AFRITIN – UIS TIN MINE

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

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<thead>
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<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIM</td>
<td>Alternative Investment Market</td>
</tr>
<tr>
<td>AMD</td>
<td>Acid Mine Drainage</td>
</tr>
<tr>
<td>ARD</td>
<td>Acid Rock Drainage</td>
</tr>
<tr>
<td>CO2</td>
<td>Carbon Dioxide</td>
</tr>
<tr>
<td>DES</td>
<td>Domain Environmental Schedule</td>
</tr>
<tr>
<td>DMS</td>
<td>Dense Media Separation</td>
</tr>
<tr>
<td>ECC</td>
<td>Environmental Compliance Consultancy</td>
</tr>
<tr>
<td>ECO</td>
<td>Environmental Control Officer</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td>EMA</td>
<td>Environmental Management Act</td>
</tr>
<tr>
<td>EMP</td>
<td>Environmental Management Plan</td>
</tr>
<tr>
<td>Ha</td>
<td>Hectare</td>
</tr>
<tr>
<td>HOD</td>
<td>Head of Department</td>
</tr>
<tr>
<td>HSE</td>
<td>Health, Safety and Environment</td>
</tr>
<tr>
<td>HSEMS</td>
<td>Health, Safety and Environment Management System</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicators</td>
</tr>
<tr>
<td>ML</td>
<td>Mining Licence</td>
</tr>
<tr>
<td>MTPA</td>
<td>Million Tonnes Per Annum</td>
</tr>
<tr>
<td>Nox</td>
<td>Nitrogen Oxides</td>
</tr>
<tr>
<td>OEMP</td>
<td>Operational Environmental Management Plan</td>
</tr>
<tr>
<td></td>
<td>The authority to implement operating policies, health and safety policies and environmental policies at a facility</td>
</tr>
<tr>
<td>Nd PAF</td>
<td>Potentially Acid Forming</td>
</tr>
<tr>
<td>PCM</td>
<td>Pollution Control Measure</td>
</tr>
<tr>
<td>pH</td>
<td>Unit of Measure for Acidity or Alkalinity in Water</td>
</tr>
<tr>
<td>PM</td>
<td>Particulate Matter</td>
</tr>
<tr>
<td>PMS</td>
<td>Planned Maintenance Schedule</td>
</tr>
<tr>
<td>PRO</td>
<td>Performance Standard</td>
</tr>
<tr>
<td>PV</td>
<td>Photovoltaic</td>
</tr>
<tr>
<td>ROM</td>
<td>Run of Mine</td>
</tr>
<tr>
<td>RWD</td>
<td>Return Water Dam</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedures</td>
</tr>
<tr>
<td>Sox</td>
<td>Sulphur Oxides</td>
</tr>
<tr>
<td>SQEP</td>
<td>Suitably Qualified and Experienced Person</td>
</tr>
<tr>
<td>TSF</td>
<td>Tailings Storage Facility</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

AfriTin Mining Limited (AfriTin) is in the process of reopening the Uis Tin Project. The site is located in the historical mining town of Uis in the Erongo Region, Namibia as shown in Figure 1. The tin is hosted in pegmatite deposits, the primary minerals is cassiterite and secondly tantalum.

![Uis locality map]

Tin was discovered at Uis by the German Colonial Gesellschaft in 1911. Mining commenced in 1923 under the name of Namib Tin Mines Ltd. After a few changes in ownership Imcor Tin (Pty) Ltd bought Uis in 1958. Imcor steadily enlarged the capacity of the mine and also started to develop the town of Uis, providing infrastructure and service facilities as well as housing for employees. In 1980 capacity was again enlarged to become the largest hard-rock tin mine in the world. Operations ceased as a result of depressed tin prices in 1990.

Uis has a non-JORC compliant resource of 73 million tonnes at 0.136% stannum (Sn) with an additional 2.7 million tonnes at 0.015% Ta₂O₅.

AfriTin’s commitment to ensure suitable and responsible mining practices are in place, which is demonstrated through a corporate commitment to ensure the protection of the environment and communities in which they operate.

AfriTin has a duty to ensure that all regulatory and company standards with regards to the environment are met and complied with. In addition, AfriTin is responsible for the protection of the environment that may be impacted as a result of site operations and activities.
1.1. PURPOSE OF THE OEMP

This Operational Environmental Management Plan (OEMP) is a site-specific plan developed to ensure that appropriate environmental management practices are followed during the construction, reopening and operational phase of a project. This OEMP has been prepared to address environmental risks associated with the operations at the Uis Tin Mine.

The OEMP is a ‘live’ document, which shall be reviewed annually and periodically updated to reflect material changes to the operations and to allow continual improvement for environment and community management on the Uis Tin Mine site.

This EMP has been approved by the site’s Mine Manager and therefore it can be implemented across all activities at the Uis site.

1.2. AFRI Tin

1.2.1. AFRI Tin Corporation

AfriTin Mining is a mining company with a portfolio of tin assets in Namibia and South Africa. The company was established in 2017 and listed on the Alternative Investment Market (AIM) in November 2017, to acquire the tin assets of Bushveld Minerals Limited, an AIM quoted Natural Resource Company.

AfriTin is listed on the London stock exchange and has a vision to create a portfolio of world class, conflict-free, tin-producing assets. The company’s top asset is the Uis brownfield tin mine in addition to the Mokopane Tin Project in South Africa.

AfriTin’s management includes an experienced board of directors and a management team with a current two-fold strategy – to fast track the Uis brownfield tin mine in Namibia for commercial production and consolidation of other quality African tin assets. AfriTin strives to capitalise on the solid supply/demand fundamentals of tin by developing a critical mass of tin resource inventory, achieving production in the near term and further scaling production by consolidating tin assets in Africa.

1.2.2. Uis Tin Mine

Uis is a small town in the Erongo Region, Namibia approximately 333km from Windhoek. The town can be accessed via the C36 from Omaruru or from the cost via Henties Bay. The mine site consists of three separate mining licences namely; ML129, ML133, ML134, each of which has been historically exploited for tin on varying scales as shown in Figure 2. Currently all construction activities are carried out on ML 134. The total size of ML 134 is approximately 197 km² and the mining footprint is 8 km², which is <2% of the licence area. No activities are currently taking place on ML 133 and ML 129.

Uis Tin Mine is situated on a topographical belt associated with the escarpment, between the Namib Desert and the Central Plateau of Namibia. Climatic conditions are associated with a transition between the semi-arid (east) and the arid (west) parts of Namibia.
The tin at the Uis Tin Project is hosted in a large pegmatite deposit. The deposit will be utilised in two phases, namely Phase 1 and Phase 2. Phase 1 of the project involves using a pilot plant, and a 1:1.5 stripping ratio is expected during this phase with an estimated production of approximately 65t of concentrate per month. The project will then advance into Phase 2, consisting of a full-scale processing plant, during which time a stripping ratio of approximately 1:1.5/2 is anticipated, yielding approximately 460 tonnes per month of tin concentrate. The operation is designed to produce 95 640 tonnes of mineral using a Dense Media Separation (DMS) plant. Existing waste dumps will be used to dispose of waste produced from mining. Three waste dumps have been identified for use during Phase 1 and therefore no additional waste dumps will be created during Phase 1 mining. The tailings produced will be co-disposed into the waste dumps and a filter press system will be used for recycling approximately 95% of water. The latter is a critical component of the design consideration for the project plant.

1.3. ENVIRONMENTAL REGULATORY REQUIREMENTS

The Uis Tin Mine and associated activities trigger a number of Listed Activities as set out in the Environmental Management Act, 2007 (Act No. 7 of 2007) and its gazetted Environmental Impact Assessment Regulations (No. 30 of 2011).

The site has an Environmental Clearance Certificate to undertake Listed Activities in accordance with the Act. As per the Act and its Regulations, this certificate is required to be renewed every three years. This OEMP supports compliance with the Uis Tin Mine site’s Environmental Clearance Certificate and shall be submitted to the Department of Environmental Affairs, in the Ministry of Environment and Tourism for endorsement.

1.4. LEGAL COMPLIANCE

The Uis Tin Mine management team holds a copy of the Environmental Clearance Certificate and is responsible for ensuring clearance certificates to be in place prior to works associated with Listed Activities, and ensures they are current, up to date and renewed on the basis required by the Act.
AfriTin holds their responsibilities in line with the legal framework and provides a statement of commitment to comply with the provisions of the regulatory arrangements set out in the OEMP. Figure 8 sets out a declaration of commitment.

![Declaration of commitment]

1.5. **Scope of this OEMP**

This OEMP has been developed by adopting a collaborative and integrated approach to environmental management. It is based on the findings from the following EIA report and therefore supersedes the prior approved EMP:

- Environmental Impact Assessment Report for the re-commissioning of the Uis Tin and Tantalum Mine, Uis Namibia (EnviroSolutions, 2013).

Obligations and commitments made in the superseded EMP have been incorporated into this OEMP; where commitments are no longer applicable, or are redundant, they have been removed. The site’s Environmental Impact Assessment (EIA) Report as well as the experience and knowledge of the authors have been used to compile this OEMP. This OEMP aims to avoid repeating information, procedures or guidance that are available in other site and company reports, and has been written in line with the Namibian Government guidance document titled “Draft Procedures and Guidelines for Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP), 2008”.

This OEMP has been prepared to reflect the entire mine’s life cycle. The mine is currently in the construction phase and intends to move into operations in 2019. The OEMP will be used to tie into the decommissioning and closure plan framework as well. The geographical scope of this OEMP includes all operations and activities within the boundary of Mining Licence 134 and includes monitoring requirements for the mining licence areas. These activities are categorised work areas, termed “domains”, which are separated by operational activities, with the long-term view of integrating the OEMP into the decommissioning and closure plan for Uis Tin Mine.

Standard Operating Procedures (SOPs) feed into this OEMP, allowing a holistic environmental management approach to be adopted across the site. Health and safety management measures are not included in this OEMP.
1.6. ENVIRONMENTAL CONSULTANCY

Environmental Compliance Consultancy (ECC), a Namibian consultancy registration number 2013/11401, has prepared this OEMP on behalf of AfriTin, Uis Tin Mine. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa, in the public and private sector. ECC is independent to the proponent and has no vested or financial interested in the proposed project.

ECC has over 25 years combined construction and operational experience in the fields of mining and metals, nuclear and renewable energy plants. Through this experience ECC has been involved with developing and implementing several operational environmental management plans for projects of various scales and hazard risks; including but not limited to gold, copper, nickel and vermiculite mining operations in Australia, nuclear power plants in the United Kingdom, renewable energy plants in South Africa and Namibia.

ECCs team focuses on ensuring environmental management is practical, implementable and useable on the ground to ensure the impacts are minimised to the environment and community in which the site operates. This is reinforced with specific environmental monitoring objectives and the OEMP has been verified and approved by the ECC team.

1.7. STRUCTURE OF THIS OEMP

As this is an operational environmental management plan it is assumed that the reader is familiar with the site. If the reader requires further details on the site and its operations, the Environmental Impact Assessment Report for the recommissioning of the Uis Tin and Tantalum Mine, Uis Namibia could be studied (EnviroSolutions, 2013).

The layout of this OEMP has been set up to provide site specific and relevant information in the main sections of the report and provides supporting or supplementary information in the appendices, thereby providing the end user with an operational document for ease of use.

The targeted users of this OEMP are Heads of the Departments (HODs), the site environmental team and the authorities or stakeholders with a vested interest in how the Uis Tin Mine manages its environment and social responsibilities. The OEMP structure is summarised in Table 1.

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>WHAT THIS CHAPTER ADDRESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Broad overview of the site and the purpose of the OEMP</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Sets out the company integrated management system and how this OEMP is managed and enforced</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Sets out the OEMP and the various domains and domain schedules</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Sets out the site’s environmental schedules and provides a customised OEMP for each domain (work area), setting out the responsibilities; the activities in the work area and potential impacts; operational management measures; environmental pollution control measures; monitoring requirements; and reporting expectations.</td>
</tr>
</tbody>
</table>

Appendices to support the OEMP and the implementation thereof are as follows:

- Appendix A - Environmental monitoring programme and trigger values
- Appendix B - Domain sign off and certification
- Appendix C – Grievance submission form
- Appendix D – Domain checklists
- Appendix E – Weed and seed clearance certificate
• Appendix F - Environmental improvement plan
• Appendix G – Land clearing permit
• Appendix H – Standard operating procedure – water quality monitoring
• Appendix I – Standard operating procedure – air quality monitoring
• Appendix J – Standard operating procedure – ambient noise monitoring
• Appendix K – Supporting documents

1.7.1. ASSUMPTIONS, LIMITATIONS AND UNCERTAINTIES

During the development of this OEMP, assumptions have been made based on the scope and scale of the project and limitations and uncertainties have been identified. The assumptions, limitations and uncertainties are as follows:

– The old tailings storage facility (TSF) is not considered within the operational control of the site, furthermore the mining strategy has mitigated the need for the construction of a TSF or use of the existing TSF and therefore has not been included in this OEMP.

– The site does not have a bio-remediation facility currently, however due to the nature of the operations a bio-remediation facility will be required and therefore has been included within this OEMP, and

– This EMP does not include measures for compliance with statutory occupational health and safety requirements.
2. OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

This OEMP provides measures, guidelines and procedures for managing and mitigating potential environmental issues during the operations of the site. It also indicates monitoring and reporting guidelines and sets responsibilities for those carrying out management and mitigation measures. One of the aims of this OEMP is to act as an umbrella document that drives a holistic iterative approach to environmental management across the Uis Tin Mine site.

The incorporation of the company’s integrated management system into this OEMP ensures that silo working across domains is avoided, and a holistic environmental management approach is implemented across the site.

2.1. MANAGEMENT STRUCTURE, ROLES AND RESPONSIBILITIES

The site’s environmental commitments are managed at various levels across the organization and is supported by an on-site appointed ECO. The site appointed ECO reports to the site General Manager and is responsible for the management and strategic direction, and advisory services on all environmental related matters to support Uis Tin Mine operations. The site has been divided into various domains, for which mitigations and environmental management measures are set out. Each domain is supervised by a domain manager.

2.2. REVIEW OF THIS OEMP

This OEMP shall be reviewed and updated as required and shall be submitted to the MET every third year to accompany the application for the renewal of the Environmental Clearance Certificate (in line with current legal requirements) or submitted to MET for endorsement as required.

2.3. COMPLIANCE, INSPECTIONS AND ENFORCEMENT

The environmental risks and impacts associated with the operations and activities of the Uis Tin Mine site are detailed in each Environmental Schedule, along with specific mitigation and operational management arrangements.

A copy of this OEMP will be available to all personnel and hard copies shall be available across site. All personnel shall comply with this OEMP through their daily roles and any activities undertaken.

The appointed ECO shall undertake regular inspections; the type and frequency will be determined based on the level of risk associated with the activities and operations performed in each domain. For the higher risk areas, inspections shall be no less than weekly, and supervisors shall inspect their area of responsibility no less than monthly. The purpose of these inspections is to ensure this OEMP is being complied with.

Work areas and work tasks shall be inspected by the domain manager, which will be an experienced and qualified person. Conditions, controls and practices in and around the work area shall be inspected and inspections shall be both visual examinations and discussions with personnel. Specialised inspection programs shall be implemented to ensure that equipment and processes with a high risk of causing harm are inspected routinely or (where applicable) to meet either internal and/or statutory requirements. The inspection schedules for each domain shall be maintained and a record of each inspection shall be produced by the appointed ECO. Any corrective or preventative actions shall be communicated to the environmental team as soon as the inspection is complete.

2.3.1. NON-COMPLIANCE

The proponent and all companies and businesses operating on the project site shall ensure that this OEMP is fully complied with by contractors and personnel. All non-compliance events shall be reported via the incident reporting system and the standard reporting process that includes ensuring preventative action, reporting and where required taking disciplinary action.

Non-compliance events can be considered as:

- Evidence of contravention of this OEMP and associated indicators
- Failure of personnel to comply with corrective action or other instructions instructed by the operational manager, and

- Failure to address and respond to community complaints.
3. DOMAINS AND DOMAIN ENVIRONMENTAL SCHEDULES

The Uis Tin Mine site operates in distinct operating zones/work areas that are defined as domains. Through defining these domains, clear operating areas are established. Each domain has a concise environmental management plan, known as a domain schedule.

Within each domain, a domain manager is assigned and is responsible and accountable for the management of the environment within the domain and who shall ensure that the domain schedule is reviewed to ensure no additional environmental risks or impacts are occurring.

The appointed ECO shall ensure that all measures are implemented to mitigate and manage environmental risks; e.g. ensuring pollution control measures, and that monitoring and reporting associated with the domain are in place. The domains for the Uis Tin Mine site have been set out in Table 2.

Table 2 – Uis Tin Mine domain schedule of areas within the operational control of AfriTin and addressed within the scope of this OEMP

<table>
<thead>
<tr>
<th>Domain</th>
<th>DESCRIPTION</th>
<th>INCLUDES</th>
<th>DOMAIN MANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Surface roads and Infrastructure</td>
<td>- Access roads and tracks - Powerline</td>
<td>- Mining Manager</td>
</tr>
<tr>
<td>2</td>
<td>- Open pit and mining area</td>
<td>- Open pits - Mining offices and change house</td>
<td>- Mining Manager</td>
</tr>
<tr>
<td>3</td>
<td>- Waste rock dumps</td>
<td>- Hauling and dumping of mineral waste rock/material from the open pit - Landform sloping and design - Bulldozing and levelling of waste rock</td>
<td>- Mining Manager</td>
</tr>
<tr>
<td>4</td>
<td>- Trial processing plants</td>
<td>- ROM - Crusher</td>
<td>- Process Manager</td>
</tr>
<tr>
<td>5</td>
<td>- Old processing plant site</td>
<td>- Processing plant - Laboratory - Tailings material handling - Fuel storage tanks, and - Processing reagents</td>
<td>- Process Manager</td>
</tr>
<tr>
<td>6</td>
<td>- Bio-remediation site</td>
<td>- Proposed bio-remediation site</td>
<td>- General Manager</td>
</tr>
<tr>
<td>7</td>
<td>- Workshops</td>
<td>- Heavy and light vehicle workshops - Contractors workshops - Wash bay - Excavator pad - Tyre workshop - All mobile maintenance activities for infield emergency repairs, maintenance or servicing of equipment</td>
<td>- Mining Manager</td>
</tr>
<tr>
<td>8</td>
<td>- Temporary Contractors camp/s</td>
<td>- Camp site</td>
<td>- Mining Manager</td>
</tr>
<tr>
<td>9</td>
<td>- Non-mineralised waste facility</td>
<td>- Proposed or municipal landfill</td>
<td>- General Manager</td>
</tr>
<tr>
<td>10</td>
<td>- Fuel Depot</td>
<td>- 62,000 lt of diesel fuel</td>
<td>- General Manager</td>
</tr>
</tbody>
</table>
3.1. **Areas Outside AfriTin’s Operational Control**

Due to the site’s long and extensive mining history, AfriTin has strategically identified areas within (depicted in green in Figure 4) and outside (depicted in red in Figure 4) of their operational control. This approach has been adopted to limit the impact of the current mining activities. Areas outside of AfriTin’s control are therefore not addressed in this OEMP and are listed below:

- Existing waste rock dumps
- Existing TSF, and
- ‘White’ tailings stockpiles

![Figure 4 - Included and excluded areas in AfriTin's operational control](image-url)
3.2. **ENVIRONMENTAL MONITORING**

3.2.1. **SURFACE WATER QUALITY MONITORING**

Two locations have been selected for water quality monitoring prior to operations. The selected sites are two existing open pits on ML 134 where water has collected over the years. These pits are referred to as the North Pit and the South Pit and are currently being utilised as fish farms. The objective of monitoring surface water is to establish the surface water quality within the operational area of the mine and therefore to determine the baseline water quality prior to operations, comparing with water quality during mining operations. This information is then used to draw a conclusion on the impacts of mining activities on water quality.

Surface water monitoring is also required at the toe of the waste rock dumps after heavy rains as stated in Domain 4. It is recommended that sampling/water quality monitoring points are placed at suitable locations for recycled process water.

![Water quality monitoring locations](image)

**Figure 5 - Water quality monitoring locations**

3.2.2. **GROUNDWATER QUALITY MONITORING**

Monitoring boreholes will be required for monitoring the quality of groundwater prior to, and at the onset of mining operations in order to determine the impacts on groundwater by mining operations. The exact monitoring locations have not been confirmed yet. Previous studies have been done on the groundwater quality in Uis, this data can serve as baseline ground water quality data for the operation. Monitoring of groundwater in close proximity to the waste rock dumps is required.
3.2.3. **Air Quality Monitoring**

Air quality monitoring locations were established prior to the onset of mining operations as shown in Figure 6, these sites will be updated as required before the mine moves into the operational phase. A dustfall monitoring network is set up by following the American Society for Testing and Materials Standard (ASTM D1739-98) method for collection and analysis of dustfall at each of the illustrated sites. Passive sampling will include collecting $\text{SO}_2$, $\text{NO}_3$, and dust fall samples. The monitoring during the construction and operational phase will focus on Total Suspended Particulates (TSP), $\text{PM}_{10}$ and $\text{PM}_{2.5}$ and Sulphur dioxide ($\text{SO}_2$) as shown in the monitoring plan (Appendix A).

![Figure 6: Air quality monitoring locations](image-url)

Figure 6: Air quality monitoring locations
3.2.4. **Noise Monitoring**

Ambient noise levels have been monitored in locations in close proximity of nearby sensitive receptors to determine the noise levels in the area prior to the onset of mining operations. The locations of the noise monitoring stations are shown in Figure 7. The nearby sensitive receptors have been identified as the village council building, the Namclay brick factory and the houses situated in close proximity to the Namclay brick factory, although all residents of Uis can be regarded as potential receptors.

![Noise monitoring locations](image)

**Figure 7: Noise monitoring locations**

3.3. **Continual Improvement**

The appointed ECO of the Uis Tin Mine is responsible for reviewing and updating this OEMP. Obsolete documents are to be promptly removed from circulation and relevant personnel made aware, thereby preventing unintended use.

As part of this review process, the monthly reports from each domain will be reviewed, identifying any trends or significant areas of concern, as well as measures implemented to manage/resolve the environment or social issues. Compliance and legislative changes shall be reviewed, and lessons learnt shall be captured. This OEMP shall be amended as required, and follow up training, awareness or updates shall be provided in the domain(s) and across the site.

This OEMP shall be circulated to all domain responsible positions and stakeholders as required. It will be made available to all those inducted on site and presented in the environmental awareness training and site induction.

Ongoing hazard identification through the review of this OEMP and supporting management plans and SOPs shall ensure environmental impacts are avoided or minimised as low as reasonably practicable.
4. OVERARCHING ENVIRONMENTAL MANAGEMENT PRINCIPLES

4.1. INTRODUCTION

This section sets out the overarching environmental principles that are applicable across all domains and environmental schedules on the Uis Tin Mine site. Environmental schedules set out the site-specific environmental management requirements for the Uis Tin Mine. The environmental schedules have been separated per domain and includes potential issues or impacts that the specific work area may create. It provides the management measures or mitigation measures in place to manage the impacts, it sets the targets and objectives for the domain, outlines the monitoring and reporting requirements and provides clear roles and responsibilities for those managing the domains.

In accordance with best practice the following information is provided in each domain schedule: roles and activities in the domain, environmental risks; objectives for managing the impacts; environmental objectives and targets; management measures; environmental protection equipment; monitoring requirements; and reporting requirements.

4.1.1. GENERAL BEST PRACTICE MANAGEMENT MEASURES

The overarching general best practice management measures that shall be complied with across site are listed in Table 3. The domain manager for each domain is responsible for complying with the measures set out in Table 3 where applicable.

Table 3 – Best practice environmental management

<table>
<thead>
<tr>
<th>ENVIRONMENTAL ASPECT</th>
<th>BEST PRACTICE REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution prevention control</td>
<td>- Plant and equipment to be maintained and serviced regularly</td>
</tr>
<tr>
<td></td>
<td>- Refuelling at designated locations</td>
</tr>
<tr>
<td></td>
<td>- Spill kits available where the risk of loss of containment is identified</td>
</tr>
<tr>
<td></td>
<td>- Bunds to be at least 110% of the container</td>
</tr>
<tr>
<td></td>
<td>- Good housekeeping</td>
</tr>
<tr>
<td>Solid waste management</td>
<td>- Good housekeeping (no littering)</td>
</tr>
<tr>
<td></td>
<td>- Designated waste collection areas around site and one central location</td>
</tr>
<tr>
<td></td>
<td>- Bins labelled</td>
</tr>
<tr>
<td></td>
<td>- Waste to be separated and kept clean and tidy</td>
</tr>
<tr>
<td></td>
<td>- Waste bins emptied on regular basis</td>
</tr>
<tr>
<td>Ground contamination</td>
<td>- Refuelling shall be undertaken in designated areas with spill kits available.</td>
</tr>
<tr>
<td></td>
<td>- Chemical management enforced on site</td>
</tr>
<tr>
<td></td>
<td>- Good housekeeping</td>
</tr>
<tr>
<td>Soil management</td>
<td>- Topsoil is to be recovered in all cases of land clearing</td>
</tr>
<tr>
<td></td>
<td>- Topsoil to be stockpiled upstream of potential contamination areas</td>
</tr>
<tr>
<td>Storage of fuels, oils, chemicals and other hazardous liquids</td>
<td>- Storage tanks shall be suitable and labelled for the liquid being stored</td>
</tr>
<tr>
<td></td>
<td>- Bunds to be at least 110% of the container</td>
</tr>
<tr>
<td></td>
<td>- Daily inspections of tanks</td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>- Plant and equipment to be maintained and serviced regularly</td>
</tr>
<tr>
<td></td>
<td>- Turn off plant and equipment when not in use</td>
</tr>
<tr>
<td>Air quality</td>
<td>- Maintenance of internal roads</td>
</tr>
<tr>
<td></td>
<td>- Turn off plant and equipment when not in use</td>
</tr>
<tr>
<td></td>
<td>- Plant and equipment to be maintained and serviced regularly</td>
</tr>
<tr>
<td>Landscape and biodiversity</td>
<td>- Control the spread of weeds through weed and seed inspections prior to equipment being used on site.</td>
</tr>
</tbody>
</table>
4.1.2. **ENVIRONMENTAL MONITORING**

Monitoring also supports environmental management on site to evaluate how effective the environmental management has been, over an extended period of time. A consolidated environmental monitoring schedule is provided in Appendix A. Standard operating procedures (SOPs) were developed to provide further detail of the monitoring programme and specific requirements (Appendix D and Appendix H - J).

The appointed ECO is responsible for the site approved environmental monitoring programme implementation across the site. The monitoring programme comprises of:

- Air monitoring (using samplers at locations within the site boundary and nearest to sensitive receptors),
- Noise monitoring, and
- Water monitoring

The domain schedules state the specific monitoring requirements and SOPs. The appointed ECO is tasked with conducting the monitoring within each domain with the support of the domain manager and in line with the monitoring plan as discussed above. The domain manager must ensure the following:

- Monitoring is conducted,
- The area is safe to allow monitoring personnel access,
- Access to the area is granted upon request, and
- Reviews the monitoring information related to their domain.

4.2. **ENVIRONMENTAL OBJECTIVES AND TARGETS**

Environmental objectives and targets have been developed so that activities on the site can minimise potential impacts on the environment, as far as reasonably practicable. These objectives align to environmental and biodiversity performance standards and are applicable to all domains on site. They also form a foundation in developing specific objectives to each domain.

- Zero pollution incidents,
- Sustainable resource use,
- Application of the waste management hierarchy,
- Sustainable use of water,
- Responsible disposal of waste,
- Minimise aerial discharges and dusts being generated,
- Minimise noise and vibration levels, and
- Biodiversity protection and enhancement.

Procedures for monitoring site activities against these environmental objectives are detailed in supporting management plans under this OEMP.

4.3. **DOCUMENT CONTROL AND RECORDS MANAGEMENT**

Document control and records management sets out requirements to ensure that necessary documentation, records, data and information exist to support the functionality and effectiveness of the Uis Tin Mine.

4.3.1. **NON-Routine OPERATIONS**

For all new and non-routine activities that occur on site a specific risk assessment will be conducted. Risk assessments must capture environmental and social risks and must be reported in the monthly report to the appointed ECO, who will then ensure that the relevant documents are updated to reflect the new activity.
4.4. **Accidents and Emergencies**

All incidents, near misses, complaints or concerns from members of the local community or other stakeholders shall be reported in a timely and factual manner; accurately classified; effectively investigated; corrected and prevented from reoccurring through implementation of additional or more effective controls. All incidents are reported on site in accordance with site incident reporting procedures.

An emergency is any abnormal event, which demands immediate attention, usually by adopting a team approach to line management within the affected part of the site or operation. It is any unplanned event, which results in the temporary loss of management control at site, but where functional resources can manage the response. The sites Emergency Response plan document manages the response in relation to emergencies including environmental emergencies. Emergency response and management falls outside the scope of this OEMP and therefore is not further discussed within the OEMP.

4.5. **Change Management**

Any changes on site, such as mining and management of waste rock or mineral processing methods and tailings management, are subject to the change management process. The change management process ensures that identified modifications or newly introduced equipment, systems, processes, etc. are effectively assessed to determine their associated hazards and level of risk to employees and the environment. The extent of the assessment shall be appropriate to the nature of the change and level of potential risk.

Recommendations or improvements for the site as identified in the Environmental Improvements Plan (Appendix F), shall be reviewed and may be subject to the change management process. This OEMP shall be revised annually taking into consideration changes and associated risk and impacts.
DOMAIN 1 – SURFACE ROADS AND INFRASTRUCTURE

This domain includes tasks for miscellaneous surface infrastructure and activities, which are mapped below:

- Access roads or tracks, and
- Powerline.

Figure 8: Domain map - Surface roads and infrastructure and monitoring locations
Table 4 – Domain 1: Surface infrastructure domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Insignificant</td>
<td>Likely 4</td>
<td>Moderate 4</td>
</tr>
</tbody>
</table>

Domain manager: MINING MANAGER

<table>
<thead>
<tr>
<th>Statutory requirements</th>
<th>Permit / Permit name</th>
<th>Environmental permit conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A. Permit renewal every 5 years or when significant changes occur.</td>
</tr>
</tbody>
</table>

Potential issues or impacts

Air quality
- Dust generated from open roads

Noise
- Noise and nuisance factor to neighbouring communities
- Impacts of noise on employees

Biodiversity
- Death of birds from power line collisions
- Wildlife injury from users of roads

Social
- Water ponding creating mosquito breeding areas in dis-used borrow pits
- Nuisance dust or noise impacting neighbours
- Poor visual amenity for the site from dis-used borrow pits

Targets
- Zero community complaints relating to dust or noise
- Dis-used roads and tracks are rehabilitated within 6 months of being deemed uneconomical or viable for future use

Operational management measures

To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:
- Contractor management will be in place to ensure heavy delivery vehicles are kept in good mechanical condition to minimise noise associated with their operation.
- Open roads within the ML are managed using suitable dust suppression measures to prevent visible dust leaving the site
- Where death of birds due to power line collisions is reported suitable preventative measures such as bird deterrents will be placed on overhead lines by suitably qualified high voltage electrician

Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water truck Low 3</td>
<td>Used on a daily basis during the dry season to wet ground to reduce dust</td>
<td>Monthly maintenance as per planned maintenance schedule</td>
</tr>
</tbody>
</table>

Environmental monitoring

<table>
<thead>
<tr>
<th>Site code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ 02</td>
<td>Monitoring dust impacts to eastern sensitive receptor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ 04</td>
<td>Monitoring dust impacts on Uis town</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ 05</td>
<td>Monitoring dust impacts to nearest sensitive receptor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depositional dust</td>
<td>Monthly</td>
<td>600 mg/m²/day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental reporting</td>
<td>Domain manager to report to Appointed ECO (monthly)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Nil</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appointed ECO to report to domain manager (monthly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Complaints from neighbours to be directed to Public Relations Manager in accordance with the grievance procedure.</td>
</tr>
<tr>
<td>- Any complaints made from neighbours regarding noise from operations will be reported in the Monthly Report. The reports are to include a description of actions taken and response times.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental Inspection</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supporting Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Environmental monitoring plan Appendix A</td>
</tr>
<tr>
<td>- Domain sign off Appendix B</td>
</tr>
</tbody>
</table>
DOMAIN 2 – OPEN PIT AND MINING

The mining methods utilised will consist of conventional drilling and blasting with the initial mining area focusing on exposed ore zones located within the old/existing mining footprint as well as new pegmatite outcrops. Two pits have been identified on ML 134, where mining activities are planned; namely the V1 and V2 pits as shown in Figure 9.

This domain schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Open pits, and
- Mine offices and change house.

Figure 9: Domain map - Mining pits and monitoring locations
Table 5 – Domain 2: Open pit mine domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderate 3</td>
<td>Likely 4</td>
<td>High 12</td>
</tr>
</tbody>
</table>

### Domain manager: MINING MANAGER

#### Permit / Permit name

<table>
<thead>
<tr>
<th>Statutory requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Environmental Clearance Certificate (ECC)</td>
</tr>
<tr>
<td>B. ML 134, ML 133, ML 129 Mining Licences</td>
</tr>
<tr>
<td>C. Water abstraction permit - Water abstraction permit for mining purposes should be obtained from Ministry of Agriculture Water and Forestry (if required)</td>
</tr>
<tr>
<td>D. Accessory works permit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental permit conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Compliance to this OEMP</td>
</tr>
<tr>
<td>B. A mine closure plan will be in place and the mining operation will work towards concurrent mine closure through progressive rehabilitation. Integrate progressive rehab into the operational mining plan</td>
</tr>
<tr>
<td>C. Ensure the water abstraction volume is not exceeded</td>
</tr>
<tr>
<td>D. Renewed every 5 years or when material change occurs.</td>
</tr>
</tbody>
</table>

#### Potential issues or impacts

**Water**
- Increase levels of nutrients and potential contamination of groundwater from excessive explosive use due to incorrect charging
- Potential hydrocarbon contamination of groundwater from heavy equipment failures or spills, or incorrect servicing procedures
- Decreased groundwater level around the site that impact from mine dewatering boreholes that may affect the groundwater levels in neighbouring boreholes
- Impacts to the catchment area due to stormwater diversions incorrectly installed or water diverted away from the catchment

**Air quality**
- Dust generated from blasting activities
- Dust generated from drilling, hauling, loading and tipping of material

**Biodiversity**
- Excessive land clearing outside of approved areas
- Fish farming can potentially be negatively affected by blasting and vibrations
- Death and injury to wildlife from heavy equipment using haul roads or falling into pit
- Disturbance and stress to wildlife from blasting vibration and noise

**Social**
- Noise to neighbours from mining activities including blasting and vibrations
- Nuisance dust to neighbours from mining activities
- Selective mining and poor resource stewardship

**Targets**
- Zero complaints from neighbours relating to mining activities including blasting, dust or noise
- Maintain abstraction of water at a rate as stipulated in abstraction permit
- Ensure that production is not affected from accumulation of water in the open pits through the use of ad hoc dewatering of rain water
- Technical Services Manager to report to the mining department in advance of potentially acid forming (PAF) mining
To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- Ensure correct charging and use of explosive at all times in accordance with site procedures.
- Ensure equipment is made available for servicing to prevent equipment-associated impacts (spills, noise etc.).
- Ensure mining area complies with the mining plan and does not exceed the permitted area (i.e. prevent excessive clearing).
- Ensure the roads are wet to prevent dust.
- Ensure existing roads and tracks are used as far as reasonably practical, and
- Ensure the most effective and efficient blast pattern and explosive are used to limit the noise and vibration impacts to neighbours and wildlife.

### Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water cart</strong></td>
<td>Used on a daily basis to wet roads and stockpiles to reduce dust</td>
<td>Monthly maintenance as per planned maintenance schedule</td>
</tr>
</tbody>
</table>

#### Air quality

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ 02</td>
<td>Depositional dust</td>
<td>Impacts of dust from open pit operations on nearby settlement</td>
<td>Monthly</td>
<td>600 mg/m²/day</td>
</tr>
<tr>
<td>AQ 03</td>
<td></td>
<td>Impacts of dust from open pit operations on Uis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ 04</td>
<td></td>
<td>Impacts of dust from open pit operations on Uis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ 06</td>
<td></td>
<td>Impacts of dust from open pit operations on nearby settlement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Noise and vibration

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO 1</td>
<td>Noise – Ambient Noise</td>
<td>Noise impacts on Uis</td>
<td></td>
<td>45 dB day time</td>
</tr>
<tr>
<td>NO 2</td>
<td></td>
<td>Noise Impacts on nearest sensitive receptor</td>
<td></td>
<td>35 dB night time</td>
</tr>
<tr>
<td>NO 3</td>
<td></td>
<td>Noise impacts on community</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### WATER QUALITY

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQ 01</td>
<td>Water</td>
<td>Impacts on water quality due to mining operations</td>
<td>Appendix A</td>
<td></td>
</tr>
</tbody>
</table>

### Domain manager to report to appointed ECO (monthly)

- Volume of waste removed to waste rock dump
### DOMAIN 2 - OPEN PIT MINE

- Volume of ore mined

**Appointed ECO to report to domain manager (monthly)**
- Appointed ECO to report to the domain manager water quality results and levels monthly.
- Appointed ECO to interpret results and signatures relevant to the open pit i.e. nutrients, sulphides, hydrocarbons etc.) and report these to the domain manager against trigger values.
- Report air quality results to the domain manager, and
- Volume of water abstracted from boreholes (flow meter readings)

<table>
<thead>
<tr>
<th>Environmental inspection/s</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td></td>
<td>Domain manager to complete</td>
<td>To be inspected by domain manager and appointed ECO</td>
<td>Annual compliance audit</td>
</tr>
</tbody>
</table>

**Supporting documents**
- Domain sign off Appendix B
DOMAIN 3 – ACTIVE WASTE ROCK DUMPS

This domain includes the active waste rock dumps.

The schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Hauling and dumping of mineral waste rock/material from the open pit,
- Landform sloping and design, and
- Bulldozing and levelling of waste rock.

The existing waste rock dump will be used during mining operations as shown in Figure 10. Mineral waste from the open pit mine is placed on the waste rock dump at a suitable angle which allows for future rehabilitation.

Figure 10: Domain map - Active waste rock dumps and monitoring locations

The mining department is responsible for:

- Shaping the landform to comply with the mine design and the sites rehabilitation design requirements, and
- To ensure slopes are provided to the remediation specification as determined by the appointed ECO.

The technical services team in conjunction with the mining department are responsible for managing Potentially Acid Forming (PAF) waste. A proactive approach to PAF identification should be in place on the site.

The mine surveyors are responsible for ensuring that all PAF cells are identified and clearly included in the site plans for future use and consideration in the mine closure plan.
### Table 6 – Domain 3: Active waste rock dump domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major 4</td>
<td>Possible 3</td>
<td>High 12</td>
</tr>
</tbody>
</table>

#### Domain manager

- **MINING MANAGER**

#### Statutory requirements

- Permit / Permit name
  - In the event that new waste rock dump site needs to be established:
    - Where practical and required obtained a land clearing permit from the Ministry of Agriculture, Water and Forestry (MAWF) (Only valid for 3 months therefore must be applied for in advance of clearing works)
    - Stipulated on permit. General conditions may include; Number of protected trees to be removed, area cleared and surveyed, photos and use of resources cleared e.g. rehabilitation

#### Potential issues or impacts

- **Water**
  - Potential for groundwater and surface water contamination from acid rock drainage (ARD)
- **Air Quality**
  - Dust generated from the truck movements on dump, hauling, loading and dumping
  - Dust generated off unrehabilitated waste surfaces
  - Dust generated from mobile crusher activities
- **Biodiversity**
  - Excessive clearing of vegetation for waste dump footprint
  - Barrier to wildlife movement
  - Loss of habitat
- **Social**
  - Nuisance noise and dust

#### Targets

- Zero noise and dust complaints from neighboring community
- 100% encapsulation of PAF material
- No clearing for the waste dump footprint without land clearing permits where recovery of topsoil or substrate material for rehabilitation is possible (10 days notices to be given)
- Air quality monitoring reflects that the waste dump running surfaces have been kept moist with a 90% compliance commitment applied to the dust thresholds

#### Operational management measures

To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- A robust monitoring system is in place to predict and prevent ARD from mineral waste.
- In the event PAF is identified, the SOP for PAF is triggered and PAF material is encapsulated, surveyed and signed off according to the procedure.
- Land clearing permits are applied from the appointed ECO in advance. The domain manager should ensure that the Land Clearing permit process is triggered at the mine planning stage and therefore must include environmental consideration for future works, this is important in areas where recovery of topsoil or substrate material for rehabilitation is possible.
- Ensure a proactive approach to weather monitoring and when high winds are predicted, ensure an operational water cart is deployed to the waste dump to prevent excess dust being generated off the running surface of the waste dump.
- Implement measures to reduce noise from the waste dump if monitoring/community feedback detects noise breaches (especially at night) from tipping or dumping activities. This might include a night-time tipping location that is below the highest level of the
**DOMAIN 3 – ACTIVE WASTE ROCK DUMP**

- waste dump, so the dump can act as a noise barrier for neighboring properties. Ensure the mining plan includes provisions for rehabilitation and that the mining schedule is adhered to prevent visual impacts from an unrehabilitated waste dumps.

<table>
<thead>
<tr>
<th>Environmental pollution control measures (PCM)</th>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water cart Moderate 8</td>
<td>Water down surfaces to prevent dust</td>
<td>As per PMS</td>
<td></td>
</tr>
<tr>
<td>ARD SOP Moderate 8</td>
<td>Used to monitor mineral waste for potentially acid forming material</td>
<td>Reviewed annually</td>
<td></td>
</tr>
</tbody>
</table>

**Environment monitoring**

<table>
<thead>
<tr>
<th>Water quality monitoring</th>
<th>Site code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid rock drainage (ARD)</td>
<td>ARD monitoring</td>
<td>Visual monitoring around dumps after rains for ARD evidence</td>
<td>Within 24 – 48 hours rainfall</td>
<td>If field pH is &lt;5 pH send sample to laboratory</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Surface water sample to be taken at the toe of dump</td>
<td>Impacts of waste dump site on water quality in the area</td>
<td>Within 24 – 48 hours rainfall</td>
<td>Appendix A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WQ.01</td>
<td>Impacts on surface water quality through water inflow at existing pits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monitoring boreholes</td>
<td>Impacts on ground water quality</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Environment reporting**

- Domain manager to report to appointed ECO (monthly)
  - Volume of PAF material identified and survey locations if applicable.
  - Any areas that required vegetation removal for the month ahead.

- Appointed ECO to report to domain manager
  - Notify domain manager in advance when high winds are predicated (daily).
  - Notify domain manager if monitoring detects contamination from waste dump (monthly).

<table>
<thead>
<tr>
<th>Environmental inspection/s</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>On shift geologist to inspect waste mined in the pit prior to dumping to confirm no evidence of PAF material</td>
<td>Domain manager to complete a weekly inspection of the domain</td>
<td>Domain manager and appointed ECO to complete</td>
<td>Bi-annual compliance audit</td>
<td></td>
</tr>
</tbody>
</table>

**Supporting documents**

- Waste rock dump inspection form,
- Domain sign off Appendix B,
DOMAIN 3 – ACTIVE WASTE ROCK DUMP

- Land clearing permit Appendix G.

DOMAIN 4 – TRIAL PROCESSING PLANT

The Uis Tin Mine site’s trial processing plant shown in Figure 11 is designed to process 65t of concentrate per month.

- Run of mine (ROM)
- Crusher

Figure 11: Domain map - Trial processing plant and monitoring locations
### Table 7 – Domain 4: Trial process plant domain schedule

#### DOMAIN 4 – TRIAL PROCESS PLANT

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate 4</td>
<td>Possible 3</td>
<td></td>
<td>High 12</td>
</tr>
</tbody>
</table>

#### Domain manager

**PROCESS MANAGER**

<table>
<thead>
<tr>
<th>Statutory requirements</th>
<th>Permit / Permit name</th>
<th>Environmental permit conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Nil</td>
<td>A. Nil</td>
<td></td>
</tr>
</tbody>
</table>

#### Potential issues or impacts

**Water**
- Contamination of soil and water from plant and equipment
- Contamination from spillage of process material from pipeline breaks / failures
- Chemical spills from reagent mixing

**Air quality**
- Dust generated from process areas
- Release of chemical gases from process operations
- Dust generated from ore falling onto stockpiles from height

**Biodiversity**
- Fauna deaths from drowning in ponds
- Fauna deaths from chemical ingestion
- Light pollution at night disorientating birds and bats

**Social**
- Noise from processing operations
- Light pollution at night
- Nuisance dust to neighbors

#### Targets

- Zero process spills from the plant
- Zero noise or dust complaints from processing activities

#### Operational management measures

To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:
- Ensure all process bunds are kept empty and free of rainwater or process material
- Ensure plant is maintained according to PMS
- Ensure mixing of reagents is conducted according to site procedures
- All lined ponds must have fauna egress mats at required intervals and not more than 50m apart
- Ensure water bodies that could contain chemical that could poison fauna or birds are either:
  - Fitted with bird deterrents; or
  - Water body is of such a quality that mass fatalities do not occur
- Ensure lighting towers and light fittings are pointing downwards
- By checking for cracks in lining, vegetation growing in pond or green areas around water facilitates.

#### Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM Risk Score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Plant inspection Moderate 6</td>
<td>Visual inspection to detect major spills or leaks from the Plant</td>
<td>Daily inspection</td>
</tr>
</tbody>
</table>

### AIR QUALITY

<table>
<thead>
<tr>
<th>Site code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ 02</td>
<td>Depositional dust</td>
<td>Impacts of dust from the trial processing plant on the community</td>
<td>Monthly</td>
<td>600 mg/m²/day</td>
</tr>
<tr>
<td>AQ 05</td>
<td>To determine impacts of dust on nearby receptors (Uis Village Council and NamClay)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


### DOMAIN 4 – TRIAL PROCESS PLANT

| AQ 06 | Impacts of dust from the trial processing plant on the community |

#### NOISE AND VIBRATION

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise – Ambient</td>
<td>N 02</td>
<td>To determine impacts of noise on nearest sensitive receptor</td>
<td>Monthly</td>
<td>45 dB Day time 35 dB Night time</td>
</tr>
<tr>
<td>Noise – Ambient</td>
<td>N 03</td>
<td>To determine impacts of noise on nearest settlement</td>
<td>Monthly</td>
<td>45 dB Day time 35 dB Night time</td>
</tr>
</tbody>
</table>

**Environmental reporting**

- Domain manager to report to appointed ECO (monthly)
- Report monthly process water volumes to the appointed ECO
- Report an wildlife fatalities straight away to the appointed ECO

**Appointed ECO to report to domain manager (monthly)**

- ECO to report to the domain manager process water quality results monthly.
- ECO to interpret results and signatures relevant to the process plant i.e. heavy metals, etc. and report these to the DM against trigger values.

#### Environmental inspection/s

- **Daily**
  - Shift supervisor to complete the daily visual inspection

- **Weekly**
  - Domain manager to complete a weekly process plant and tailings line inspection

- **Monthly**
  - Domain manager and appointed ECO to complete monthly inspection

- **Other**
  - Bi-annual compliance audit

#### Supporting Documents

- Area inspection form,
- Domain sign off Appendix B, and
- Spill prevention and management.
DOMAIN 5 – PROCESSING PLANT AND TAILINGS

The Uis Tin Mine site’s process plant will be developed where the existing processing plant is situated for Phase 2 of the operations. Where possible existing infrastructure will be used and upgraded. The process flow design is illustrated in Figure 12.

The metallurgical process comprises of the following key stages and infrastructure:

- Primary crusher,
- Three stage crushing circuit,
- Shaking tables, and
- DMS circuit

![Process flow design](AfriTin, 2018)
This domain schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Processing plant,
- Laboratory,
- Tailings material handling,
- Fuel storage tanks, and
- Processing reagents.

Figure 13: Domain map - Old processing plant facilities and monitoring locations
Table 8 – Domain 5: Process plant domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major 4</td>
<td>Possible 3</td>
<td>High 12</td>
<td></td>
</tr>
</tbody>
</table>

Domain manager: PROCESS MANAGER

<table>
<thead>
<tr>
<th>Statutory requirements</th>
<th>Permit / Permit name</th>
<th>Environmental permit conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Nil</td>
<td>B. Nil</td>
<td></td>
</tr>
</tbody>
</table>

Potential issues or impacts

- **Water**
  - Contamination of soil and water from plant and equipment,
  - Contamination from spillage of process material from pipeline breaks/failures,
  - Chemical spills from reagent mixing.

- **Air quality**
  - Dust generated from process areas,
  - Release of chemical gases from process operations,
  - Dust generated from ore falling onto stockpiles from height.

- **Biodiversity**
  - Fauna deaths from drowning in ponds,
  - Fauna deaths from chemical ingestion,
  - Light pollution at night disorientating birds and bats.

- **Social**
  - Noise from processing operations,
  - Light pollution at night,
  - Reputation and business risk associated with the use of hazardous chemicals,
  - Nuisance dust to neighbors.

Targets

- Zero process spills from the plant,
- Zero noise or dust complaints from processing activities.

Operational management measures

To minimise the effects the above mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- Ensure all staff are trained on how to respond to process spills and emergencies.
- Ensure all process bunds are kept empty and free of rainwater or process material.
- Ensure plant is maintained according to PMS.
- Ensure mixing of reagents is conducted according to site procedures.
- Ensure water bodies that could contain chemicals that could poison fauna are either
  - Fitted with bird deterrents; or
  - Water body is of such a quality that mass fatalities do not occur.
- Ensure lighting towers and light fittings are pointing downwards.
- Ensure that ponds are not leaking by checking for cracks in lining, vegetation growing in pond or green areas around water facilitates.

Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Plant inspection Moderate 6</td>
<td>Visual inspection of the plant</td>
<td>Daily inspection</td>
</tr>
</tbody>
</table>

**WATER QUALITY**

<table>
<thead>
<tr>
<th>Site code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ 04</td>
<td>Depositional dust</td>
<td>Impacts of dust from the processing plant on Uis Town</td>
<td>Monthly</td>
<td>600 mg/m²/day</td>
</tr>
</tbody>
</table>

**AIR QUALITY**

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring Purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ 04</td>
<td>Depositional dust</td>
<td>Impacts of dust from the processing plant on Uis Town</td>
<td>Monthly</td>
<td>600 mg/m²/day</td>
</tr>
</tbody>
</table>
### DOMAIN 5 - PROCESS PLANT

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring Purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise - Ambient</td>
<td>N 01</td>
<td>To determine the impacts of noise on Uis town.</td>
<td>45 dB day time</td>
<td>35 dB night time</td>
</tr>
<tr>
<td>Noise - Ambient</td>
<td>N 02</td>
<td>To determine noise to nearest sensitive receptor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise - Ambient</td>
<td>N 03</td>
<td>To determine impacts of noise on nearby settlement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Environmental reporting

- Domain manager to report to appointed ECO (monthly)
  - Report monthly process water volumes to the appointed ECO,
  - Report wildlife fatalities straight away to the appointed ECO.

- Appointed ECO to report to domain manager (monthly)
  - ECO to report the domain manager process water quality results monthly,
  - ECO to interpret results and signatures relevant to the process plant i.e. heavy metals, etc. and report these to the DM against trigger values.

#### Environmental inspection/s

- Daily
  - Shift supervisor to complete the daily tailings pipe line visual inspection

- Weekly
  - Domain manager to complete a weekly process plant and tailings pipe line inspection

- Monthly
  - Domain manager and appointed ECO to complete monthly inspection

- Other
  - Bi-annual compliance audit

#### Supporting documents

- Area inspection form,
- Domain sign off Appendix B, and
- Spill prevention and management.
DOMAIN 6 – BIO-REMEDICATION SITE

When a hydrocarbon spill occurs on site, the spill is assessed and a suitable remediation plan is actioned depending on the location and site of the spill. When the spill cannot be transported to the bioremediation site it is remediated in situ. A suitable location for the bio-remediation site is yet to be selected, in the event of hydrocarbon spills the material is collected and transported to the bioremediation site for treatment.

This domain schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Bio-remediation facility/cells

### Table 9 – Domain 6: Bio-remediation site domain schedule

<table>
<thead>
<tr>
<th>Environment risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major 4</td>
<td>Possible 3</td>
<td></td>
<td>High 12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain manager</th>
<th>GENERAL MANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statutory requirements</td>
<td>Permit / Permit name</td>
</tr>
<tr>
<td>A. Nil</td>
<td>A. Nil</td>
</tr>
</tbody>
</table>

**Potential issues or impacts**

- Water
  - Contamination to groundwater from leaking liners in the facility
  - Contamination to surface water from overfilling of cells and contamination to surrounding areas
- Air quality
  - Dust generated from open and dry cells
- Biodiversity
  - Wildlife trapped in cells
- Social
  - NA

**Targets**

- RemEDIATE available soil in a timely manner

**Operational management measures**

To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- All cells are constructed according to the specifications
- The facility is managed according to the site procedures

**Environmental pollution control measures (PCM)**

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

**Environmental reporting**

- Domain manager to report to appointed ECO (monthly)
  - Volume of material received into the facility each month
  - Volume of material treated each month
  - Volume of material produced for rehab
- Appointed ECO to report to domain manager (monthly)
  - Water quality results as applicable

**Environmental inspection/s**

<table>
<thead>
<tr>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Domain manager</td>
<td>Environmental officer with domain manager</td>
<td>Bi-annual compliance audit</td>
</tr>
</tbody>
</table>

**Supporting documents**

- Area inspection form,
- Domain sign off Appendix B, and
- Spill prevention and management.
DOMAINE 7 – WORKSHOPS

Almost all items of light and heavy equipment are serviced and maintained on site at the Uis Tin Mine Engineering workshops.

This domain schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Heavy and light vehicle workshops,
- Contractors workshops,
- Wash bay,
- Excavator pad,
- Offices,
- Tyre workshop, and
- All mobile maintenance activities for infield emergency repairs, maintenance or servicing of equipment.

Figure 14: Domain map – Workshops and monitoring locations

Table 10 – Domain 7: Workshops domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor 2</td>
<td>Possible 3</td>
<td></td>
<td>Moderate 6</td>
</tr>
</tbody>
</table>

Domain manager: ENGINEERING MANAGER

statutory requirements

<table>
<thead>
<tr>
<th>permit / Permit name</th>
<th>Environmental permit conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Nil</td>
<td>A. Nil</td>
</tr>
</tbody>
</table>
## DOMAIN 7 – WORKSHOP

### Potential issues or impacts

**Water**
- Contamination of soil and water from plant and equipment,
- Contamination from spillage of chemicals and hydrocarbons,
- Chemical spills from infield refueling, reloading or mechanical breakdowns,
- Contamination to surface water from a poorly functioning / designed wash bay.

**Air quality**
- Dust generated from workshop loading bays,
- Increased PM emissions from poorly maintained equipment.

**Biodiversity**
- Fauna deaths from drowning in ponds,
- Fauna deaths from chemical ingestion,
- Light pollution at night disorientating birds and bats.

**Social**
- Noise from workshop operations especially at night.

### Targets
- Ensure the wash bay is operational and compliant at all time,
- Ensure all chemicals are stored correctly and bunded at all times.

### Operational management measures

To minimise the effects of the above mentioned impacts pose to the environment and community, the domain manager will ensure the following measures are implemented:
- Ensure that pipes and flanges are contained within a bund,
- Ensure all staff are trained on how to respond to chemical spills and emergencies,
- Ensure all bunds are kept empty and free of rainwater,
- Ensure plant is maintained according to PMS,
- Ensure staff report leaking pipes, joins or flanges to prevent failure,
- Ensure refueling, handling of chemicals, oils and greases is conducted according to specific site procedures,
- Ensure that all waste oil tanks are pumped out at 80% full capacity.

### Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash bay LOW 3</td>
<td>The final collection point for the domains oily and contaminated wastewater.</td>
<td>Daily</td>
</tr>
</tbody>
</table>

### Environmental reporting

#### Domain manager to report to appointed ECO (monthly)
- Quantities of fuels and oils used.

#### Appointed ECO to report to domain manager (monthly)
- Water quality results relating to the wash bay.

### Environmental inspection/s

<table>
<thead>
<tr>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be completed by the shift supervisor</td>
<td>To be completed by the foreman with the shift supervisor</td>
<td>To be completed with the appointed ECO and the HOD</td>
<td>Bi-annual compliance audit</td>
</tr>
</tbody>
</table>

### Supporting documents
- Area inspection form,
- Domain sign off Appendix B, and
- Spill prevention and management.
DOMAIN 8 – CONTRACTORS CAMP

A contractor’s camp is located on the site that was erected only for the construction phase. This domain schedule includes all infrastructure and activities within the operational control of the construction camp or any future construction camps and mapped below:

- Accommodation facilities for construction employees.

Figure 15: Domain map - Contractors camp
Table 11 – Domain 8: Contractors camp - domain schedule

<table>
<thead>
<tr>
<th>DOMAIN 9 - CONTRACTORS CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental risk of domain</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Domain manager: GENERAL MAINTENANCE SERVICES MANAGER

<table>
<thead>
<tr>
<th>Statutory requirements</th>
<th>Permit / Permit name</th>
<th>Environmental permit conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Nil</td>
<td>A. Nil</td>
<td></td>
</tr>
</tbody>
</table>

Potential issues or impacts

- Water
  - Contamination from canteen or mess area from fats oils and grease entering the waste water system.

- Air quality
  - Nil

- Biodiversity
  - Poaching risk from employees staying on site,
  - Potential for fire as a result of unauthorised fires being lit in the camp.

- Social
  - Reputaion damage with neighboring farmers from poaching incidents.

Targets

- Zero incidents relating to poaching from man camp

Operational management measures

To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- Ensure the fence around the main camp is maintained,
- Ensure the fat trap is cleaned our monthly by approved contractor,
- Ensure all contractors are educated and aware of camp rules including poaching and fires.

Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canteen fat trap Low 3</td>
<td>Intercepts fats, oils and grease to prevent contamination to waste water stream</td>
<td>Monthly</td>
</tr>
</tbody>
</table>

Environmental pollution control measures (BCM)

<table>
<thead>
<tr>
<th>Site code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors camp</td>
<td>Campsite</td>
<td>Monitoring for potential poaching/snares</td>
<td>Weekly</td>
<td>Zero</td>
</tr>
</tbody>
</table>

Environmental reporting

- Domain manager to report to appointed ECO (monthly)
  - Nil
- Appointed ECO to report to domain manager (monthly)
  - Nil

Environmental inspection/s

- Daily
  - Nil
- Weekly
  - Nil
- Monthly
  - Appointed ECO with domain manager to complete
- Other
  - Annual audit of compliance

Supporting documents

- Area inspection form,
- Domain sign off Appendix B.
DOMIAN 9 – NON-MINERALISED WASTE FACILITY

The first options for the handling of non-mineralised waste is to reduce, re-use and recycle. A landfill facility is to be constructed on the mine site for the event that the first options are not practically feasible. The location of the on-site landfill is still to be decided and although there is currently a landfill on-site, this site will require significant work to reach an acceptable standard. The landfill is to be classified as a non-hazardous landfill therefore each cell is earthen lined. The landfill site should be fenced to avoid windblown litter and to control access to the landfill site.

The Uis Tin Mine should consider other alternatives for the non-mineralised waste facility, such as using the municipal waste site (which is poorly managed) or use on-site waste removal options such as waste incineration.

This domain schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Proposed or municipal landfill or;
- An on site designed landfill.

Table 12 – Domain 9: Non-mineral waste facility domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain manager</td>
<td>GENERAL MANAGER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statutory requirements</td>
<td>Permit / Permit name</td>
<td>Environmental permit conditions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. Environmental Clearance Certificate</td>
<td>A. Compliance with the EIA that supports the clearance certificate</td>
<td></td>
</tr>
<tr>
<td>Potential issues or impacts</td>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Contamination to groundwater from incorrect disposal of waste in the landfill,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Contamination from uncleared drums or containers from the chemicals used in the operation arriving at the waste site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Dust from landfill operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biodiversity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Loss of topsoil and remediation material,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Potential poaching incidents from landfill operators,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Injury to wildlife from scavenging in the landfill site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Nuisance odour from landfill</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Targets | – Demonstrate an increase in the throughput of recycled materials annually, |
|         | – Demonstrate a reduction in volumes of waste going into landfill annually. |

Operational management measures

To minimise the effects the above mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- A vegetation clearing permit is obtained through the appointed ECO prior to land clearing activities where recovery of topsoil or substrate material for rehabilitation is possible,
- Vegetation is cleared and stockpiled for rehabilitation,
- Quality control process are in place to prevent hazardous materials entering the landfill site,
- Ensure training and awareness is in place with all operators to prevent contaminated drums or containers arriving on the landfill site.

Environmental pollution control measures (PCM)

<table>
<thead>
<tr>
<th>PCM risk score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fencing of landfill LOW 3</td>
<td>Improves containment of waste to landfill site</td>
<td>Weekly</td>
</tr>
</tbody>
</table>
### Domain 9: Non-Mineral Waste Facility (Landfill and Recycling Site)

#### Environment Monitoring

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ground- and surface water quality</td>
<td>To be confirmed upon suitable landfill location selection</td>
<td>To detect contamination from landfill site</td>
</tr>
</tbody>
</table>

#### AIR Quality

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Depositional dust</td>
<td>To be confirmed upon suitable landfill location selection</td>
<td>Air quality from the landfill</td>
</tr>
</tbody>
</table>

#### Environmental Reporting

- Domain manager to report to appointed ECO (monthly)
  - Volumes of waste sent to landfill,
  - Volumes of recycled materials.

- Appointed ECO to report to domain manager (monthly)
  - Results from water quality monitoring relating to potential landfill contamination,
  - Results from air quality monitoring relating to the landfill.

#### Environmental Inspection/s

<table>
<thead>
<tr>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill operator supervisor to inspect the facility</td>
<td>Inspection by domain manager</td>
<td>Appointed ECO and domain manager to complete</td>
<td>Bi-annual compliance audit</td>
</tr>
</tbody>
</table>

#### Supporting Documents

- Area inspection form
- Domain sign off Appendix B
DOMAIN 10 – FUEL DEPOT

AfriTin will be constructing a fuel depot on site, which will supply fuel for all activities on site as required.

This domain schedule includes all infrastructure and activities within the operational control of the domain outlined and mapped below:

- Fuel storage.

Figure 16: Domain map - Fuel depot
Table 13 - Domain 11: Fuel depot domain schedule

<table>
<thead>
<tr>
<th>Environmental risk of domain</th>
<th>Consequence</th>
<th>Likelihood</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Catastrophic (5)</td>
<td>Rare (1)</td>
<td>High 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain manager</th>
<th>MINING MANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statutory requirements</td>
<td>Permit / Permit Name</td>
</tr>
<tr>
<td>Water</td>
<td>A. Nil</td>
</tr>
<tr>
<td>Biodiversity</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td>Potential issues or impacts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Targets</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To minimise the effects the above-mentioned impacts may have on the environment and community, the domain manager will ensure the following measures are implemented:

- Fencing off fuel depot to avoid unauthorised entrance,
- All hydrocarbons must be stored in a bund at all times,
- The bund needs to hold 110% of the largest unit stored in the bund,
- Small bunded containments need to be sheltered from the rain,
- Storage areas require adequate ventilation,
- Storage area to be kept clean and tidy and free of combustibles,
- Equipment at the depot must be kept in a good state,
- In the event of a spill, hazardous material may be generated. This material must be disposed in a suitable manner.
- Leak proof drums for the disposal of oils and grease must be placed at a suitable location where such hazardous material can likely be generated,
- Ensure equipment that is clearing vegetation is free of weeds and seeds prior to clearing vegetation,
- Any leakages and spills must be reported to the domain manager.

**Fuel deliveries and dispensing**

- Do not leave area unattended when refueling,
- Turn off all vehicles while refueling,
- No smoking should be allowed in the fuel depot area especially during fuel handling.

**Tank, pump and pipelines**

- Any suspected leaks and spills should be reported to the domain manager,
- Any leaks from tanks or pipelines must be checked and attended to immediately, the leak should be isolated, and the general area should be treated with an absorbing agent immediately.

**Fire prevention and control**

- Ensure fire extinguishers are kept in close proximity and attended to regularly,
- Training should be provided in the use of the appropriate firefighting equipment,
- Smoking should be prohibited in the vicinity of flammable substances.

**Environmental pollution control measures (PCM)**

<table>
<thead>
<tr>
<th>PCM Risk Score</th>
<th>Function and performance</th>
<th>Maintenance frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency response plan</td>
<td>To set out guidelines for emergency response</td>
<td>Nil</td>
</tr>
</tbody>
</table>

Low 3
### Domain 11 – Fuel Depot

#### Biodiversity

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Name</th>
<th>Monitoring purpose</th>
<th>Frequency</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual</td>
<td></td>
<td>Inspect tanks for leakages and any breach of containment within this domain.</td>
<td>Daily</td>
<td>NA</td>
</tr>
</tbody>
</table>

#### Environmental Monitoring

<table>
<thead>
<tr>
<th>Environmental reporting</th>
<th>Domain manager to report to appointed ECO (monthly)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>– Nil</td>
</tr>
<tr>
<td></td>
<td>Appointed ECO to report to domain manager (monthly)</td>
</tr>
<tr>
<td></td>
<td>– Nil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental inspection/s</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To be completed by the shift supervisor</td>
<td>Inspection by domain manager</td>
<td>To be completed with the appointed ECO</td>
<td>6 monthly</td>
</tr>
</tbody>
</table>

| Supporting documents       | Land clearing permit Appendix G,                   |
|                           | Area inspection form, and                          |
|                           | Domain sign off Appendix B.                        |

#### Environment Emergency and Response Contacts

4.6. **Environment Emergency and Response Contacts**

The appointed ECO will be the primary contact person in the event of an environmental emergency. The appointed ECO has the authority and independence to request reasonable steps to be taken to avoid or to minimise unintended or adverse environmental impacts. If preventative steps appear to be ineffective the officer can ceased immediately the process, should an adverse environmental impact be anticipated.

Contact numbers of the emergency services are provided in Table 14.

**Table 14 - Emergency Services contact telephone numbers**

<table>
<thead>
<tr>
<th>AMBULANCE (Usakos)</th>
<th>POLICE (Uis)</th>
<th>FIRE BRIGADE (Usakos)</th>
<th>CLINIC (Uis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+264 (64) 53-0023</td>
<td>+264 (67) 1-0111</td>
<td>+264 (64) 53-0023</td>
<td>+264 (67) 50-4011</td>
</tr>
</tbody>
</table>

For large-scale spills and other significant environmental incidents, the fire services shall be contacted as required and the MET office be informed of the incident (telephone +264 61 284 2111). All correspondence with MET should be undertaken by the appointed ECO.

All environmental incidents, regardless of their size or significance, should be recorded and reported to either the appointed ECO or the Mine Manager.
## APPENDIX A – ENVIRONMENTAL MONITORING PROGRAMME AND TRIGGER VALUES BASED ON NAMIBIAN STANDARDS

### TABLE 15 - UIS TIN MINE MONITORING PLAN

<table>
<thead>
<tr>
<th>TYPE</th>
<th>RATIONALE</th>
<th>MONITORING AREA / SITE DESCRIPTION / DETAILS</th>
<th>FREQUENCY</th>
<th>PHASE (CONSTRUCTION, OPERATIONS, DECOMMISSIONING, OR ALL)</th>
<th>PARAMETERS</th>
<th>QUALITY CONTROL POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air quality - Dust fallout collection</td>
<td>Potential impacts on air quality can arise from mine development and operations. Air quality monitoring is done to monitor the potential impacts on surrounding communities. Potential to generate dust during access track development, blasting and use of haul roads.</td>
<td>Sites surrounding the mine – in line with predominant wind direction. The co-ordinates for the selected sites are: <strong>AQ 01</strong> (21°13'44&quot;S 14°52'57&quot;E) <strong>AQ 02</strong> (21°14'10&quot;S 14°53'8&quot;E) <strong>AQ 03</strong> (21°12'54&quot;S 14°52'20E) <strong>AQ 04</strong> (21°13'24&quot;S 14°52'11&quot;E) <strong>AQ 05</strong> (21°13&quot;32&quot;S 14°53'13E)</td>
<td>Prior to mine operations to determine the baseline air quality - Monthly At the onset of mining operations – Five (5) samplers exchanged monthly for 12 months</td>
<td>All</td>
<td>Total Suspended Particulates (TSP)</td>
<td>Yes</td>
</tr>
<tr>
<td>Air quality - Passive sampling</td>
<td>Equipment used during operations generates SO₂</td>
<td>The co-ordinates for the selected sites are: Five samplers; cartridges are exchanged every</td>
<td>Operations</td>
<td>Sulphur Dioxide (SO₂)</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
Dust generating activities such as road construction, mining activities such as drilling and blasting, excavation and land clearing, Wind erosion on tailings dumps.

The co-ordinates for the selected sites are:

**AQ 01**
(21'13'44''S 14'52'57''E)

**AQ 02**
(21'14'10''S 14'53'8''E)

**AQ 03**
(21'12'54''S 14'52'20''E)

**AQ 04**
(21'13'24''S 14'52'11''E)

**AQ 05**
(21'13''32''S 14'53'13''E)

Three-day cycle for one month

Operations

PM$_{10}$ and PM$_{2.5}$ Yes
<table>
<thead>
<tr>
<th><strong>Water quality</strong></th>
<th>To monitor the water quality (both surface and ground water). Monitoring prior to the onset of mining operations to determine baseline. Monitoring after mining commences to determine impacts of mining operations on water quality.</th>
<th>Existing open pits, the coordinates are as follows: <strong>Surface Water Sites</strong> <strong>South Pit - WQ 01</strong> (21°14'43.90&quot;S 14°52'45.33&quot;E) <strong>North Pit - WQ 02</strong> (21°13'7.30&quot;S 14°52'42.60&quot;E) <strong>GroundwaterSites</strong> To be determined / confirmed with groundwater specialist</th>
<th>Annually</th>
<th>All</th>
<th>pH, Metals</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noise</strong></td>
<td>Noise monitoring to determine impact of development on residents and surrounding areas</td>
<td>Specific locations selected to conduct noise monitoring: <strong>N 01</strong> (21°13′24″ S 14°52′11″E) <strong>N 02</strong> (21°12′47″ S 14°51′40″E) <strong>N 03</strong> (21°13′37.32″ S 14°53′40.93″E)</td>
<td>During the construction phase of the mine – Quarterly During the mine’s operational phase – Annually</td>
<td>Prior to construction commencing and during construction</td>
<td>dB</td>
<td>No</td>
</tr>
<tr>
<td><strong>Biodiversity</strong></td>
<td>An LFA transect was to monitor the baseline diversity</td>
<td><strong>LFA site</strong> (21°14′6″ S 14°53′7″E)</td>
<td>Inspected Monthly</td>
<td>Visual and inspections</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
THRESHOLDS FOR AIR QUALITY

The Namibian Atmospheric Pollution Prevention Ordinance, No. 11 of 1976, does not make provision for any standards for individuals and institutions to comply to with regards to fall out dust. The South African National Dust Control Regulations (NDCR) state the limits in Table 16 for dustfall rates in residential and non-residential areas.

**TABLE 16 - ALLOWABLE DUSTFALL LIMITS**

<table>
<thead>
<tr>
<th>RESTRICTION AREAS</th>
<th>DUSTFALL RATE (D) (mg/m²/day), 30-DAYS AVERAGE</th>
<th>PERMITTED FREQUENCY OF EXCEEDING DUST FALL RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential area</td>
<td>D &lt; 600</td>
<td>Two within a year, not sequential months</td>
</tr>
<tr>
<td>Non-residential area</td>
<td>D ≤ 1200</td>
<td>Two within a year, not sequential months</td>
</tr>
</tbody>
</table>

The most widely referenced international criteria are those published by the World Bank group (WB), World Health Organization (WHO), and the European Union (EU) as shown in **TABLE 17**. Additionally, South African legislation (the Air Quality Act No. 39 of 2004) stipulates air quality standards for the mining sector, which can be regarded as representative indicators to Namibia because of the similarity in social, environmental and economic features.

**TABLE 17 - THE STANDARDS / GUIDELINES DERIVED FROM THE WB, WHO, EU AND SOUTH AFRICAN STANDARDS**

<table>
<thead>
<tr>
<th>POLLUTANT</th>
<th>AVERAGING PERIOD</th>
<th>WHO GUIDELINES (µg/m³)</th>
<th>EU DIRECTIVES (µg/m³)</th>
<th>SOUTH AFRICA STANDARDS NAAQS (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter</td>
<td>1 year 24 hours</td>
<td>70 50 30 150 100 75 50</td>
<td>40 50</td>
<td>50 40 120 75</td>
</tr>
<tr>
<td>PM10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate matter</td>
<td>1 year 24 hours</td>
<td>35 25 10 75 50 37.5 25</td>
<td>25</td>
<td>25 20 15 65 40 25</td>
</tr>
<tr>
<td>PM10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphur dioxide (SO₂)</td>
<td>1 year 24 hours</td>
<td>- 125 50</td>
<td>20 125</td>
<td>50 125</td>
</tr>
</tbody>
</table>
THRESHOLDS FOR WATER QUALITY

It is required that all mine water in Namibia is adequately monitored and analysed to ensure compliance to regulatory standards, according to the obligatory industrial and domestic effluent discharge exemption permit under section 21(5) and 22(2) of the Water Act (Act 54 of 1956). Table 18 indicates the general standards for Article 21 Permits (effluents).

**TABLE 18 - GENERAL STANDARDS FOR WASTE/EFFLUENT WATER DISCHARGE**

<table>
<thead>
<tr>
<th>DETERMINANTS</th>
<th>MAXIMUM ALLOWABLE LEVELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>0,5 mg/l as As</td>
</tr>
<tr>
<td>Biological Oxygen Demand (BOD)</td>
<td>no value given</td>
</tr>
<tr>
<td>Boron</td>
<td>1,0 mg/l as B</td>
</tr>
<tr>
<td>Chemical Oxygen Demand (COD)</td>
<td>75 mg/l as O</td>
</tr>
<tr>
<td>Chlorine, residual</td>
<td>0,1 mg/l as Cl2</td>
</tr>
<tr>
<td>Chromium, hexavalent</td>
<td>50 µg/l as Cr (VI)</td>
</tr>
<tr>
<td>Chromium, total</td>
<td>500 µg/l as Cr</td>
</tr>
<tr>
<td>Copper</td>
<td>1,0 mg/l as Cu</td>
</tr>
<tr>
<td>Oxygen, dissolved (DO)</td>
<td>at least 75% saturation</td>
</tr>
<tr>
<td>Detergents, Surfactants, Tensides</td>
<td>0,5 mg/l as MBAS</td>
</tr>
<tr>
<td>Fats, Oil &amp; Grease (FOG)</td>
<td>2,5 mg/l (gravimetric method)</td>
</tr>
<tr>
<td>Fluoride</td>
<td>1,0 mg/l as F</td>
</tr>
<tr>
<td>Free &amp; Saline Ammonia</td>
<td>10 mg/l as N</td>
</tr>
<tr>
<td>Lead</td>
<td>1,0 mg/l as Pb</td>
</tr>
<tr>
<td>Oxygen, Absorbed (OA)</td>
<td>10 mg/l as O</td>
</tr>
<tr>
<td>pH</td>
<td>5,5 – 9,5</td>
</tr>
<tr>
<td>Phenolic Compounds</td>
<td>100 µg/l as phenol</td>
</tr>
<tr>
<td>Phosphate</td>
<td>1,0 mg/l as P</td>
</tr>
</tbody>
</table>
### Determinants and Maximum Allowable Levels

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Maximum Allowable Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium</td>
<td>not more than 90 mg/l Na more than influent</td>
</tr>
<tr>
<td>Sulphide</td>
<td>1,0 mg/l as S</td>
</tr>
<tr>
<td>Temperature</td>
<td>35°C</td>
</tr>
<tr>
<td>Total Dissolved Solids (TDS)</td>
<td>not more than 500 mg/l more than influent</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>25 mg/l</td>
</tr>
<tr>
<td>Typical faecal Coli.</td>
<td>no typical coli should be counted per 100 ml</td>
</tr>
<tr>
<td>Zinc</td>
<td>5,0 mg/l as Zn</td>
</tr>
</tbody>
</table>

### Threshold for Noise

The South African Noise level Criteria, SANS 10103: 2003 (SABS 0103) is frequently used in Namibia to determine the maximum allowable ambient noise levels **Table 19** which should not be exceeded.

**Table 19- Recommended Allowable Ambient Sound (Rating) Levels for Various Land Use Type Districts**

<table>
<thead>
<tr>
<th>Type of District</th>
<th>Maximum Allowable Ambient Noise Levels $L_{eq}$ (Hourly) in dB (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outdoors</td>
</tr>
<tr>
<td></td>
<td>Day–night ($L_{eq, dn}$)</td>
</tr>
<tr>
<td><strong>Residential Districts</strong></td>
<td></td>
</tr>
<tr>
<td>a) Rural Districts</td>
<td>45</td>
</tr>
<tr>
<td>b) Suburban districts (little road traffic)</td>
<td>50</td>
</tr>
<tr>
<td>c) Urban districts</td>
<td>55</td>
</tr>
<tr>
<td><strong>Non-Residential Districts</strong></td>
<td></td>
</tr>
<tr>
<td>d) Urban districts (some workshops, business premises and main roads)</td>
<td>60</td>
</tr>
<tr>
<td>e) Central business districts</td>
<td>65</td>
</tr>
<tr>
<td>f) Industrial districts</td>
<td>70</td>
</tr>
</tbody>
</table>

Note: Residential buildings such as dormitories, hotel accommodation, residences, etc. should only be allowed in non-residential districts on condition that the calculated anticipated indoor maximum equivalent continuous rating levels $L_{eq,1}$
## APPENDIX B – DOMAIN SIGN OFF AND CERTIFICATION

### DOMAIN MANAGER CERTIFICATION

I, _______________________________________________, _________________________________  
(Name of Domain Manager) (Position)

Hereby certify that I accept responsibly and accountability for the environmental schedule of:

**Domain:** _______________ nominated to this Position.  
(Domain Number)

I hereby confirm that I am a Suitability Qualified Experienced Person (SQEP) in order to take responsibility of the Domain and its environmental schedule. The following evidence is provided to demonstrate the standard of the SQEP (e.g. Years of experience, degree, certificates, CV, evidence of training courses etc.).

<table>
<thead>
<tr>
<th>Type / Name</th>
<th>Experience Years/Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signed: ___________________________________________ Date: ___ / ___ / _______  
(Domain Supervisor/Manager)

### AFRITIN MANAGEMENT TO COMPLETE

Certificate reviewed and approved by:

Name: ___________________________ Signed: _______________ Date: ___/___/____  
(Managing Director / General Manager)

Name: ___________________________ Signed: _______________ Date: ___/___/____  
(Environmental Officer)
APPENDIX C – GRIEVANCE SUBMISSION FORM

GRIEVANCE SUBMISSION FORM

Reference Number: ____________________________ Date: ________________

Submitted at: ____________________________
Windhoek Representative Office
Usis Office
Site Office

Please mark applicable box with an X:
I want to raise my grievance anonymously
My identity may only be disclosed with my consent

First or given name: ____________________________
Last name/Surname: ____________________________

How would you prefer to be contacted?
By Post
By Telephone/Mobile
By E-mail

Postal Address: ____________________________

Landline number: ____________________________ Mobile number: ____________________________

Preferred language for feedback communication: ____________________________

Description of Incident or Grievance (What happened? Where? Who was involved? What is the result?)

Please mark the appropriate block with an X:
It was a once-off incident Date: / / 
It happened more than once How many times? .......
It is an ongoing problem

What would you like AfriTin to do to resolve this problem?

Respondent Signature: ____________________________ AfriTin Representative Signature: ____________________________
APPENDIX D – DOMAIN CHECKLISTS
<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>EMP COMMITMENTS / REGULATORY OBLIGATIONS</th>
<th>RESPONSIBILITY (POSITION/NAME)</th>
<th>DOES THE ITEM COMPLY WITH THE REQUIRED STANDARD (YES/NO/NA)</th>
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<th>EVIDENCE (TIME AND INITIALS)</th>
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<tbody>
<tr>
<td>A</td>
<td>General Areas</td>
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<tr>
<td>1</td>
<td>Tracks are properly demarcated</td>
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<td>2</td>
<td>Roads are properly maintained</td>
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<tr>
<td>3</td>
<td>Suitable dust suppression measures are in place to prevent excessive amounts of dust from being created</td>
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<td>5</td>
<td>Management steps are in place to ensure heavy delivery vehicles are kept in good mechanical condition</td>
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<td>6</td>
<td>Complaints against noise by neighbours are recorded and addressed</td>
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<td>7</td>
<td>PPE provided to workers in the area where noise level exceed 85dB</td>
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<td>8</td>
<td>Speed limits adhered to and signage is appropriate</td>
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<tr>
<td>9</td>
<td>Progressive rehabilitation of unused tracks and roads</td>
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<tr>
<td>ITEM NUMBER</td>
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<tr>
<td>A</td>
<td>General Areas</td>
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<tr>
<td>1</td>
<td>Access is kept clear for all working areas</td>
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<tr>
<td>2</td>
<td>Dust suppression measures are adequate</td>
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<tr>
<td>3</td>
<td>Haulroads delineated to minimise grader workload</td>
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<td>4</td>
<td>Pit walls free from overhangs or loose material</td>
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<tr>
<td>5</td>
<td>Unwanted items stored away and PPE not being used put away</td>
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<tr>
<td>6</td>
<td>Safety inspector on site</td>
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<tr>
<td>7</td>
<td>Proper drainage installed and functioning</td>
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<td>8</td>
<td>Records of accident/injury reporting</td>
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<tr>
<td>9</td>
<td>Roadways around the mining area are in good condition (no potholes, water, etc.)</td>
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<td>10</td>
<td>The groundwater flow model is updated within one year after approval of the project (if approved) and every two years subsequently</td>
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<tr>
<td>11</td>
<td>Information regarding monitoring boreholes is shared with site managers</td>
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<tr>
<td>12</td>
<td>Feedback on the water level is reported</td>
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<tr>
<td>ITEM NUMBER</td>
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<tr>
<td>13</td>
<td>Pumps are free from hydrocarbon spills or leaks</td>
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<td></td>
<td><strong>B General Waste Management</strong></td>
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<tr>
<td>14</td>
<td>Appropriate re-use, recycling or recovery strategies in place for identified prescribed wastes</td>
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<tr>
<td>15</td>
<td>All prescribed industrial wastes generated by the site are identified</td>
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<tr>
<td>16</td>
<td>All waste, grease and hydrocarbons are effectively handled and removed from the site</td>
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</tbody>
</table>
### General Areas

1. Water flow is prevented from going into the main channel in the downstream part of the catchment area

2. Mineral waste is handled and managed in accordance to the OEMP

3. A robust monitoring system is in place to predict and prevent ARD (Acid Rock Drainage) from mineral waste

4. Potentially acid forming (PAF) waste is managed in accordance to ARD plan

5. Implement measures to reduce noise from the waste dump, if noise breaches (especially at night) from tipping or dumping activities is detected by monitoring or community feedback

6. Appropriate stormwater diversion away from pits and waste dumps

7. Operational waste dump design aligns with the closure plan

8. All haulroads are in good condition with no or minimal damage

9. Dust supression measures are in place

10. Safety or hazard signs are in place
**A General Areas**

1. Process spillages are appropriately cleaned-up and within a reasonable timeframe (maximum 48 hours)
2. Spillages at conveyor transfer points are regularly cleaned
3. Process chemicals and process storage tanks are adequately bunded
4. Dust control measures are used to minimise dust emissions from process plant and the surrounding area
5. Process water and chemical containers are clearly labelled
6. Equipment, material and consumables are neatly stored
7. Is there movement of soil, fill or sand on the site and if so, where is it coming from or going to

**B Waste Management**

8. Appropriate re-use, recycling or recovery, and waste removal strategies in place for identified prescribed wastes
9. Waste effectively segregated
10. Waste grease and hydrocarbons being effectively handled and removed from the site

**C General Housekeeping**
<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>EMP COMMITMENTS / REGULATORY OBLIGATIONS</th>
<th>RESPONSIBILITY (POSITION/NAME)</th>
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<th>EVIDENCE (TIME AND INITIALS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>General housekeeping at an acceptable standard</td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>Adequate waste bins present and emptied regularly</td>
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<td></td>
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<tr>
<td>13</td>
<td>Unwanted items stored away and all PPE not being used is put away</td>
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<tr>
<td>14</td>
<td>Floor free from built-up oil, rubbish and rags</td>
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<td>D</td>
<td>Personal Protective Equipment</td>
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<tr>
<td>15</td>
<td>Safety glasses being worn at the time of the inspection (by all personnel)</td>
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<td>16</td>
<td>Hearing protection being worn when required</td>
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<tr>
<td>17</td>
<td>Condition of the clothing and footwear in good order (long sleeves, good footwear)</td>
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<td>18</td>
<td>Gloves being worn when manual handling is taking place</td>
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<td>19</td>
<td>Hard hats worn at all times</td>
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<tr>
<td>E</td>
<td>Emergency Management</td>
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<tr>
<td>20</td>
<td>Potential emergency situations that could lead to a spill, and/or soil contamination have been identified, assessed and documented</td>
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<td>21</td>
<td>An emergency plan/procedure has been documented that covers each type of identified emergency situation (incl. fire prevention and control plan)</td>
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<tr>
<td>22</td>
<td>Site developed with capabilities and resources adequate to respond to potential emergency situations (reviewed and considered in the response procedures)</td>
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<tr>
<td>23</td>
<td>Key external emergency contacts are contained within the procedures (MET, ambulance, fire, police, MME)</td>
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<td>24</td>
<td>Staff trained on emergency procedures for process waste spills</td>
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<td>25</td>
<td>Evidence provided of training for spills as mentioned above</td>
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<tr>
<td>26</td>
<td>Emergency location is clearly signposted in the area</td>
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<tr>
<td>27</td>
<td>Location of water source for processing is known</td>
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<tr>
<td>28</td>
<td>Pumps and pipelines are in place to pump solutions from the bunds back into the process</td>
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<tr>
<td>29</td>
<td>Maintain and implement an emergency procedure for the containment and clean-up of process solutions if bunds are breached and treatment of contaminated areas</td>
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<tr>
<td>F</td>
<td>Exits and Egress</td>
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<td>30</td>
<td>Exits and egress free from obstruction</td>
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<td>31</td>
<td>Exits and egress adequately illuminated in case of an emergency</td>
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<td>G</td>
<td>Lighting</td>
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<tr>
<td>32</td>
<td>Work areas adequately illuminated to safely perform the tasks</td>
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<tr>
<td>33</td>
<td>Light fixtures clean and in good condition</td>
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<tr>
<td>H</td>
<td>First Aid Stations</td>
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<tr>
<td>34</td>
<td>First aid station easily accessible</td>
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<tr>
<td>35</td>
<td>Adequate materials and equipment available in first aid kit</td>
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<tr>
<td>36</td>
<td>Material in the first box still in the use by date</td>
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<tr>
<td>37</td>
<td>Correct signage present, clean and readable</td>
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<tr>
<td>I</td>
<td>Eye Wash Stations</td>
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<tr>
<td>ITEM NUMBER</td>
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<tr>
<td>38</td>
<td>Eye wash baths in areas where chemicals are used</td>
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<tr>
<td>39</td>
<td>Water flush system works correctly and at a comfortable temperature</td>
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<td>40</td>
<td>Proper signs and instructions in place</td>
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<td>J</td>
<td>Reagent Storage Area</td>
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<tr>
<td>41</td>
<td>The area is free from built up rubbish and all drums are stored neatly</td>
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<tr>
<td>42</td>
<td>Adequate signage present to warn of any danger</td>
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<tr>
<td>43</td>
<td>Fire extinguisher present, charged and tagged</td>
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<tr>
<td>44</td>
<td>Material Safety Data Sheets (MSDS) present or a notice identifying the location of the MSDS file</td>
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</tbody>
</table>
A site specific rehab plan is available and implemented

Rehabilitation plan is monitored for effectiveness / success

The waste rock piles and tailings are aligned with the rehabilitation plan

Visual impacts of the processing plant, waste rock piles and tailings will generally be limited by a strategy of concurrent rehabilitation over the life of mine

The areas of the old road which will not be utilised for the mine need to be ripped and rehabilitated

Rehabilitated areas around linear infrastructure after installing is such that they minimise habitat fragmentation, allowing populations to be connected across them

Rehabilitation of all the faces of the waste rock piles and tailings to grass / shrub and some trees;
Angle of the slopes is reduced if not suitable for rehabilitation;
There will be continuous rehabilitation of the waste rock dumps’ walls as they are raised

Site free from erosion

Evidence of vegetation growth

A mixed medium is used for rehab area

The slope angles are less than 18 degrees

Rehabilitation in accordance with the OEMP plan
### Planning and Management

1. Rehabilitation management plan available

2. Effectiveness / successful monitoring of indicators for rehabilitation

3. Area of the old road which will not be utilised for the mine needs to be ripped and rehabilitated

4. Rehabilitate areas around linear infrastructure after installing it such that they minimise habitat fragmentation, allowing populations to be connected across them

5. Rehabilitation of all the faces of the waste rock piles and tailings to vegetated surface

6. Rehabilitation progress is aligned with mining operations

7. Availability of inspection forms and spill prevention and management plan

### Soil and Water Management
<table>
<thead>
<tr>
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<td>Personal Protective Equipment</td>
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<tr>
<td>1</td>
<td>Safety glasses worn at the time of the inspection (by all personnel)</td>
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<td>2</td>
<td>Hearing protection worn when required (rattle gun, grinder, etc.)</td>
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<tr>
<td>3</td>
<td>Condition of the clothing and footwear in good order (long trousers, long sleeves, safety boots)</td>
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<td>4</td>
<td>Gloves worn when manual handling is taking place (handling steel, etc.)</td>
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<tr>
<td>5</td>
<td>Hard hats worn at all times</td>
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<tr>
<td>B</td>
<td>Storage Areas</td>
<td></td>
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<tr>
<td>5</td>
<td>Aisle ways and entrances kept clear at all times (no slip or trip hazards)</td>
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<td>6</td>
<td>Stored items are stacked neatly on shelves to prevent congestion of the area</td>
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<tr>
<td>C</td>
<td>General Housekeeping</td>
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<tr>
<td>7</td>
<td>Waste bins present and emptied regularly</td>
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<tr>
<td>8</td>
<td>Unwanted items stored away and gear not being used put away</td>
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<td>9</td>
<td>Floors in the workshop area are free from oil and slip hazards</td>
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<td>10</td>
<td>Roadways outside the workshop are in good order</td>
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<td>D</td>
<td>Exits and Egress</td>
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<td>11</td>
<td>Exits and egress free from obstruction</td>
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<td>Exits and egress adequately illuminated in case of an emergency</td>
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<td>E</td>
<td>Lighting</td>
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<td>Work areas adequately illuminated to safely perform the tasks</td>
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<td>14</td>
<td>Light fixtures clean and in good order</td>
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<td>15</td>
<td>Light pollution prevented at night</td>
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<td>F</td>
<td>Oil Storage Area</td>
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<tr>
<td>16</td>
<td>Area free from built up rubbish and all drums stored neatly</td>
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<tr>
<td>17</td>
<td>Adequate signage present to warn of any danger (No Smoking)</td>
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<tr>
<td>18</td>
<td>Fire extinguisher present, charged and tagged</td>
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<tr>
<td>ITEM</td>
<td>EMP COMMITMENTS / REGULATORY OBLIGATIONS</td>
<td>RESPONSIBILITY (POSITION/NAME)</td>
<td>DOES THE ITEM COMPLY WITH THE REQUIRED STANDARD (YES/NO/NA)</td>
<td>ACTION TAKEN / CORRECTIVE ACTION REQUIRED</td>
<td>EVIDENCE (TIME AND INITIALS)</td>
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<tr>
<td>19</td>
<td>MSDS sheets present or a notice identifying the location of the MSDS file</td>
<td></td>
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<tr>
<td>20</td>
<td>Bund surrounding the oil storage area are capable of containing an oil spill</td>
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<tr>
<td>21</td>
<td>Tyre Handling Area</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>21a</td>
<td>Tyre handling area free from congestion and fire material</td>
<td></td>
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<tr>
<td>22</td>
<td>Site have an emergency response plan specifically related to tyre fire incidents</td>
<td></td>
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</tr>
<tr>
<td>23</td>
<td>Fuel and Chemical Storage Area</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>22a</td>
<td>The concrete floor is clean and free of cracks</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>23a</td>
<td>Bowser hoses are properly secured in keepers and delivery lines free of leaks</td>
<td></td>
<td></td>
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<td>24</td>
<td>The area is free of evidence of significant spills or staining outside the bund</td>
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<tr>
<td>25</td>
<td>Systems in place to prevent overfilling of the tanks</td>
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<tr>
<td>26</td>
<td>Bunded areas are able to contain at least 110% of the contents of the largest tank and at least 25 % of the total tank storage volume</td>
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<tr>
<td>27</td>
<td>Bunds designed such that leaks would be captured</td>
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<tr>
<td>28</td>
<td>Liquid recovery or drainage systems from bund are maintained and in good working order</td>
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<tr>
<td>29</td>
<td>Bunding integrity around storage areas is effective (i.e. sufficient capacity, integrity of grouting and impervious construction material – no cracks)</td>
<td></td>
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<td>30</td>
<td>All bund valves are in the closed position or locked and piping or hoses secure from potential exposure to mechanical or vehicle damage</td>
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<tr>
<td>31</td>
<td>Transfer lines, valves and flanges have secondary containment and are free of leaks, rust and deterioration</td>
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<td>32</td>
<td>The drums etc. containing the substances in good condition (i.e. no corrosion, leaks or damage)</td>
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<td>33</td>
<td>Oil absorbents available and in adequate stock</td>
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<td>34</td>
<td>Access steps over bund wall in good condition and not constructed with flammable material</td>
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<td>35</td>
<td>Ladders secured to bulk tanks for inspection purposes in good condition</td>
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<tr>
<td>36</td>
<td>Tanks are correctly labelled</td>
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<tr>
<td>37</td>
<td>The bunds/sumps and transfer points are free of hydrocarbons, litter and water and surrounding soil is free from hydrocarbon stains</td>
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<tr>
<td>38</td>
<td>External water drainage systems adequate and surface storm water diverted away from contaminated area</td>
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<tr>
<td>ITEM</td>
<td>EMP COMMITMENTS / REGULATORY OBLIGATIONS</td>
<td>RESPONSIBILITY (POSITION/NAMES)</td>
<td>DOES THE ITEM COMPLY WITH THE REQUIRED STANDARD (YES/NO/NA)</td>
<td>ACTION TAKEN / CORRECTIVE ACTION REQUIRED</td>
<td>EVIDENCE (TIME AND INITIALS)</td>
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<td>39</td>
<td>The emergency location must be clearly signposted in the workshop area</td>
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<td>40</td>
<td>The correct emergency instructions present at all phone and radio locations</td>
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<tr>
<td>41</td>
<td>Up to date phone list available at all phone locations</td>
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<tr>
<td>42</td>
<td>Fire hazard symbols on facilities containing hazardous substances</td>
<td></td>
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<tr>
<td>43</td>
<td>A worker can explain to you what the emergency phone number on site is</td>
<td></td>
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<tr>
<td>44</td>
<td>A worker can explain to you which extinguisher to use for what fire</td>
<td></td>
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<tr>
<td>45</td>
<td>A worker can tell you what they would do in an emergency (Fire, Evacuation, etc.)</td>
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<tr>
<td>46</td>
<td>The MSDS register is easily accessible and up to date</td>
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<tr>
<td>ITEM NUMBER</td>
<td>EMP COMMITMENTS / REGULATORY OBLIGATIONS</td>
<td>RESPONSIBILITY (POSITION/NAME)</td>
<td>DOES THE ITEM COMPLY WITH THE REQUIRED STANDARD (YES/NO/NA)</td>
<td>ACTION TAKEN / CORRECTIVE ACTION REQUIRED</td>
<td>EVIDENCE (TIME AND INITIALS)</td>
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<td>A</td>
<td>General Area</td>
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<tr>
<td>1</td>
<td>Minimum loss of vegetation around camp sites</td>
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<tr>
<td>2</td>
<td>No plastic used for accommodation</td>
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<tr>
<td>3</td>
<td>Shaded area available</td>
<td></td>
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<td>4</td>
<td>Noise kept at acceptable level</td>
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<td>5</td>
<td>Sewage system for bathrooms and kitchen is adequate</td>
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<tr>
<td>6</td>
<td>Enough toilets present and clean</td>
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<tr>
<td>7</td>
<td>Adequate waste management and recycling system in place</td>
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<tr>
<td>8</td>
<td>Good housekeeping in the camp</td>
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<tr>
<td>9</td>
<td>Surrounding area is clean</td>
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<td>10</td>
<td>Fence around the main camp is maintained</td>
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<tr>
<td>11</td>
<td>Fat trap is cleaned out monthly by approved contractor</td>
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<tr>
<td>12</td>
<td>No pets on-site</td>
<td></td>
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<tr>
<td>13</td>
<td>Contractors educated and aware of camp rules including poaching and fires</td>
<td></td>
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</tr>
<tr>
<td>ITEM NUMBER</td>
<td>EMP COMMITMENTS / REGULATORY OBLIGATIONS</td>
<td>RESPONSIBILITY (POSITION/NAME)</td>
<td>DOES THE ITEM COMPLY WITH THE REQUIRED STANDARD (YES/NO/NA)</td>
<td>ACTION TAKEN / CORRECTIVE ACTION REQUIRED</td>
<td>EVIDENCE (TIME AND INITIALS)</td>
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<tr>
<td>A</td>
<td>General Area</td>
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<tr>
<td>1</td>
<td>Vegetation clearing permit obtained through the environmental department prior to land clearing activities</td>
<td></td>
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<tr>
<td>2</td>
<td>Vegetation cleared and stockpiled for rehabilitation</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Quality control process are in place to prevent hazardous materials entering the landfill site</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Adequate training and awareness is in place for all operators to prevent contaminated drums or containers arriving on the landfill site</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>Volumes of waste sent to landfill recorded</td>
<td></td>
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<tr>
<td>6</td>
<td>Volumes of waste recycled recorded</td>
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<td></td>
</tr>
<tr>
<td>No.</td>
<td>EMP COMMITMENTS / REGULATORY OBLIGATIONS</td>
<td>RESPONSIBILITY (POSITION/NAME)</td>
<td>DOES THE ITEM COMPLY WITH THE REQUIRED STANDARD (YES/NO/NA)</td>
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</tr>
<tr>
<td>1</td>
<td>The area is free of evidence of spills or staining outside the bund</td>
<td></td>
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<tr>
<td>2</td>
<td>Systems in place to prevent overfilling of the tanks</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>All hazardous substances (including hydrocarbons) stored within bunded areas able to retain at least 110% of contents of largest tank and at least 25% of total tank storage volume</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>Bunds designed such that leaks would be captured</td>
<td></td>
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<tr>
<td>5</td>
<td>The bund is graded and adequately protected to permit liquid recovery, drainage systems maintained and in good working order</td>
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<tr>
<td>6</td>
<td>Bunding integrity around storage areas is effective (i.e. sufficient capacity, integrity of grouting and impervious construction material – no cracks)</td>
<td></td>
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<tr>
<td>7</td>
<td>All bund valves are in the closed position or locked and piping or hoses secure from potential exposure to mechanical or vehicle damage</td>
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<tr>
<td>8</td>
<td>Transfer lines, valves and flanges have secondary containment and are free of leaks, rust and deterioration</td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>The drums etc. containing the substances are in good condition (i.e. no corrosion, leaks or damage)</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>Oil absorbents available and in adequate stock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Access steps over bund wall in good condition and not constructed with flammable material</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>Ladders secured to bulk tanks for inspection purposes are in good condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Tanks are correctly labelled</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Adequate lighting for night time use</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>15</td>
<td>The bunds/sumps and transfer points are free of hydrocarbons, litter and water and the surrounding soil is free of hydrocarbon stains</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>External water drainage systems adequate and surface storm water diverted away from the contaminated area</td>
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</table>
APPENDIX E – WEED AND SEED CLEARANCE CERTIFICATE

SECTION 1 – PROJECT MANAGER TO COMPLETE (AT LEAST 2 DAYS PRIOR TO EQUIPMENT ARRIVING)

Project Manager or responsible person bringing equipment to site:

<table>
<thead>
<tr>
<th>Name:</th>
<th>Department:</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Site:</th>
<th>Equipment Arrival Date:</th>
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Details of the owner of the equipment:

<table>
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<tr>
<th>Equipment owner:</th>
<th>Company Name:</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Equipment type:</th>
<th>Equipment ID:</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Date Equipment was washed:</th>
<th>Inspected By:</th>
</tr>
</thead>
<tbody>
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<table>
<thead>
<tr>
<th>Where was the equipment last used:</th>
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</thead>
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SECTION 2 - ENVIRONMENTAL CONTROL OFFICER TO COMPLETE PRIOR TO ANY GROUND WORKS COMMENCING

<table>
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<tr>
<th>Inspection area</th>
<th>Requirements</th>
<th>Compliance</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Body works</td>
<td>Free of all soil and vegetation?</td>
<td></td>
</tr>
<tr>
<td>Bumpers</td>
<td>Hollow sections and attachment points free of dirt</td>
<td></td>
</tr>
<tr>
<td>Tyres</td>
<td>Free of all soil and vegetation</td>
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</tr>
<tr>
<td>Dual Wheels</td>
<td>Free of all soil and vegetation</td>
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<tr>
<td>Canopy</td>
<td>Free of all soil and vegetation</td>
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</tr>
<tr>
<td>Radiator</td>
<td>Free of all soil and vegetation – specifically look for seed heads</td>
<td></td>
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<tr>
<td>Interior</td>
<td>Free of soil and vegetation – specifically look for seed heads in upholstery and under mats</td>
<td></td>
</tr>
<tr>
<td>Storage compartments</td>
<td>Free of all soil and vegetation</td>
<td></td>
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<tr>
<td>Jack and tool kit</td>
<td>Check tool roll and spare wheel are clean</td>
<td></td>
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<tr>
<td>Racks and bull bars</td>
<td>Free of all soil and vegetation</td>
<td></td>
</tr>
<tr>
<td>Ropes/ Straps/ Cages</td>
<td>Free of all soil and vegetation? Carefully check Velcro and tensioning devices</td>
<td></td>
</tr>
<tr>
<td>Tracks</td>
<td>Carefully check tracks are clean of soil and vegetation</td>
<td></td>
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</table>
# APPENDIX F – ENVIRONMENTAL IMPROVEMENT PLAN

## HSE Improvement Plan

<table>
<thead>
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<th>Document Number:</th>
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<td>February 12, 2019</td>
</tr>
<tr>
<td>Revision:</td>
<td>1.0</td>
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### Department: Created By:  
Created By:  
C-Safe number:  

### Objective:  

#### Environmental Improvement Program

### Target:  
1.  
2.  

### Key Performance Indicator:  
1.  

### Target Date: Accountable Person: Signature:  

### Significant Risk Register Number/s:  

### Task | Target/KPI | Responsible Person | Completion Date | C-Safe No. | Signature |
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<td>10.</td>
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### Notes:  

Approval: _____________________________ Department Manager (signature over printed name)  

Date: _______________________________  

Approval: _____________________________ General Manager (signature over printed name)  

Date: _______________________________  

Uncontrolled if Printed: Printed on: 12 February 2019; Review 2 Years after issue date
APPENDIX G – LAND CLEARING PERMIT

SECTION 1 – PROJECT MANAGER TO COMPLETE

Submit to the Project Environmental Officer 7 DAYS PRIOR to ground disturbing works

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<th>Site:</th>
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<tr>
<td>Project Manager:</td>
<td>Department:</td>
</tr>
<tr>
<td>Commencement date:</td>
<td>Estimated completion date:</td>
</tr>
<tr>
<td>Size of area to clear:</td>
<td>Date of application:</td>
</tr>
<tr>
<td>Map (must be attached) ☐</td>
<td>Photos: Yes ☐ No ☐</td>
</tr>
<tr>
<td>Equipment to be Used:</td>
<td>Mapping Licence Number:</td>
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</tbody>
</table>

Purpose of clearing

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</tbody>
</table>

Map showing area to be cleared

<p>| |</p>
<table>
<thead>
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</table>
APPENDIX H – STANDARD OPERATING PROCEDURE – WATER QUALITY MONITORING
APPENDIX I – STANDARD OPERATING PROCEDURE – AIR QUALITY MONITORING
APPENDIX J – STANDARD OPERATING PROCEDURE – AMBIENT NOISE MONITORING
1.0 INTRODUCTION

The main objective of this procedure is to manage and contain the spill thereby minimizing adverse effects on the environment. The procedure is also intended to ensure the safety of site personnel and nearby community.

2.0 GENERAL PROCEDURES

If you recognize a hazardous spill:

- Move away from spill
- Alert others and restrict access to the spill area
- If the spill occurs indoor, close door and windows to control ventilation. Turn off fans, heaters, etc.
- Alert company specialists of situation.
- Do not attempt to contain material unless you are trained and equipped to do so
- Identify material only if this can be done safely
- Call emergency numbers
- Alert responding medical personnel (on site or outside of the site) if victim has been contaminated by toxic material.

3.0 SPECIFIC PROCEDURES

3.1 Hydrocarbon Spills

PROCEDURE:

- Supervisor will inspect and assess the spillage area.
- Supervisor will ensure all personnel near the area are notified of the spill occurrence and personnel involved in the leak clean up and repairs preparation have suitable protective clothing including. No special PPE is required but a dust mask is recommended.
- The source of the spill will be isolated to prevent the spill from becoming larger
- Spills should be cleaned up by means of absorption, which typically converts the liquid spill into a solid for easy clean up
- The spill material is then disposed – the disposal method is dependent on the extent and nature of the spill
- Report the spill to the Environmental Officer on site

3.2 Acid Spills

Acid spills should be neutralized first before being pumped to the tails hopper, as they can cause fumes if pumped directly to the tails hopper.
Personal Protective Equipment:

- Standard Site PPE
- Rubber gloves (full length)
- Mono-goggles/Face shield
- Yellow protective coat and pants (2x)
- Full length chemical apron (1x)
- Respirator (2x)

Procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Examine the size of the acid spill. If it is less than 50 liters then dilute with approximately 15 minutes of hosing before pumping to the tails hopper</td>
<td>Do not hose directly into the acid</td>
</tr>
<tr>
<td>2</td>
<td>If spill is outside of bunded area attempt to contain spill with earthen containment. If it is more than 50 liters, notify your supervisor immediately before proceeding. Sentry will be required.</td>
<td>An investigation into the cause of the spill will be required. Any spill outside a bunded area or the release of a hazardous gas must have an environmental incident report written up</td>
</tr>
<tr>
<td>3</td>
<td>Notify downwind personnel of spill and evacuate as necessary. Contact emergency number if necessary.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Call for an assistant to help you with the task of neutralizing the spill. You must have two people present at all times in case of any incidents occurring.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Put on the required PPE. A full-face respirator, pair of long gloves, yellow protective coat and pants, and full-length apron is required.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>With the use of the forklift, bring the pallet of soda ash (in the reagents shed) to the acid spill.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Estimate the size of the spill. Every 50L of acid will require a 25kg bag of soda ash to neutralize it.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The sentry must be wearing the required PPE as well and should stand back for the following steps (respirator can be hanging around your neck). A full-face respirator, pair of long gloves and yellow protective coat and pants is required for the sentry.</td>
<td>The reaction between the acid and the soda ash is violent and bubbling will occur, this is just carbon dioxide gas forming and is not harmful, however it will cause the solution to splash around so make sure all due care is taken when adding the two together</td>
</tr>
<tr>
<td>9</td>
<td>Carefully put the required amount of soda ash into an unaffected area. If this is not possible (i.e. the bund floor is totally covered in acid solution) carefully pour all of the required amount into a neat pile into a corner of the bund.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Using a hose slowly pour water onto the pile of soda ash and gently mix it into the acid solution. Be careful not to splash acid solution on to yourself or others.</td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Action</td>
<td></td>
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<tr>
<td>11</td>
<td>Once all of the soda ash has been mixed into the acid solution, more water can be added to ensure it has been diluted as much as possible</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Start the sump pump to dispose of the neutralized acid. Hose out the bund to remove all traces of acid and soda ash</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Clean the chemical aprons thoroughly with water and dry it before placing it back in the green plastic bag</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Dispose of the red rubber gloves and issue new ones from the store, place them in the green plastic bag</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Issue soda ash from the store to replace the once used. There must be 10 bags of soda ash available at all times from the reagent shed</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Notify your supervisor that you have disposed of the acid spill and assist with the investigation if required.</td>
<td></td>
</tr>
</tbody>
</table>

Incident report or environmental spill report must be submitted within 24 hours of incident.

Have the supervisor declare the area safe
TITLE AND APPROVAL PAGE

Project Name: Biannual Report for January – June 2017
Project Number: ECC-84-194-REP-46-D
Client Name: Uis Tin Mining Company (Pty) Ltd
Ministry Reference: N/A
Status of Report: Final submitted to the Government
Date of issue: May 2020
Review Period: N/A

Environmental Compliance Consultancy Contact Details:
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### INSTRUCTIONS:

1. An Environmental Report shall be submitted to the Ministry of Environment and Tourism (MET) by the following dates each year:
   - **January to June 2017** and from **July to December (biannually)**

2. This form shall be the minimum reporting format. Mineral Licence Holders are expected to attach a map of the area to this report. Mineral Licence Holders are welcome to attach any other information they like, such as copies of new agreements, letters of explanation, aerial photographs, or anything else of interest.

3. The map shall be used to indicate the following:
   - areas where activities have taken place,
   - roads or tracks made and/or used,
   - houses and other infrastructure erected,
   - excavations or other scars that have been rehabilitated,
   - Conflict areas, etc.....

4. It is recommended (but not compulsory) that Holders attach photographs to their report, which visually illustrate the activities described in their report.

5. Failure to submit an Environmental Report shall constitute a breach of the Environmental Contract, which could result in steps taken against the Holder.

6. All information contained in the Environmental Report shall be treated as confidential.

7. The Holder shall ensure that all the information recorded in the Environmental Report is, to their best knowledge, accurate and correct.

Completed Environmental Reports should be sent to:

**The Permanent Secretary**  
Ministry of Environment and Tourism Private Bag 13306  
Windhoek  
For Attention: Ms. S. Angula / Environmental Assessment Unit
HOLDER DETAILS AND REPORTING PERIOD

Name of Holder: Uis Tin Mining Company (Pty) Ltd

Address of Holder:
PO Box 30,
Uis,
Namibia

Telephone: +26481 124 7395

Name of person compiling report: Environmental Compliance Consultancy

Reference number(s) of Mining Claim area / block / license: ML 134

Geographical location of area / block / license: Uis, Erongo Region, (21°17′34.65″ S, 14°58′10.61″ E)

This report is for the period of: (tick the relevant box and fill in the year)

☑️ January – June 2017
☐ July – December 2017
☐ Other (please specify)

POLLUTION AND WASTE

Has all domestic refuse (e.g. household waste, bottles, tins, paper, plastic, etc.) been removed from the mining claim area? Due to the fact that there were no operations, this section is not applicable.

☐ Yes
☐ No

If “yes” above, specify the site where such refuse has been deposited:

How often is refuse removed to the site mentioned above? Due to the fact that there were no operations, this element is not applicable.

☐ every week
☐ every two weeks
☐ every three weeks
☐ once a month
☐ at irregular intervals

If refuse has not been removed, where has it been dumped? N/A
As far as litter is concerned, would you describe your mineral licence area as: **Due to the fact that there were no operations, this element is not applicable.**

- [ ] Very clean
- [ ] Reasonably clean
- [ ] Filthy

If your mineral licence area is littered with refuse, please indicate how you intend cleaning it up: N/A

Are toilets provided for all staff employed by the holder? **Due to the fact that there were no operations, this element is not applicable.**

- [ ] Yes
- [ ] No

If “yes” above, are they:

- [ ] Flush toilets
- [ ] Chemical Toilets
- [ ] Pit Latrines
- [ ] Other

If chemical toilets are used, how are old chemicals disposed of:

- [ ] Deposited in evaporation ponds
- [ ] Deposited in a municipal refuse dump
- [ ] Buried on site
- [ ] Other (specify)

### VEHICLES AND EARTHMOVING EQUIPMENT

Indicate the types and number of vehicles and earthmoving equipment used on site during the reporting period (tick box in front of the category of vehicles used and indicate how many are in use). **Due to the fact that there were no operations, this section is not applicable.**

- [ ] Pick-up trucks (“bakkies”), either 2x4 or 4x4
- [ ] Lorries / trucks between
- [ ] Lorries / trucks larger than
- [ ] Bulldozer of any size
ROADS AND TRACKS

In addition to ticking the following boxes, please draw roads/tracks made on an accompanying map in blue ink. Roads which have been rehabilitated (i.e. restored to their natural state) can be scratched out in red pen.

Have new roads or tracks been made during the reporting period? Yes ☐ No ☑

If “yes” above how long are these (in kilometres)?

If “yes” above are these still in use? Yes ☐ No ☑

Tracks used as access road as previous and firebreak by farm owner

If “no” above have any of these roads or tracks been rehabilitated? Yes ☐ No ☑ N/A

If “yes” above, how have you done such rehabilitation? Ripping ☐ Raking ☐ Sweeping ☐

Other (specify)

If road / track rehabilitation has taken place, how many kilometres of roads or tracks have been rehabilitated? No

TRENCHES OR PITS

If new trenches or pits were made in the site / area during the reporting period, please indicate these by ticking the appropriate boxes AND by means of illustrating them on the same map described above. New pits or trenches made, should be numbered and drawn as a CIRCLE in blue ink, while pits or trenches which were rehabilitated during the reporting period should be scratched out in RED ink.

Have new trenches or pits been excavated in your area during the reporting period? Yes ☐ No ☑

If “yes” above, what are their approximate sizes or dimensions? (in metres)

1. Trench / pit No.: Size / dimensions: length breath depth

Were any holes/trenches rehabilitated during this period of reporting? Yes ☐ (show on map) ☑ No ☐

INFRASTRUCTURAL DEVELOPMENT

Infrastructural Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.

Was any NEW infrastructure established during this period? Yes ☐ No ☑

If “yes” above, is this infrastructure: Permanent ☑
Were any holes drilled during this period? Yes ☒ No ☑

If “yes”, for which purpose were they drilled? Water
  Sampling N/A
  Explosives
  Other (specify)

**BOREHOLES, SAMPLE HOLES OR OTHER DRILLING**

*This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose*

**WATER**

Your estimated monthly water consumption during this period was: **Due to the fact that there were no operations, this section is not applicable.**

Water was obtained from:
  River
  Borehole
There were no operations, so this section is not applicable.

**PROTECTION OF FAUNA AND FLORA**

**Due to the fact that there were no operations, this section is not applicable.**

**Question:**

Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the mining claim site or area?  
Yes  [ ]  No  [x]  Unsure  [ ]

Were any plants (excluding grasses) picked, damaged or removed?  
Yes  [ ]  No  [x]  Unsure  [ ]

Was there any wood collecting in the area?  
Yes  [ ]  No  [x]  Unsure  [ ]

**RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC**

Were there any conflicts with neighbours, landowners, Government Officials or the public during this period?  
Yes  [ ]  No  [x]  
If “yes” above, what was the nature of these conflicts? (tick boxes to provide answers)

People entered the area without permission or prior arrangement
If conflicts arose, indicate how these were resolved? (tick boxes)

- Verbal agreement after discussions
- Written agreement by special contract
- Instructions to Holder staff to avoid conflicts
- Holder rectified its mistakes and undertook to avoid future wrongdoing.
- Court action or other third-party arbitration
- Other (specify)
- The conflicts remain unsolved

Any other comments or information:

N/A

I declare that the information provided in this Environmental Report is, to the best of my knowledge, accurate and correct.

[Signature]

May 2020

Holder

Date
UIS TIN MINING COMPANY (PTY) LTD

BI-ANNUAL REPORT (JULY – DECEMBER 2017)
TITLE AND APPROVAL PAGE

Project Name: Biannual Report for July – December 2017
Project Number: ECC-84-194-REP-47-D
Client Name: Uis Tin Mining Company (Pty) Ltd
Ministry Reference: N/A
Status of Report: Final submitted to Government
Date of issue: May 2020
Review Period: N/A

Environmental Compliance Consultancy Contact Details:
We welcome any enquiries regarding this document and its content please contact:

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**ENVIRONMENTAL REPORT (ER) (MINERAL LICENCE HOLDERS) (ML 134)**

**INSTRUCTIONS:**

1. An Environmental Report shall be submitted to the Ministry of Environment and Tourism (MET) by the following dates each year:

   January to June and from **July to December 2017** (biannually)

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   - houses and other infrastructure erected,
   - excavations or other scars that have been rehabilitated,
   - Conflict areas, etc.

4. It is recommended (but not compulsory) that Holders attach photographs to their report, which visually illustrate the activities described in their report.

5. Failure to submit an Environmental Report shall constitute a breach of the Environmental Contract, which could result in steps taken against the Holder.

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**The Permanent Secretary**  
Ministry of Environment and Tourism Private Bag 13306  
Windhoek  
For Attention: Ms. S. Angula / Environmental Assessment Unit
### HOLDER DETAILS AND REPORTING PERIOD

<table>
<thead>
<tr>
<th><strong>Name of Holder:</strong></th>
<th>Uis Tin Mining (Pty) Ltd</th>
</tr>
</thead>
</table>
| **Address of Holder:** | PO Box 30  
Uis  
Namibia |
| **Telephone:** | +26481 124 7395 |
| **Name of person compiling report:** | Environmental Compliance Consultancy |
| **Reference number(s) of Mining Claim area / block / license:** | ML 134 |
| **Geographical location of area / block / license:** | Uis, Erongo Region, (21°17'34.65" S, 14°58'10.61" E) |
| **This report is for the period of:** (tick the relevant box and fill in the year) |  
☑️ July – December 2017  
☐ Other (please specify) |

### POLLUTION AND WASTE

Has all domestic refuse (e.g. household waste, bottles, tins, paper, plastic, etc.) been removed from the mining claim area? **Due to the fact that there were no operations, this section is not applicable.**

| ☐ Yes  
☐ No |

If “yes” above, specify the site where such refuse has been deposited:

How often is refuse removed to the site mentioned above? **Due to the fact that there were no operations, this element is not applicable.**

| ☐ every week  
☐ every two weeks  
☐ every three weeks  
☐ once a month  
☐ at irregular intervals |

If refuse has not been removed, where has it been dumped? N/A
As far as litter is concerned, would you describe your mineral licence area as: Due to the fact that there were no operations, this element is not applicable.

- [ ] Very clean
- [ ] Reasonably clean
- [ ] Filthy

If your mineral licence area is littered with refuse, please indicate how you intend cleaning it up: N/A

Are toilets provided for all staff employed by the holder? Due to the fact that there were no operations, this element is not applicable.

- [ ] Yes
- [ ] No

If “yes” above, are they:

- [ ] Flush toilets
- [ ] Chemical Toilets
- [ ] Pit Latrines
- [ ] Other

If chemical toilets are used, how are old chemicals disposed of:

- [ ] Deposited in evaporation ponds
- [ ] Deposited in a municipal refuse dump
- [ ] Buried on site
- [ ] Other (specify)

VEHICLES AND EARTHMOVING EQUIPMENT

Indicate the types and number of vehicles and earthmoving equipment used on site during the reporting period (tick box in front of the category of vehicles used and indicate how many are in use).

Due to the fact that there were no operations, this section is not applicable.

- [ ] Pick-up trucks ("bakkies"), either 2x4 or 4x4
- [ ] Lorries / trucks between
- [ ] Lorries / trucks larger than
- [ ] Bulldozer of any size
ROADS AND TRACKS

In addition to ticking the following boxes, please draw roads/tracks made on an accompanying map in blue ink. Roads which have been rehabilitated (i.e. restored to their natural state) can be scratched out in red pen.

Have new roads or tracks been made during the reporting period? Yes ☐ No ☒
If “yes” above how long are these (in kilometres)?
If “yes” above are these still in use? ☐ Yes ☐ No
Tracks used as access road as previous and firebreak by farm owner
If “no” above have any of these roads or tracks been rehabilitated? Yes ☐ No ☐ N/A
If “yes” above, how have you done such rehabilitation? Ripping ☐ Raking ☐ Sweeping ☐
☐ Other (specify)
If road / track rehabilitation has taken place, how many kilometres of roads or tracks have been rehabilitated? No rehabilitation conducted during the reporting period

TRENCHES OR PITS

If new trenches or pits were made in the site / area during the reporting period, please indicate these by ticking the appropriate boxes AND by means of illustrating them on the same map described above. New pits or trenches made, should be numbered and drawn as a CIRCLE in blue ink, while pits or trenches which were rehabilitated during the reporting period should be scratched out in RED ink.

Have new trenches or pits been excavated in your area during the reporting period? Yes ☐ No ☒
If “yes” above, what are their approximate sizes or dimensions? (in metres)
1. Trench / pit No.: Size / dimensions: length breath depth
Were any holes/trenches rehabilitated during this period of reporting? Yes ☐ (show on map) No ☒

INFRASTRUCTURAL DEVELOPMENT

Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.

Was any NEW infrastructure established during this period? Yes ☐ No ☒
If “yes” above, is this infrastructure:
☐ Permanent
BOREHOLES, SAMPLE HOLES OR OTHER DRILLING

This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose.

Were any holes drilled during this period? Yes [ ] No [X]

If "yes", for which purpose were they drilled? Water

- Sampling N/A
- Explosives
- Other (specify)

WATER

Your estimated monthly water consumption during this period was: Due to the fact that there were no operations, this section is not applicable.

Water was obtained from:

- River
- Borehole
Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the mining claim site or area? Yes [ ] No [ ] Unsure [ ]

Were any plants (excluding grasses) picked, damaged or removed? Yes [ ] No [ ] Unsure [ ]

Was there any wood collecting in the area? Yes [ ] No [X] Unsure [ ]

Were there any accidents which caused a loss of water? Yes [ ] No [X]

If yes, please give details

**PROTECTION OF FAUNA AND FLORA**

Please answer the following questions by ticking the appropriate boxes

Question:
Were there any conflicts with neighbours, landowners, Government Officials or the public during this period? Yes [ ] No [X]

If “yes” above, what was the nature of these conflicts? (tick boxes to provide answers)

People entered the area without permission or prior arrangement

Complaints about reduced access to water or other resources

**RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC**
Complaints about danger posed to livestock or wildlife
Allegations about stock-theft or poaching
Complaints about vehicle or equipment movement on access roads / tracks
Complaints about litter or other types of pollution (e.g. Noise, dust, etc.)
Complaints about the activities / actions of Holder staff
Allegations that the Holder was not adhering to contracts / agreements
Allegations that the Holder damaged property or installations
Allegations that gates were left open or unlocked
Other (specify)

If conflicts arose, indicate how these were resolved? (tick boxes)

- Verbal agreement after discussions
- Written agreement by special contract
- Instructions to Holder staff to avoid conflicts
- Holder rectified its mistakes and undertook to avoid future wrongdoing.
- Court action or other third-party arbitration
- Other (specify)
- The conflicts remain unsolved

Any other comments or information:

N/A

I declare that the information provided in this Environmental Report is, to the best of my knowledge, accurate and correct.

May 2020

Holder
Date
UIS TIN MINING COMPANY (PTY) LTD
BI-ANNUAL REPORT (JANUARY – JUNE 2018)

MAY 2020

PO BOX 91193 Windhoek Namibia
Environmental Compliance Consultancy CC
CC/2013/11404
TITLE AND APPROVAL PAGE

Project Name: Biannual Report for January – June 2018
Project Number: ECC-84-194-REP-44-D
Client Name: Uis Tin Mining Company (Pty) Ltd,
Ministry Reference: N/A
Status of Report: Final submitted to the Government
Date of issue: May 2020
Review Period: N/A

Environmental Compliance Consultancy Contact Details:
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- January – June 2018
- July – December 2018
- Other (please specify)

POLLLUTION AND WASTE

Has all domestic refuse (e.g. household waste, bottles, tins, paper, plastic, etc.) been removed from the mining area?

- Yes
- No

If “yes” above, specify the site where such refuse has been deposited: Waste is deposited at the municipal landfill.

How often is refuse removed to the site mentioned above:

- every week
- every two weeks
- every three weeks
- once a month
- at irregular intervals

If refuse has not been removed, where has it been dumped?
As far as litter is concerned, would you describe your mineral licence area as:

- [x] Very clean
- [ ] Reasonably clean
- [ ] Filthy

If your mineral licence area is littered with refuse, please indicate how you intend cleaning it up:

Are toilets provided for all staff employed by the holder?

Due to the fact that there were no operations conducted, this element is not applicable.

- [ ] Yes
- [ ] No

If “yes” above, are they:

- [ ] Flush toilets
- [ ] Chemical Toilets
- [ ] Pit Latrines
- [ ] Other

If chemical toilets are used, how are old chemicals disposed of:

- [ ] Deposited in evaporation ponds
- [ ] Deposited in a municipal refuse dump
- [ ] Buried on site
- [ ] Other (specify)

VEHICLES AND EARTHMOVING EQUIPMENT

Indicate the types and number of vehicles and earthmoving equipment used on site during the reporting period (tick box in front of the category of vehicles used and indicate how many are in use).

- [ ] Pick-up trucks (“bakkies”), either 2x4 or 4x4
- [ ] Lorries / trucks between 5 – 10 tonnes
- [ ] Lorries / trucks larger than 10 tonnes
- [ ] Bulldozer of any size
- [ ] Road Grader of any size
- [ ] Front-end loader of any size
- [ ] Drilling machine of any type
- [ ] Other (specify) **1.2 Light Duty Vehicle was used during this reporting period.**
ROADS AND TRACKS

In addition to ticking the following boxes, please draw roads/tracks made on an accompanying map in blue ink. Roads which have been rehabilitated (i.e. restored to their natural state) can be scratched out in red pen.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have new roads or tracks been made during the reporting period?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>If “yes” above how long are these (in kilometres)?</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>If “yes” above are these still in use?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Tracks used as access road as previous and firebreak by farm owner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If “no” above have any of these roads or tracks been rehabilitated?</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>If “yes” above, how have you done such rehabilitation?</td>
<td>Ripping</td>
<td>Raking</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If road / track rehabilitation has taken place, how many kilometres of roads or tracks have been rehabilitated?</td>
<td>No rehabilitation was conducted during the reporting period.</td>
<td></td>
</tr>
</tbody>
</table>

TRENCHES OR PITS  If new trenches or pits were made in the site / area during the reporting period, please indicate these by ticking the appropriate boxes AND by means of illustrating them on the same map described above. New pits or trenches made, should be numbered and drawn as a CIRCLE in blue ink, while pits or trenches which were rehabilitated during the reporting period should be scratched out in RED ink.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have new trenches or pits been excavated in your area during the reporting period?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>If “yes” above, what are their approximate sizes or dimensions? (in metres)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trench / pit No.: Size / dimensions: length breath depth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were any holes/trenches rehabilitated during this period of reporting?</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

INFRASTRUCTURAL DEVELOPMENT  Infrastructural Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was any NEW infrastructure established during this period?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Due to the fact that there were no operations conducted, this element is not applicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If “yes” above, is this infrastructure:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temporary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Eight production water boreholes were drilled in June 2018.

<table>
<thead>
<tr>
<th>Were any holes drilled during this period? Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If &quot;yes&quot;, for which purpose were they drilled? Water</td>
<td>Depth</td>
</tr>
</tbody>
</table>

**BOREHOLES, SAMPLE HOLES OR OTHER DRILLING** This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose.
Your estimated monthly water consumption during this period was: **Due to the fact that there were no operations conducted, this element is not applicable.**

Water was obtained from:

- [ ] River
- [ ] Borehole
- [ ] Dam
- [ ] Water Affairs
- [ ] Reservoir/pond
- [ ] Other

Please estimate the percentage (%) of water used for the following activities during this period:
Due to the fact that there were no operations conducted, this element is not applicable.

Human consumption
Toilets
Washing vehicles & equipment
Dust control
Building activities
Gardens
Recreation
Other (specify)

Were there any accidents which caused a loss of water? Yes ☐ No ☒ X
If yes, please give details. N/A

PROTECTION OF FAUNA AND FLORA

Please answer the following questions by ticking the appropriate boxes. Due to the fact that there were no operations conducted, this element is not applicable.

Question:
Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the mining claim site or area? Yes ☐ No ☒ X Unsure ☐

Were any plants (excluding grasses) picked, damaged or removed? Yes ☐ No ☒ X Unsure ☐

Was there any wood collecting in the area? Yes ☐ No ☒ X Unsure ☐

RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC

Were there any conflicts with neighbours, landowners, Government Officials or the public during this period? Yes ☐ No ☒ X

If “yes” above, what was the nature of these conflicts? (tick boxes to provide answers)

People entered the area without permission or prior arrangement
☐ Complaints about reduced access to water or other resources
☐ Complaints about danger posed to livestock or wildlife
☐ Allegations about stock-theft or poaching
If conflicts arose, indicate how these were resolved? (tick boxes)

- [ ] No conflicts during the reporting period.
- [ ] Verbal agreement after discussions
- [ ] Written agreement by special contract
- [ ] Instructions to Holder staff to avoid conflicts
- [ ] Holder rectified its mistakes and undertook to avoid future wrongdoing
- [ ] Court action or other third-party arbitration
- [ ] Other (specify)
- [ ] The conflicts remain unsolved

Any other comments or information:

I declare that the information provided in this Environmental Report is, to the best of my knowledge, accurate and correct.

Holder

Date

May 2020
# TITLE AND APPROVAL PAGE

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Biannual Report for July - December 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Number</td>
<td>ECC-84-194-REP-45-D</td>
</tr>
<tr>
<td>Client Name:</td>
<td>Uis Tin Mining Company (Pty) Ltd</td>
</tr>
<tr>
<td>Ministry Reference:</td>
<td>N/A</td>
</tr>
<tr>
<td>Status of Report:</td>
<td>Final submitted to the Government</td>
</tr>
<tr>
<td>Date of issue:</td>
<td>May 2020</td>
</tr>
<tr>
<td>Review Period</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Environmental Compliance Consultancy Contact Details:**
We welcome any enquiries regarding this document and its content please contact:

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Director & Principal Environmental Practitioner  
Tel: +264 81 6697608  
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# INSTRUCTIONS:

1. An Environmental Report shall be submitted to the Ministry of Environment and Tourism (MET) by the following dates each year:
   - January to June and from **July to December 2018** (biannually)

2. This form shall be the minimum reporting format. Mineral Licence Holders are expected to attach a map of the area to this report. Mineral Licence Holders are welcome to attach any other information they like, such as copies of new agreements, letters of explanation, aerial photographs, or anything else of interest.

3. The map shall be used to indicate the following:
   - areas where activities have taken place,
   - roads or tracks made and/or used,
   - houses and other infrastructure erected,
   - excavations or other scars that have been rehabilitated,
   - Conflict areas, etc.

4. It is recommended (but not compulsory) that Holders attach photographs to their report, which visually illustrate the activities described in their report.

5. Failure to submit an Environmental Report shall constitute a breach of the Environmental Contract, which could result in steps taken against the Holder.

6. All information contained in the Environmental Report shall be treated as confidential.

7. The Holder shall ensure that all the information recorded in the Environmental Report is, to their best knowledge, accurate and correct.

Completed Environmental Reports should be sent to:

**The Permanent Secretary**  
Ministry of Environment and Tourism Private Bag 13306  
Windhoek  
For Attention: Ms. S. Angula / Environmental Assessment Unit
# HOLDER DETAILS AND REPORTING PERIOD

**Name of Holder:** Uis Tin Mining Company (Pty) Ltd

**Address of Holder:**
PO Box 30
Uis
Namibia

**Telephone:** +264 81 124 7395

**Name of person compiling report:** Environmental Compliance Consultancy

**Reference number(s) of Mining Claim area / block / license:** ML 134

**Geographical location of area / block / license:** Uis, Erongo Region, (21 17’34.65” S, 14 58’10.61” E)

This report is for the period of: (tick the relevant box and fill in the year)

- [ ] January – June 2018
- [x] July – December 2018
- [ ] Other (please specify)

# POLLUTION AND WASTE

Has all domestic refuse (e.g. Household waste, bottles, tins, paper, plastic, etc.) been removed from the mining claim area? **Due to the fact that there were no operations, this section is not applicable.**

- [ ] Yes
- [ ] No

If “yes” above, specify the site where such refuse has been deposited:

How often is refuse removed to the site mentioned above:

- [ ] every week
- [ ] every two weeks
- [ ] every three weeks
- [ ] once a month
- [ ] at irregular intervals

If refuse has not been removed, where has it been dumped?
As far as litter is concerned, would you describe your mineral licence area as:

- [ ] Very clean
- [ ] Reasonably clean
- [ ] Filthy

If your mineral licence area is littered with refuse, please indicate how you intend cleaning it up: N/A

Are toilets provided for all staff employed by the holder?

Due to the fact that there were no operations, this element is not applicable.

- [ ] Yes
- [ ] No

If “yes” above, are they:

- [ ] Flush toilets
- [ ] Chemical Toilets
- [ ] Pit Latrines
- [ ] Other

If chemical toilets are used, how are old chemicals disposed of:

- [ ] Deposited in evaporation ponds
- [ ] Deposited in a municipal refuse dump
- [ ] Buried on site
- [ ] Other (specify)

VEHICLES AND EARTHMOVING EQUIPMENT

Indicate the types and number of vehicles and earthmoving equipment used on site during the reporting period (tick box in front of the category of vehicles used and indicate how many are in use).

- [ ] Pick-up trucks (“bakkies”), either 2x4 or 4x4
- [ ] Lorries / trucks between
- [ ] Lorries / trucks larger than
- [ ] Bulldozer of any size
- [ ] Road Grader of any size
- [ ] Front-end loader of any size
- [ ] Drilling machine of any type
ROADS AND TRACKS

In addition to ticking the following boxes, please draw roads/tracks made on an accompanying map in blue ink. Roads which have been rehabilitated (i.e. restored to their natural state) can be scratched out in red pen.

Have new roads or tracks been made during the reporting period? Yes ☐  No ☒

If “yes” above how long are these (in kilometres)? ☐

If “yes” above are these still in use? Yes ☐  No ☒

Tracks used as access road as previous and firebreak by farm owner

If “no” above have any of these roads or tracks been rehabilitated? Yes ☐  No ☒

If “yes” above how have you done such rehabilitation? Ripping ☐  Raking ☒

Sweeping ☐

If road / track rehabilitation has taken place, how many kilometres of roads or tracks have been rehabilitated? No roads/ tracks were rehabilitated during the reporting period.

TRENCHES OR PITS

If new trenches or pits were made in the site / area during the reporting period, please indicate these by ticking the appropriate boxes AND by means of illustrating them on the same map described above. New pits or trenches made, should be numbered and drawn as a CIRCLE in blue ink, while pits or trenches which were rehabilitated during the reporting period should be scratched out in RED ink.

Have new trenches or pits been excavated in your area during the reporting period? Yes ☐  No ☒

If “yes” above, what are their approximate sizes or dimensions? (in metres)

Trench / pit No.: Size / dimensions: length breath depth

Were any holes/trenches rehabilitated during this period of reporting? Yes ☐  (show on map)  No ☒

INFRASTRUCTURAL DEVELOPMENT

Infrastructural Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.

Was any NEW infrastructure established during this period? Yes ☐  No ☒

If “yes” above, is this infrastructure:

Permanent ☐

Temporary ☐
Your estimated monthly water consumption during this period was: **Due to the fact that there were no operations conducted, this section is not applicable.**

Water was obtained from:
- River
- Borehole
- Dam
- Water Affairs
- Reservoir/pond

BOREHOLES, SAMPLE HOLES OR OTHER DRILLING

**This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose.**

Were any holes drilled during this period? Yes [X] No [ ]

If "yes", for which purpose were they drilled? Water [X] N/A

Sampling [X] Depth - max 250 metres Quantity [ ]

Explosives N/A

Other (specify) N/A
PROTECTION OF FAUNA AND FLORA

Please answer the following questions by ticking the appropriate boxes

Question:

Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the mining claim site or area?  Yes ☐ No ☒ Unsure ☐

Were any plants (excluding grasses) picked, damaged or removed? Yes ☐ No ☒ Unsure ☐

Was there any wood collecting in the area? Yes ☐ No ☒ Unsure ☐

RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC

Were there any conflicts with neighbours, landowners, Government Officials or the public during this period? Yes ☐ No ☒ Unsure ☐

If “yes” above, what was the nature of these conflicts? (tick boxes to provide answers)

☐ People entered the area without permission or prior arrangement
☐ Complaints about reduced access to water or other resources
☐ Complaints about danger posed to livestock or wildlife
☐ Allegations about stock-theft or poaching

Due to the fact that there were no operations, this element is not applicable
If conflicts arose, indicate how these were resolved? (tick boxes)

- Verbal agreement after discussions
- Written agreement by special contract
- Instructions to Holder staff to avoid conflicts
- Holder rectified its mistakes and undertook to avoid future wrongdoing
- Court action or other third-party arbitration
- Other (specify)
- The conflicts remain unsolved

Any other comments or information:

N/A

I declare that the information provided in this Environmental Report is, to the best of my knowledge, accurate and correct.

Signed: ____________________________

Holder

Date: May 2020
UIS TIN MINING COMPANY (PTY) LTD
BI-ANNUAL REPORT (JANUARY – JUNE 2019)

MAY 2020

PO BOX 91193 Windhoek Namibia
Environmental Compliance Consultancy CC
CC/2013/11404
TITLE AND APPROVAL PAGE

Project Name: Biannual Report for January – June 2019
Project Number: ECC-84-194-REP-42-D
Client Name: Uis Tin Mining Company (Pty) Ltd
Ministry Reference: N/A
Status of Report: Final submitted to the Government
Date of issue: May 2020
Review Period: N/A

Environmental Compliance Consultancy Contact Details:
We welcome any enquiries regarding this document and its content please contact:

Stephan Bezuidenhout
Director & Principal Environmental Practitioner
Tel: +264 81 6697608
Email: stephan@eccenvironmental.com
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www.eccenvironmental.com

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For Attention: Ms. S. Angula / Environmental Assessment Unit
HOLDER DETAILS AND REPORTING PERIOD

Name of Holder: Uis Tin Mining (Pty) Ltd

Address of Holder:
P O Box 30
Uis
Namibia

Telephone: +26481 124 7395

Name of person compiling report: Environmental Compliance Consultancy

Reference number(s) of Mining Claim area / block / license: ML 134

Geographical location of area / block / license: Uis, Erongo Region, (21 17’34.65” S, 14 58’10.61” E)

This report is for the period of: (tick the relevant box and fill in the year)

X January – June 2019

☐ July – December 2019

Other (please specify)

POLLUTION AND WASTE

Has all domestic refuse (e.g. household waste, bottles, tins, paper, plastic, etc.) been removed from the mining claim area?

X Yes

☐ No

If “yes” above, specify the site where such refuse has been deposited: Waste has been removed and deposited at the municipal landfill.

How often is refuse removed to the site mentioned above:

☐ every week

☐ every two weeks

☐ every three weeks

☐ once a month

X at irregular intervals

If refuse has not been removed, where has it been dumped? Waste is removed and deposited at the local municipal
As far as litter is concerned, would you describe your mineral licence area as:

- [ ] Very clean
- [X] Reasonably clean – Mineral licence area is reasonably clean. Some plastic bottles were observed onsite during the reporting period. However, waste bins were provided around the site.
- [ ] Filthy

If your mineral licence area is littered with refuse, please indicate how you intend cleaning it up: Bins and bags are provided. These will be regularly emptied.

---

FIGURE 1 – WASTE BINS PROVIDED ON THE MINING AREA

Are toilets provided for all staff employed by the holder?

- [X] Yes
- [ ] No
If “yes” above, are they:

- [ ] Flush toilets
- [ ] Chemical toilets
- [ ] Pit latrines
- [X] Other – Mobile toilets are provided (see Figure 2).

If chemical toilets are used, how are chemicals disposed of:

- [ ] Deposited in evaporation ponds
- [ ] Deposited in a municipal refuse dump
- [ ] Buried on site
- [ ] Other (specify)
### VEHICLES AND EARTHMOVING EQUIPMENT

Indicate the types and number of vehicles and earthmoving equipment used on site during the reporting period (tick box in front of the category of vehicles used and indicate how many are in use).

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick-up trucks (“bakkies”), either 2x4 or 4x4</td>
<td>☑️</td>
</tr>
<tr>
<td>Lorries / trucks between 5 – 10 tonnes</td>
<td>☑️</td>
</tr>
<tr>
<td>Lorries / trucks larger than 10 tonnes</td>
<td>☑️</td>
</tr>
<tr>
<td>Bulldozer of any size</td>
<td>☑️</td>
</tr>
<tr>
<td>Road Grader of any size</td>
<td>☑️</td>
</tr>
<tr>
<td>Front-end loader of any size</td>
<td>☑️</td>
</tr>
<tr>
<td>Drilling machine of any type</td>
<td>☑️</td>
</tr>
<tr>
<td>Other (specify) - Rental bakkies, 7 UTMC Light Duty Vehicle (LDVs) and over 10 mining equipment.</td>
<td>☑️</td>
</tr>
</tbody>
</table>

### ROADS AND TRACKS

In addition to ticking the following boxes, please draw roads/tracks made on an accompanying map in blue ink. Roads which have been rehabilitated (i.e. restored to their natural state) can be scratched out in red pen.

- **Have new roads or tracks been made during the reporting period?**
  - Yes ☐️
  - No ☑️
  - If “yes” above how long are these (in kilometres)? **No new roads or tracks have been created.**
  - If “yes” above are these still in use? ☑️ Yes ☐️ No

- Tracks used as access road as previous and firebreak by farm owner

- If “no” above have any of these roads or tracks been rehabilitated? ☐️ No

- If “yes” above, how have you done such rehabilitation? Ripping ☐️
  - Raking ☐️
  - Sweeping ☐️
  - Other (specify)

- If road / track rehabilitation has taken place, how many kilometres of roads or tracks have been rehabilitated?
  - **No rehabilitation has taken place during the reporting period.**

### TRENCHES OR PITS

If new trenches or pits were made in the site / area during the reporting period, please indicate these by ticking the appropriate boxes and by means of illustrating them on the same map described above. New pits or trenches made, should be numbered and drawn as a circle in blue ink, while pits or trenches which were rehabilitated during the reporting period should be scratched out in red ink.

- **Have new trenches or pits been excavated in your area during the reporting period?**
  - Yes ☑️
  - No ☐️
The mining pit has been expanded during the reporting period.

If “yes” above, what are their approximate sizes or dimensions?

Trench / pit No.: Size / dimensions: length breath depth

The pit was expanded to approximately 188 Km²

Were any holes/trenches rehabilitated during this period of reporting? Yes ☑️ (show on map) No ☑️

**INFRASTRUCTURAL DEVELOPMENT**

Infrastructural Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.

Was any NEW infrastructure established during this period? Yes ☑️ No ☑️

If “yes” above, is this infrastructure:

- Permanent
- Temporary
- ☑️ A combination

Describe infrastructure by ticking boxes:

- Offices
- Housing
- Sheds
- Prefab Structures
- Garages
- Storage Tanks
- ☑️ Cement slabs
- ☑️ Foundations
- ☑️ Other

The pit was expanded to approximately 188 Km²
BOREHOLES, SAMPLE HOLES OR OTHER DRILLING

This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose.

<table>
<thead>
<tr>
<th>Were any holes drilled during this period?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If “yes”, for which purpose were they drilled?</td>
<td>Water</td>
<td>Depth</td>
</tr>
<tr>
<td></td>
<td>Sampling</td>
<td>Depth</td>
</tr>
<tr>
<td></td>
<td>Explosives</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

WATER

Your estimated monthly water consumption during this period was: Approximately 5934m³ - sourced from well field 2 and old open pits.

Water was obtained from:
- River
- Borehole - Approximately 7m³/hr from boreholes is used
- Dam
- Water Affairs
- Reservoir/pond
Water is obtained from different sources, some water is collected from the pit lakes, some from the production boreholes and Namwater potable water.

Approximately 7 m³/hr of water is pumped from boreholes, 20 m³/hr from pits and, 0.04 m³/hr potable water from Namwater.

Please estimate the percentage (%) of water used for the following activities during this period:
PROTECTION OF FAUNA AND FLORA

Please answer the following questions by ticking the appropriate boxes

Question:

Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the mining claim site or area? Yes [ ] No [X] Unsure [ ]

Were any plants (excluding grasses) picked, damaged or removed? Yes [ ] No [X] Unsure [ ]

Was there any wood collecting in the area? Yes [ ] No [X] Unsure [ ]

RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC

Were there any conflicts with neighbours, landowners, Government Officials or the public during this period? Yes [ ] No [X]

If “yes” above, what was the nature of these conflicts? (tick boxes to provide answers)

- People entered the area without permission or prior arrangement
- Complaints about reduced access to water or other resources
- Complaints about danger posed to livestock or wildlife
- Allegations about stock-theft or poaching
- Complaints about vehicle or equipment movement on access roads / tracks
- Complaints about litter or other types of pollution (e.g. Noise, dust, etc.)
- Complaints about the activities / actions of Holder staff
- Allegations that the Holder was not adhering to contracts / agreements
- Allegations that the Holder damaged property or installations
- Allegations that gates were left open or unlocked

Other (specify) [ ]

Were there any accidents, which caused a loss of water? Yes [ ] No [ ] X

If yes, please give details. No accidents occurred during the reporting period.
If conflicts arose, indicate how these were resolved? (tick boxes)

- Verbal agreement after discussions
- Written agreement by special contract
- Instructions to Holder staff to avoid conflicts
- Holder rectified its mistakes and undertook to avoid future wrongdoing
- Court action or other third-party arbitration
- Other (specify)
- The conflicts remain unsolved

Any other comments or information:

Eight (8) dust monitoring stations were installed around the mine. This is done to monitor the impacts of mining activities on air quality. Results for depositional dust are reported in the monthly compliance reports.

FIGURE 7 – A SATELLITE IMAGE SHOWING THE LOCATION OF THE EIGHT DUST MONITORING STATIONS
I declare that the information provided in this Environmental Report is, to the best of my knowledge, accurate and correct.

May 2020

Holder

Date
UIS TIN MINING COMPANY (PTY) LTD

BI-ANNUAL REPORT (JULY - DECEMBER 2019)

AFRITIN MINING

© MAY 2020
TITILE AND APPROVAL PAGE

Project Name: Biannual Report for July - December 2019
Project Number: ECC-84-194-REP-43-D
Client Name: Uis Tin Mining Company Pty) Ltd
Ministry Reference: N/A
Status of Report: Final submitted to the Government
Date of issue: May 2020
Review Period: N/A

Environmental Compliance Consultancy Contact Details:
We welcome any enquiries regarding this document and its content please contact:

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Email: jessica@eccenvironmental.com  
www.eccenvironmental.com

Confidentiality
Environmental Compliance Consultancy Notice: This document is confidential. If you are not the intended recipient, you must not disclose or use the information contained in it. If you have received this document in error, please notify us immediately by return email and delete the document and any attachments. Any personal views or opinions expressed by the writer may not necessarily reflect the views or opinions of Environmental Compliance Consultancy.
INSTRUCTIONS:

1. An Environmental Report shall be submitted to the Ministry of Environment, Forestry and Tourism (MEFT) by the following dates each year:

   **January to June and from July to December 2019** (biannually)

2. This form shall be the minimum reporting format. Mineral Licence Holders are expected to attach a map of the area to this report. Mineral Licence Holders are welcome to attach any other information they like, such as copies of new agreements, letters of explanation, aerial photographs, or anything else of interest.

3. The map shall be used to indicate the following:
   - areas where activities have taken place,
   - roads or tracks made and/or used,
   - houses and other infrastructure erected,
   - excavations or other scars that have been rehabilitated,
   - Conflict areas, etc.

4. It is recommended (but not compulsory) that Holders attach photographs to their report, which visually illustrate the activities described in their report.

5. Failure to submit an Environmental Report shall constitute a breach of the Environmental Contract, which could result in steps taken against the Holder.

6. All information contained in the Environmental Report shall be treated as confidential.

7. The Holder shall ensure that all the information recorded in the Environmental Report is, to their best knowledge, accurate and correct.

Completed Environmental Reports should be sent to:

**The Permanent Secretary**
Ministry of Environment, Forestry and Tourism Private Bag 13306
Windhoek
For Attention: Ms. S. Angula / Environmental Assessment Unit
HOLDER DETAILS AND REPORTING PERIOD

Name of Holder: Uis Tin Mining Company (Pty) Ltd

Address of Holder:
PO Box 30,
Uis,
Namibia

Telephone: +26481 124 7395

Name of person compiling report: Environmental Compliance Consultancy

Reference number(s) of Mining Claim area / block / license: ML 134

Geographical location of area / block / license: Uis, Erongo Region, (21 17’34.65” S, 14 58’10.61” E)

This report is for the period of: (tick the relevant box and fill in the year)

☐ January – June 2019
X July – December 2019
☐ Other (please specify)

POLLUTION AND WASTE

Has all domestic refuse (e.g. Household waste, bottles, tins, paper, plastic, etc.) been removed from the mining area?

X Yes
☐ No

If “yes” above, specify the site where such refuse has been deposited: Waste is removed on an irregular basis and deposited at the local municipal landfill.

How often is refuse removed to the site mentioned above:

☐ every week
☐ every two weeks
☐ every three weeks
☐ once a month
X at irregular intervals
If refuse has not been removed, where has it been dumped?

As far as litter is concerned, would you describe your mineral licence area as:

<table>
<thead>
<tr>
<th></th>
<th>Very clean</th>
<th>Reasonably clean</th>
<th>Filthy</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If your mineral licence area is littered with refuse, please indicate how you intend cleaning it up:

Mineral licence area is free from litter. Effective waste management will be implemented on site and waste will be deposited more regularly.

Are toilets provided for all staff employed by the holder?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If “yes” above, are they:
Waste is collected by a contractor.

If chemical toilets are used, how are chemicals disposed of:

- Deposited in evaporation ponds
- Deposited in a municipal refuse dump
- Buried on site
- Other (specify)

Other – Several mobile toilets are provided at the trial processing plant, open pit and the contractors camp.
**VEHICLES AND EARTHMOVING EQUIPMENT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick-up trucks (&quot;bakkies&quot;), either 2x4 or 4x4</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lorries / trucks between 5 and 10 tonnes</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lorries / trucks larger than 10 tonnes</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Bulldozer of any size</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Road Grader of any size Front-end loader of any size Drilling machine of any type</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td>Rental bakkies and 7 UTMC Light Duty Vehicles, over 10 mining equipment used to include water truck.</td>
<td>X</td>
</tr>
</tbody>
</table>
ROADS AND TRACKS

In addition to ticking the following boxes, please draw roads/tracks made on an accompanying map in blue ink. Roads which have been rehabilitated (i.e. restored to their natural state) can be scratched out in red pen.

Have new roads or tracks been made during the reporting period? Yes [X] No

A new access road was created behind the NamClay brick factory as indicated in the diagram below.

If “yes” above how long are these (in kilometres)? The new access road is approximately 1 km long.

If “yes” above are these still in use? [X] Yes No

Tracks used as access road as previous and firebreak by farm owner

If “no” above have any of these roads or tracks been rehabilitated? Yes No

If “no” above, how have you done such rehabilitation: Ripping [ ] Raking [ ] Sweeping [ ]
TRENCHES OR PITS

If new trenches or pits were made in the site / area during the reporting period, please indicate these by ticking the appropriate boxes AND by means of illustrating them on the same map described above. New pits or trenches made, should be numbered and drawn as a CIRCLE in blue ink, while pits or trenches which were rehabilitated during the reporting period should be scratched out in RED ink.

Have new trenches or pits been excavated in your area during the reporting period? Yes [X] No [ ]

The mining pit has been expanded during the reporting period.

FIGURE 4 - APPROXIMATELY 1KM NEW ACCESS ROAD AT THE MINE
INFRASTRUCTURAL DEVELOPMENT INFRASTRUCTURAL

Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.

| Was any NEW infrastructure established during this period? | Yes [X] | No [ ] |

If “yes” above, is this infrastructure:

- Permanent [ ]
- Temporary [ ]
- A combination [X]

Describe infrastructure by ticking boxes:

- Offices [X]
- Housing [ ]
- Sheds [X]
- Prefab Structures [X]
- Garages [ ]
- Storage Tanks [X]
- Cement slabs [X]
- Foundations [X]
- Other - Workshops etc. [X]

If “yes” above, what are their approximate sizes or dimensions?

Trench / pit No.: Size / dimensions: length breath depth

The pit was expanded to approximately 188 km² during the reporting period.

Were any holes/trenches rehabilitated during this period? Yes [ ] (show on map) No [X]
FIGURE 5 – SOME INFRASTRUCTURE ON SITE INCLUDING STORAGE TANKS, WORKSHOP, SHEDS, OFFICES
### BOREHOLES, SAMPLE HOLES OR OTHER DRILLING

*This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose.*

<table>
<thead>
<tr>
<th>Were any holes drilled during this period?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If “yes”, for which purpose were they drilled?</td>
<td>Water</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Sampling</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Explosives - High Explosives Fragmentation (HEF) - 138 183 tons used</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

### WATER

*Your estimated monthly water consumption during this period was: Approximately 5934 m³.*

<table>
<thead>
<tr>
<th>Water was obtained from:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>River</td>
<td></td>
</tr>
<tr>
<td>X Borehole</td>
<td></td>
</tr>
<tr>
<td>Dam</td>
<td></td>
</tr>
<tr>
<td>Water Affairs</td>
<td></td>
</tr>
<tr>
<td>Reservoir/pond</td>
<td>X</td>
</tr>
<tr>
<td>X Other</td>
<td></td>
</tr>
</tbody>
</table>

*Approximately 7 m³/hr of water is pumped water boreholes, 20 m³/hr from pits and 0.04 m³/hr of potable water from Namwater.*

*Please estimate the percentage (%) of water used for the following activities during this period:*

- Human consumption: 1% - Namwater - potable water
- Toilets: 1%
- Washing vehicles & equipment: 3%
- Dust control: 5% - Plant and Mine Dust control
- Building activities: 0%
- Gardens: 0%
- Recreation: 0%
- Other (specify): 90% Process make-up water

<table>
<thead>
<tr>
<th>Were there any accidents which caused a loss of water?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, please give details N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PROTECTION OF FAUNA AND FLORA

Please answer the following questions by ticking the appropriate boxes

Question:
Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the mining claim site or area?  

Yes ☐ No ☑️ Unsure ☐

Were any plants (excluding grasses) picked, damaged or removed?  

Yes ☐ No ☑️ Unsure ☐

Afritin Mining has been effective in conserving trees and shrubs in and around the mine site.

FIGURE 6 - SOME TREES CONSERVED ON THE MINING SITE

Was there any wood collecting in the area?  

Yes ☐ No ☑️ Unsure ☐

RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC

Were there any conflicts with neighbours, landowners, Government Officials or the public during this period?  

Yes ☐ No ☑️

If “yes” above, what was the nature of these conflicts? (tick boxes to provide answers)

☐ People entered the area without permission or prior arrangement
☐ Complaints about reduced access to water or other resources
☐ Complaints about danger posed to livestock or wildlife
☐ Allegations about stock-theft or poaching
Complaints about vehicle or equipment movement on access roads / tracks
Complaints about litter or other types of pollution (e.g. Noise, dust, etc.)
Complaints about the activities / actions of Holder staff
Allegations that the Holder was not adhering to contracts / agreements
Allegations that the Holder damaged property or installations
Allegations that gates were left open or unlocked
Other (specify)

If conflicts arose, indicate how these were resolved? (tick boxes)
No conflicts during the reporting period;
Verbal agreement after discussions
Written agreement by special contract
Instructions to Holder staff to avoid conflicts
Holder rectified its mistakes and undertook to avoid future wrongdoing
Court action or other third-party arbitration
Other (specify)
The conflicts remain unsolved

Any other comments or information:

I declare that the information provided in this Environmental Report is, to the best of my knowledge, accurate and correct.

[Signature]

May 2020

Holder Date