she is also responsible for the implementation of the EHS Group Procedure: Occupational Health Management (i.e. as part of the HSEC Management System) including employee training.

3.1.4 Safety Advisors

Safety Advisors will undertake inspections / audits of safety requirements by employees and sub-contractors; sampling and data capture in accordance with safety monitoring program and analysis of results; assistance with the preparation of reporting and permit applications.

3.1.5 Site Managers

Safety management at SRL is considered to be a line management function. Site Managers are responsible for health and safety of employees, day-to-day operations, and attainment of zero incidents, fatalities and job-related illness, as well as identification of unsafe situations. The Site Managers will further ensure that the HSEC Management System is in place as a framework for auditing against, will ensure procedures for updating of policy are in place and will ensure management representation on a Joint Health and Safety Committee.

3.1.6 Supervisors

Supervisors, reporting to the Site Managers, will be responsible for day-to-day safety at the key facilities such as the mining plant, quarry and waste site and individuals they supervise, including attendance of safety meetings and awareness and implementation of rules, as well as representation on the Joint Health and Safety Committee; reinforcement of safe behaviours through positive reinforcement and reprimands for unsafe behaviours; elimination of unsafe situations.

3.1.7 Employees

Employees, reporting to the supervisors, are responsible for ensuring safe behaviour and implementation of rules; taking ownership of zero incidents approach; control of actions; provision of feedback and reporting on safety and near misses; attendance off training and meetings; completion of job hazard identification for work permits issued; participation in incident and accident investigations; and ensure employee representation on the Joint Health and Safety Committee.

3.1.8 Visitors

Visitors will attend visitor orientation prior to entering site; will know what to do in an emergency; wear personal protective equipment (PPE) as required; be escorted by an SRL employee at all times.

3.1.9 Sub-contractors and contractors

Sub-contractors and contractors, reporting to SRL Supervisors with respect to OHS matters, will attend contractor orientation prior to entering site; adhere to Safety Contractor Manual; will have insurance requirements in place prior to commencement where feasible; develop a site-specific HSEC plan to become part of contract; regularly review the HSEC plan.

4 SRL OHS Plan

As noted in Section 1.1, this plan has been developed to provide guidance for developing site specific practices and procedures which will be developed and implemented. Key elements of the OHS Plan include the development of the Standard Operating Procedures (SOPs) and guidelines, SWI and reference documents/training materials. These are described further below with management actions to implement by SRL presented in Table 4-1.

Standard Operating Procedures and guidelines

SOPs identify specific, documented tasks or actions, which provide sequential detailed administrative instructions for implementing Corporate Directives and Policies. Guidelines identify specific, documented standards, which provide detailed administrative instructions to the delegated authority with the limits to which they are entitled to act on behalf of the corporation for implementing Corporate Directives. SOPs and Guidelines will be approved and issued by the EHS Manager. They will have mandatory applications to each employee, facility and operation of the SRL Project.

Safe Work Instructions

SWIs will identify specific, documented tasks or actions, and will provide sequential detailed administrative instructions for implementing SOPs and Guidelines with the objective of ensuring conformance and compliance. SWIs will be approved and issued by the EHS Manager, and will have mandatory applications to each employee, facility and operation of the proposed SRL Project.

Reference documents / training materials

Reference documents, training materials and software systems will provide supporting information for the review by employees on specific issues of concern to the company and will be designed to assist in implementing the company Policy, Directives, SOPs and Guidelines and complying with the national legislation and international standards and guidelines. Training materials will be provided to employees to promote understanding and conformance with Policies, Directives, Procedures, Guidelines and compliance with the law. Reference documents and training materials will be approved and issued by the EHS Manager.

Table 4-1 SRL Occupational Health and Safety Action Plan

Issue	Management action	Progress indicators
Development of OHS Policy and Guidelines		
OHS management system	SRL to formally establish and adopt OHS management system standard based on the ISO Management System Standard format, to comply with: <ul style="list-style-type: none"> • Mines and Minerals Act; • The Mines and Minerals Operational Regulations, 2013; • IFC PSs; • World Bank/IFC: Environmental, Health, and Safety (EHS) Guidelines - General EHS Guidelines; and • World Bank/IFC: Environmental, Health, and Safety Guidelines – Mining. 	OHS management system in place
OHS policy	SRL OHS Policy posted on corporate website and available in workplace.	SRL OHS Policy available on website and on workplace noticeboards
OHS directives	SRL Corporate Directives will define the company standard and specific, documented tasks and actions that must be completed to implement company policy or comply with the law. Directives will cover: <ul style="list-style-type: none"> • Health and Safety Management; • Workplace Health and Safety; • Emergency Preparedness and Response; • Occupational Health and Safety; and • Zero tolerance rules. 	Corporate directives in place
OHS management system documents	SRL will develop / update OHS management system documents to comply with ISO standards covering: <ul style="list-style-type: none"> • Organisational context; • Leadership; • Planning; • Support; • Operational control (HSEC); • Performance evaluation, and • Improvement. 	OHS management system in place
Management System Implementation		
Hazard Identification and Risk Assessment (HIRA)	SRL to carry out hazard identification, risk assessment and determining controls.	Assessment complete and document available as part of the overall hazard registry
Legal and other requirements	SRL to carry out a detailed legal review of OHS requirements relating to labour practice.	Legal review available
Objectives and program(s)	SRL to define and prioritize OHS program objectives.	Objectives and programs available

Issue	Management action	Progress indicators
Resources, roles, responsibility, accountability and authority	SRL to: <ul style="list-style-type: none"> • Develop/ update a standard outlining the roles and responsibilities for all levels of management as it relates to OHS; • Communicate OHS roles and responsibilities to all affected employees; and • Ensure documented OHS roles and responsibilities are included in basic SRL safety awareness training. 	Standard on resources, roles, responsibility, accountability and authority available Records of communications and meeting notes Training materials
Competence, training and awareness	SRL to conduct basic safety awareness training that identifies the importance of health and safety to all employees and their roles, responsibilities and accountabilities.	Training modules available Attendance registers
Communication, participation and consultation	SRL to ensure: <ul style="list-style-type: none"> • Clear terms of reference for combined OHS/ H&S Committee structure; • Regular OHS/ H&S Committee Meetings required in terms of the Sierra Leone legislation; • SRL H&S bulletin boards to be regularly updated with relevant information; and • Implementation of the OHS communication standard. 	Attendance registers and minutes of meetings Up-to-date OHS/ H&S bulletin boards
Chemical, biological and radiological hazards	SRL to: <ul style="list-style-type: none"> • Develop a SOP describing requirements and systems necessary for the classification and labelling of hazardous substances and dangerous goods to ensure their safe use, storage, transportation and disposal; • Develop a documented list of hazardous materials stored, handled or used at the SRL Project; • Implement system with hazard symbols and content name; • Develop and implement management system for chemical safety data sheets; and • Develop training program for chemical, biological and radiological hazards. 	SOP on chemical, biological and radiological hazards in place List of hazardous materials handles, stored or used Labelling system in place Chemical safety data sheets Training materials for chemical, biological and radiological hazards available Course attendance registers
Working in confined spaces	SRL to: <ul style="list-style-type: none"> • Develop a SOP that ensures the safety of all personnel when working in situations where they enter confined spaces; • Document the confined spaces for the SRL operation with identifying number; • Develop detailed standards for identified confined spaces; • Develop standard SRL confined space entry permit; and • Develop SRL training program on confined space entry. 	SOP on working in confined spaces in place List of confined spaces available Standards for identified confined spaces in place Training manual on Confined Spaces available Training attendance registers
SOPs and SWIs	SRL to develop: <ul style="list-style-type: none"> • SOPs and SWIs that identifies standards for a safe workplace and establishes requirements that will ensure Contractors working at the SRL site conduct their work in a safe manner; • A contractor safety manual on safe work practices; and • A Non-Conformance Report to document and monitor contractor EHS compliance. 	SOP on safe work practices in place Training manual available Training attendance registers Template for reporting non-conformances in place
Emergency and fire management	In alignment with the Emergency Response and Contingency Plan (ERCP), a SOP is to be developed that establishes the minimum requirements for emergency, heat stress and fire management and describes the procedures to be followed in planning and organizing for fire emergencies.	SOP on emergency, heat stress and fire

Issue	Management action	Progress indicators
		management in place Inspection reports Training attendance registers
Emergency medical management	SRL to: <ul style="list-style-type: none"> • Develop a SOP describing the minimum standards for the SRL Project on emergency medical management and facilities; • Install first aid kits; • Carry out monthly inspections of emergency medical and first aid kits; • Purchase and make available personal protective equipment (PPE) for medical personnel for high risk biological exposure; • Develop basic standards on biological safety for employees covering medical and emergencies; • Develop list of minimum emergency medical equipment stock level for all SRL facilities; and • Ensure all emergency medical SOS containers are made operational 	SOP on emergency medical management in place Records of inspections List of minimum emergency equipment Basic standards in place on biological safety
Fatality and serious injury reporting	SRL to develop a SOP that describes the process to be followed in the event of a fatality or serious injury of an employee.	SOP on fatality and serious Injury reporting in place
Hazard communication and PPE	SRL to: <ul style="list-style-type: none"> • Develop a SOP that describes requirements and procedures necessary to communicate and control workplace hazards and set out the level of PPE requirement for operations; • Identify high safety risk behaviours and document these in a in a zero-tolerance guideline; • Document standard for signage to communicate hazardous areas; • Develop standard for minimum PPE for different areas of the operation; and • Develop standard for purchasing PPE and maintenance of PPE stock levels in store. 	SOP for hazard communication and PPE in place Guideline on safety risk behaviours available Zero tolerance guideline available Signage standard available Minimum PPE standard available Standard on PPE stock levels in place
Hot work	SRL to: <ul style="list-style-type: none"> • Develop a SOP that defines procedures for conducting hot work that may involve open flames, sparks or potential ignition sources; and • Implement a hot work permit system. 	SOP for hot work available Hot work permit system in place
Injury, disease and dangerous occurrence reporting	SRL to: <ul style="list-style-type: none"> • Develop a SOP defining responsibilities and procedure for reporting all work place health and safety events that result in injury, diseases or dangerous occurrence. This will include the process for investigation and corrective action to ensure prevention and continuous improvement; and • Develop and implement a reporting standard on injury, disease and dangerous occurrences. 	SOP on injury, disease and dangerous occurrence in place Reporting standard on injury, diseases and dangerous occurrences in place
Isolation of hazardous energy	SRL to: <ul style="list-style-type: none"> • Develop an Isolation and Lockout / tagout (LOTO) SOP to ensure the safety of all personnel when required to control hazardous energy associated with potentially harmful machines, equipment, 	SOP for Isolation of Hazardous Energy in place Training materials on hazardous energy

Issue	Management action	Progress indicators
	hydraulics, pneumatics, mechanical energy, potential energy, pipeline substances, etc. <ul style="list-style-type: none"> • Develop training programs for hazardous energy lockout; • Identify a standard for energy isolation equipment (locks and tags) and implement; • Carry out training all affected employees in isolation of hazardous energy (lockout); • Ensure required standard locks and tags are retained in a minimum stocking level at site; and • Ensure all equipment is designed and installed to be 'lockable'. 	lockout available Attendance registers Inspection records
Mechanical and electrical equipment safety	SRL to: <ul style="list-style-type: none"> • Develop a SOP that identifies minimum standards to eliminate or minimize the risk of fatalities, injuries and incidents resulting from the activities of employees and their interaction with electrical and mechanical equipment; • Develop a technical guideline for safety identification of piping and equipment specifying piping colour, content and flow direction; • Ensure all affected employees receive instruction on the Guideline; and • Ensure stores retain all necessary piping labelling signs. 	SOP for mechanical and electrical equipment safety in place Technical guideline for safety identification of piping and equipment available Attendance registers Inspection records Training manuals prepared
Mobile equipment	SRL to: <ul style="list-style-type: none"> • Develop a SOP describing basic requirements for vehicle accident prevention to include the broader risks of community and site transportation safety; • Carry out regular training; • Develop a pre-trip inspection form for plant vehicles; and • Develop documented standard which identified a list of actual and potential controls for traffic safety issued identified by a traffic safety risk assessment. 	SOP for mobile equipment in place Attendance registers Pre-trip inspection records Training undertaken and certificates obtained
Surface mining safety	SRL to: <ul style="list-style-type: none"> • Develop a SOP on minimum standards to eliminate or minimize the risk of fatalities, injuries and incidents resulting from the surface activities of mining, including: falls of ground; collapse in surface operations; emergency preparedness; refuge and response; air quality; worksite preparation; and design and engineering standards. It will further specify all slopes including pits, water storage facilities, stockpiles, natural and modified slopes, trenches, borrow pits, benches and quarries; and • Carry out training of SRL rescue team. 	SOP for surface mining safety in place Attendance registers Training manual prepared
Working at heights	SRL to: <ul style="list-style-type: none"> • Develop a SOP that sets out the minimum standards to ensure the safety of all personnel when working at heights; and • Develop PPE inspection standards for all fall protection equipment. 	SOP for working at heights in place Standards for fall protection equipment in place
Workplace health and safety	SRL to develop SOP on requirements, terms of reference and responsibilities for employees and persons exercising their duties on workplace health and safety committees, workplace inspections, and refusal of work.	SOP for workplace health and safety in place
Noise exposure	SRL to develop SOP on noise exposure throughout the operations. There should be visible signage where noise levels are above 85dB. Persons must wear hearing protection.	SOP for noise exposure
Radiation safety	SRL to ensure that all persons working in areas where there is radioactive material to attend a Radiation	Induction for Radiation Safety Awareness

Issue	Management action	Progress indicators
	Safety Awareness Induction.	
Industrial hygiene and occupational health	SRL to: <ul style="list-style-type: none"> • Develop SOP on industrial hygiene and occupational health; and • Install a management system for the development and retention of employee occupational medical records and a SOP for control of records. 	SOP for industrial hygiene and occupational health in place Management system for medical records in place Risk assessment documented

Issue	Management action	Progress indicators
Cranes, rigging hoisting and lifting devices	SRL to: <ul style="list-style-type: none"> • Develop a SOP dealing with cranes, rigging, hoisting and lifting devices; • Develop standard pre-trip inspection record for cranes, rigging, hoisting and lifting devices; and • Develop training programs for cranes rigging hoisting and lifting devices. 	SOP for cranes, rigging hoisting and lifting devices in place Pre-trip inspection records Attendance registers
General safety procedures	SRL to develop general safety procedures for specific types of potential hazards associated with day-to-day operation, including the following: <ul style="list-style-type: none"> • Slips, trips and falls: Determine ways to prevent slips, trips and falls; • Stairways and walkways: Determine the most suitable material for construction of stairways and walkways, and define the height of handrails on stairs and walkways; • Excavations – trenching and shoring: Determine the local governmental regulations for excavations, trenching and shoring, and develop a code of practice for excavations; • Working around heavy equipment: Maintain awareness of location of heavy equipment, establish rights-of-way rules for heavy equipment on haul roads, and develop communication procedures to communicate with operators of heavy equipment; • Machinery, mechanized and hand equipment safety: Ensure all required safety guards are in place and maintained, develop machine-specific safety rules and procedures, define the safety procedures for equipment such as abrasive wheel grinders and saws, scaffolding, drills and rotating equipment; • Heavy lifting: Determine ways to eliminate or control heavy lifting by the use of powered mechanical devices and educate workers on safe lifting; • Sanitation and waste management: Determine the local regulations on sanitation, as well as defining items for different waste streams and means of disposal; • Eating areas: Determine suitable areas for eating and cleaning of those areas; • Lighting and illumination: Determine the lighting requirements for the facility areas; • Working alone / isolated workers: Develop working alone procedures for the facility; • Fuelling and flammable materials: Develop protocols for fuelling equipment, areas where flammable material can be stored, as well as procedures for dealing with a flammable liquid spill; • Compressed air and gases: Define the areas where compressed air and gases can be stored and transportation procedures for moving compressed air or gases; • Transportation of dangerous goods: Define the personnel who will be involved in the transportation of dangerous goods and training requirements for those personnel; • Safe operation of vehicles: Determine the personnel who will be operating vehicles on site and the training required to operate those vehicles, as well as the areas where vehicles can be operated safely; and • Fire prevention and protection: Define the areas where fire protection is required; determine the methods of fire protection required and define programs to teach personnel about fire prevention. 	
Monitoring and review		
Performance measurement and monitoring	SRL to: <ul style="list-style-type: none"> • Develop a performance measurement and monitoring OHS report format; • Develop a standard document for the reporting and recording of hazardous occurrences (incidents 	Performance report format available Report template on incidents and accidents prepared Hard copy tracking system in place

Issue	Management action	Progress indicators
	and accidents); and <ul style="list-style-type: none"> • Develop and implement a hard copy tracking system to verify that corrective actions identified within hazardous occurrence reports are being completed. 	
Evaluation of compliance – internal audit	The SRL Board of Directors will require comprehensive audits to ensure the safety management system is effective, weaknesses are identified, and resources are applied to achieve the policy objectives.	Internal audit reports available
Evaluation of compliance – external audit	SRL to: <ul style="list-style-type: none"> • Engage external auditors to conduct compliance, conformance and verification audits of the SRL Project; and • Issue corrective/ preventive action plans for both conformance and compliance findings, and track and document completion and closure of audit findings. 	External audit reports available Corrective/preventive action plans available

5 General safety rules

The general safety rules and regulations of the facility will be communicated to workers during the site induction.

5.1 Contractor safety

Ensure contractors are aware of the safety rules and regulations set out by the company, (to be included as part of the contract) and that they abide by these rules.

5.2 Drugs and alcohol

Any person under the influence of drug and alcohol will not be permitted to enter operational areas. SRL will:

- Determine if alcohol and drug testing will be done on site;
- Implement drug and alcohol testing for the following reasons:
 - Pre-employment requisite;
 - Post-incident / accident investigation;
 - Reasonable suspicion;
- Use trained individuals to conduct drug and alcohol testing; and
- Define what support will be given to employees deemed to have a substance abuse problem.

5.3 Enforcement

The health and safety policy will be enforced by the following personnel:

- Site Management and Supervisors, assisted by site safety coordinators, will enforce the safety rules and regulations; and
- The Operations Manager will enforce the rules and regulations from a disciplinary perspective if infractions continue.

6 Personal protective equipment

Personal protective equipment (PPE) requirements will be described for specific types of protection. Employees will receive proper training before receiving their PPE and for respiratory equipment employees will be fit tested before receiving equipment. PPE will include, but not be limited to:

- **Hard Hats:** All hard hats will conform to good practice standards. Hard hats will be worn at all times when working in operational areas;
- **Steel-Toed Footwear:** All safety footwear will be steel or suitable material for toe and shank protection. Safety footwear when used in the operational areas will be at least ankle high;
- **Clothing:** All clothing will afford the worker the most possible protection required for the specific jobs. The shirts should be day/night high visibility (reflective stripes and long sleeves). The trousers must be long. Clothing is to be in good condition with no rips or tears and no contamination from chemicals or oils. If this is the case, clothes must be replaced or laundered;
- **Gloves:** Gloves must be made of a suitable material that will protect the worker and not react with chemicals used for the particular task. Welders will wear welding gloves. Gloves must close-fitting;
- **Eye and Face Protection:** Eye protection will be worn at all times in areas deemed eye injury hazard areas. Safety glasses will conform to local government standards and will be worn at all times when working in the operational area. Face protection will be worn when working with or around machinery/ tools that produce flying objects. Proper eye protection will be worn in conjunction with the face protection;
- **Hearing Protection:** There will be an audiometric program in place for noise-exposed workers. Hearing protection will be worn in areas where the decibel reading is 85 or greater, or if local government standards are lower than 85 A-weighted decibels. Hearing protection will consist of one or more of the follow methods of protection:

- Hard hat-mounted ear muffs;
- Moulded ear plugs; and
- Roll up foam ear plugs.
- **Fall Protection:** A fall protection policy and Code of Practice will be in place and is required should there be any possibility of a worker having a fall over three meters, or less if there is a possible chance of severe injury. Regular training will be conducted in fall protection and there will be rescue procedures in place to aide a worker if they have taken a fall and are suspended in the harness. Fixed fall protection systems will be installed where appropriate.
- **Respiratory Protection:** Respiratory protection will be selected depending on what is deemed necessary for the facility. A program will be designed and implemented to ensure that workers are protected. The program will include quantitative and qualitative fit testing and medical evaluations will be conducted before the employee uses the equipment.
- **Other:** Monogoggles, high impact face shields and hot work wear, and emergency PPE as may be relevant (rescue from height PPE, self-contained breathing apparatus, confined space rescue equipment, etc.)

7 SRL Project audit program

An on-site verification audit program will be put in place to define scheduling, conducting, and documenting of internal and external HSEC audits. Audit findings will be classified in accordance with the corporate rating procedure. The EHS Manager will review final review audit findings and ensure that all non-conformances are dealt with expeditiously. Systems will be put in place to:

- Avoid recurrence of non-conformances;
- Ensure timeous actions;
- Perform follow ups with site management to ensure that non-conformances are corrected, and recommendations are implemented within required timeframes;
- Report any areas of non-compliance to corrective actions to the Operations Manager, for potential escalation to the COO; and
- Ensure methodical record-keeping.

8 References

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