



REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

DIRECTORATE OF ENVIRONMENTAL AFFAIRS

ENVIRONMENTAL AUDIT - (SELF AUDIT QUESTIONNAIRE)

Please Take Note:

1. All questions are mandatory and thus must be fully completed
2. knowingly providing false or misleading information is an offence as in terms of Section 43 (1) of the Environmental Management Act, Act No. 7 of 2007.

Activity:

THE PROPOSED OPEN PIT MINING ACTIVITIES ON MINING LICENCES (MLS) 73B; 73C; 9; 16 & 21 LOCATED AT KOMBAT IN THE OTJOZONDJUPA REGION, REPUBLIC OF NAMIBIA.

MINING & QUARRYING ACTIVITIES:

- 3.1 The construction of facilities for any process or activities which requires a licence, right or other form of authorization, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.
- 3.2 Other forms of mining or extraction of any natural resources whether regulated by law or not.
- 3.3 Resources extraction, manipulation, conservation and related activities.
- 3.4 The extraction or processing of gas from natural and non-natural resources, including gas from landfill sites.
- 3.5 The extraction of peat.

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Initials ...*CK*

1. OVERVIEW AND GENERAL INFORMATION	
a) Name of the unit and complete address	Trigon Mining (Namibia) (Pty) Ltd
b) What are the main activities carried out on site?	<p>OPEN PIT MINING ACTIVITIES ON MINING LICENCES (MLS) 73B; 73C; 9; 16 & 21 LOCATED AT KOMBAT IN THE OTJOZONDJUPA REGION, REPUBLIC OF NAMIBIA.</p> <p>MINING & QUARRYING ACTIVITES:</p> <p>3.1 The construction of facilities for any process or activities which requires a licence, right or other form of authorization, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.</p> <p>3.2 Other forms of mining or extraction of any natural resources whether regulated by law or not.</p> <p>3.3 Resources extraction, manipulation, conservation and related activities.</p> <p>3.4 The extraction or processing of gas from natural and non-natural resources, including gas from landfill sites.</p> <p>3.5 The extraction of peat</p>
c) Number of people employed on site (temporary + permanent)	<p>Employer: 359x Trigon Mining (Namibia) (Pty) Ltd</p> <p>Contractor 01: 30x NS Electric</p> <p>Contractor 02: 109x GC Engineering</p> <p>Contractor 03: 33x Sowden Security</p> <p>Contractor 04: 50x Optimine Solutions</p> <p>Contractor 05: 89x Tulela Mining & Construction</p> <p>Contractor 06: 27x Africa Laboratory Specialists Namibia</p>
d) Is a copy of the site layout plan available?	Yes: Main Office; Mining Office & EMP: ML 73B; 73C;9; 16 & 21 Locality & Farm Map Cartographed January 2023 by SL Johannes
e) Are there any other projects in the area having similar activities?	No
f) Environmental Clearance Certificate (ECC) Number and date issued (if available)	Environmental Clearance Certificate Number 001390. Serial: zaMcNT1390; Dated: 07 June 2021

2. SITE HISTORY AND DETAILS	
a) When was the facility established?	05 th July 2021
b) Who owns the facility/industry?	Trigon Mining (Namibia) (Pty) Ltd
c) Who owns the land and what is the type of the land?	Trigon Mining (Namibia) (Pty) Ltd
d) Is the land ownership/lease document available?	Yes, copy submitted to Ministry of Mines & Energy
e) What is the total land area?	ML 9: 74.1239-ha ML 16: 476.6958-ha ML 73B: 150.1931-ha ML: 73C: 262.28-ha Total Area: 963.2926-ha
f) What was the previous land use of that area (commercial, residential, industrial or agricultural)?	Mining, Agriculture, Residential
g) Does the facility have any citations or complaints pending against it?	No
h) Has there ever been any major accidents on-site?	No

3. PROCESS REVIEW	A	N/A	Comments
a) Give a detailed description of the production process.	✓		Flotation processing plant – consist of Crushing, conveying, milling/grinding, flotation, thickening, filtration, and bagging processes
b) Total production capacity of the plant/ project in terms of tonne per annum	✓		Between 275 000 and 330 000 DMT per annum
c) What are the inputs required in the production process (preferably in the form of a list containing name, amount / quantity required and their price?	✓		Reagents (Potassium Amyl Xanthate, Sodium silicate, Betafrother, Pineoil Sulphidiser) , air, water grinding media (quantities and prices varies)
d) What are the outputs produced (including pollutants) and their quantities?	✓		TSF slurry and water, Cu concentrate
e) Provide a list of all the machinery and utilities used on-site along with their capacities number, energy	✓		
f) consumption and time in use.			
g) How often is maintenance work carried out on-site?	✓		Every second week of the month
h) Does any recycling/reuse of material take place on-site?	✓		Yes

4. LICENSE AND PERMITS	A	N/A	Comments
a) Does the facility have a valid factory license? If not, has the facility applied for it? Is a copy of the application form available?		✓	Mining Licence: 73B; 73C; 9; 6; 21 Environmental Clearance Certificate Number 001390; Serial: zaMcNT1390; Dated: 07 June 2021 Permits For Multiple Consignment Export of Minerals: EM 40209; Reference number 14/2/5/1/73B, Dated 2023-08-11; EM 41045 Dated, 2024-02-15; Diesel Consumer Installation Certificate CI/2806/2021, Dated 05 Aug 2021;
b) Does the facility have a valid Consent to Operate (CTO) certificate? If not, has the facility applied for it? Is a copy of the application form available?		✓	No Boiler's On Site. ML: 73B; 73C; 9; 6; 21. ECC 2301138;
c) Does the facility generate hazardous waste? If it does, does the facility have authorization for storage, handling and transportation of hazardous waste as per the	✓		Kindly refer to effluent permit

Hazardous Waste (Management and Handling) Rules? If not, has the facility applied for it?			
Is a copy of the application available?			

5. AIR EMISSIONS	A	N/A	Comments
a) What are the sources of stack and fugitive emissions in the facility?		✓	
b) Has stack and ambient monitoring carried out?		✓	
c) Does emissions meet standards specified in the CTO certificates?		✓	
d) Are monitoring records/reports maintained?		✓	
e) What are the air pollution control device that has been installed?		✓	
f) What is the frequency of cleaning and maintaining the air pollution control device?		✓	
g) Are site processes and operations free of significant fugitive air emissions?	✓		Yes

6. Water consumption and wastewater generation

6.1 Freshwater	A	N/A	Comments
a) What is the source of freshwater? Is it metered or not?	✓		Ground water which is measured
b) How many boreholes are installed in the site?	✓		4
c) How many flow meters are installed in the plant? What are their readings?	✓		
d) Schematic of a raw water treatment plant and DM plant e.g. Sceptic tanks, filtering systems etc.	✓		Not available
e) Latest groundwater quality test reports	✓		
f) Specify average daily water consumption of the entire plant and in township/colony (m ³ /day):	✓		5, 760m ³ /day
g) Has the plant / activity studied the impact of its water consumption on respective surface water source and/or groundwater table?	✓		
h) Break-up of average freshwater consumed for last two financial years?	✓		Not measured
i) Specific water consumption values for last two financial years (in m ³ /tonne or m ³ /Mwh, etc.):	✓		Not operation that long
j) Chemicals used in water treatment plant with quantity and price:		✓	
k) What is the capacity of the demineralization (DM) plant? What is then average quantity of water treated in DM plant (m ³ /day)?		✓	No DM Plant on site
l) Does the plant/ project have rainwater harvesting (RWH) system? If it does, is it rooftop, paved or unpaved?		✓	
m) Method of harvesting rainwater—Storage in artificial tanks/recharge into the pit/ trench/well		✓	
n) Total rainwater harvesting potential of the plant		✓	
o) Rainwater harvesting potential of the site developed by the plant:		✓	
p) Total rainwater harvesting done by the plant		✓	

q) Frequency of monitoring of the groundwater quality and quantity (pre- and post-monsoon) and frequency of cleaning the rainwater harvesting catchment/storage system	✓	Monthly, no rain water harvesting / storage system
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r) How is the harvested rainwater utilized by the plant/ project?		✓	
s) Key measures taken by the plant/project for water conservation in the past three years and water saving achieved in terms of m3	✓		

6.2 Wastewater	A	N/A	Comments
a) Schematic diagram of an Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) along with their capacities (attach)	✓		Not available
b) Latest laboratory test reports of ETP and STP inlet/outlet streams	✓		
c) Does the plant/ project have separate ETP for its different products?	✓		No
d) Total effluent generated by plant/ project (including all products) in last two financial years	✓		
e) Total sewerage generated by plant/ project and colony in last two financial years	✓		
f) Provide the details of wastewater generation and recycling in the entire facility	✓		
g) Does the plant/ project monitor the impact of wastewater on the receiving waterbody/ land?		✓	
h) What is the total number of outlets for effluent discharge from the plant/ project?	✓		
i) Name of WTP unit/s (filtration unit/softening unit/reverse osmosis plant etc.) and its capacity and average quantity of water treated in filtration plant (m3/day)	✓		None

7. NOISE POLLUTION	A	N/A	Comments
a) Does the facility have a valid factory license? If not, has the facility applied for it? Is a copy of the application form available?		✓	ML 73B; 73C; 9; 6; 21

8. FUEL CONSUMPTION	A	N/A	Comments
a) List the different type of fuel used in different areas of the plant/ project	✓		Diesel, kindly refer to Diesel Consumer Installation Certificate CI/2806/2021, Dated 05 August 2021
b) Quantification of fuel used in each process and its calorific value	✓		Kindly see Kombat Mining Project Equipment List and capacity attached.:
c) How is the industry storing the different types of fuel?	✓		Certified Service Stations; Above Ground Storage Tanks; Diesel Consumer Installation Cert CI/2806/2021, 05 Aug 2021
d) If they are using:			
Gas —Is the supply regular? If not, mention the number of hours.	✓		LPG: 5 940 000 Industrial Gas: Oxygen: 60 921 882kJ Acetylene: 274 462 534.88kJ Argon: 166 133 066.67kJ Argon 5.0 MCP: 356 928 000kJ Nitrogen AP 9.30kg: LPG: 6 991 380 000kJ
Biomass —Is it available for the entire year?		✓	

Coal —Are they using low ash coke or high coke and the supply is regular or not?		✓	
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9. CHEMICAL HANDLING AND STORAGE		A	N/A	Comments
a)	What are the various types of chemicals stored on-site?	✓		Betafroth, Pineoil, PAX 90, Soda Ash, HCL, Nitric Acid, Acetone
b)	Is a list of chemicals available?	✓		Yes
c)	How are chemicals transported?	✓		Delivered by transporter with a truck. Forklift is used on site
d)	What kind of containers are there for storing the chemicals?	✓		Flow Bins, Plastic Containers, wooden crates
e)	Are there any above or underground chemical storage tanks on-site?	✓		Above is a reagent store with ventilation
f)	Are any of the chemicals toxic or harmful? How many of them are hazardous?	✓		All chemicals are Hazardous and harmful
g)	Are all the chemicals labelled?	✓		Yes
h)	Are the chemical containers' lid closed after use?	✓		Yes
i)	Are records of chemicals and dyes usage maintained in the logbook?	✓		Yes

10. SOLID AND HAZARDOUS WASTE MANAGEMENT		A	N/A	Comments
a)	What kinds of solid waste are generated on-site?	✓		Sewerage from toilets
b)	What is the quantity of solid waste generated?	✓		77kg (2638 x 29g)
c)	How is the solid waste disposed of?	✓		Sludge dried, burned and buried at designated area of solid waste
d)	Is any of the waste reused or recycled?	✓		Used oil / lubricants, are removed from site by recycling companies
e)	What are the sources of hazardous waste generation on-site?	✓		Light / heavy duty machinery and vehicles
f)	What is the quantity of hazardous waste generated?	✓		45, 000L used oil per annum and used grease 2, 520L per annum
g)	How is the hazardous waste disposed of?	✓		Collected by recyclers
h)	Are hazardous waste disposal records maintained?	✓		
i)	Are any of the hazardous wastes treated on-site?		✓	No
j)	Where are the hazardous wastes stored before disposal?	✓		Above ground tanks

11. OCCUPATIONAL HEALTH AND SAFETY		A	N/A	Comments
a)	Does the facility have a site emergency plan?	✓		
b)	If yes, then has this plan been documented?	✓		Work in progress.
c)	What are the recognized hazards in the facility?	✓		Chemical Agent: Dust; Methane, Smoke Physical Agent: Noise; Lighting, Heat Stress Biological: Soil/Water Borne Infections; Mosquito Bites Ergonomic: Prolonged Crouching and Bending; Prolonged Handling of Tools; Carrying Heavy Loads; Repetitive Muscular Trauma; Awkward Working Postures Accident: Fire Outbreaks; Fall from Heights; Falling Rocks; Flooding; Electrocution; Abrasives From Rotating Parts; Drawing In or Trapping Hazards; Cutting and Shearing

			Psychological: Post-Traumatic Stress; Violence Geographical: Flooding; Landslides; Ground fall Design: Structures; Tools; Equipment; Machines;
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d)	Are fire extinguishers available in the facility?	✓	Yes, located in strategic places all over facilities. Equipment / Machinery / Vehicles also equipped
e)	What type of fire extinguisher is available?	✓	CO2 / DCP
f)	Are the fire extinguishers functional?	✓	Yes, serviced annually
g)	Are facility personnel trained in its use?	✓	
h)	Is personal protective equipment (PPE) available for use?	✓	
i)	Do the workers use PPE?	✓	
j)	Are health check-ups for workers conducted?	✓	
k)	Do the workers know whom to contact in case of an emergency?	✓	Yes, Emergency Management Plan, Emergency Response Protocol & Emergency Snake Bite Protocol available and communicated to all employees
l)	Has any accident ever occurred on-site?	✓	All incidents are recorded in the Incidents Records Book

Declarations

I...**Careful Kaeka (Trigon Mining (Namibia) (Pty) Ltd**..... (full name of **PROPONENT**) understand and agree that the information that I have provided in this questionnaire will be used by the Environmental Commissioner. I accept that the Environmental Commissioner will hold me accountable for any inaccurate or misleading information knowingly provided in this questionnaire and acknowledge that the provision of such information will impede the lawful carrying out of the responsibilities and functions of the Environmental Commissioner.

I declare that the information that I have provided in this questionnaire is to the best of my knowledge, true and

Reliable.

Signature:

Date: Tuesday, 23rd Day of April 2024.....