An overview of the lithium processing plant

(Long fire Investments, Erongo Region)

The 1 million tons/year heavy medium mineral processing project will mainly include: Concentrator raw ore storage yard, crushing and screening, crushed product storage yard, heavy medium separation, product storage yard and other main industrial facilities, laboratory, dressing plant machine repair workshop, diesel generator room, water intake pump room, living dormitory and canteen and other supporting facilities Low-voltage power distribution, electrical transmission, automatic control, electrical lighting, electrical safety, etc. of production auxiliary facilities. The total amount of earthwork works on the site is 273,000 m^3, including 65,000 m^3 of excavation and 20.8 m^3 of filling.

Identified stake holders

- Traditional authority,
- Tsiseb Conservancy,
- Interested and affected Parties

1) Objectives of the public consultation

Summarize the objectives of the meeting:

- To provide an overview of the Environmental Impact Assessment (EIA) and Public Participation Process;
- To provide stakeholders / I&APs with information regarding the proposed project;
- To afford stakeholders and I&APs an opportunity to give input on the project;
- To gather public comments raised for inclusion in the EIA Report and decision-making process;
- To make sure that all potential impacts on the Environment are taken into consideration;
- To provide the competent authority with the necessary information which will allow them to make informed decisions;
- To obtain information that may influence the design project.

2) Overview of the proposed project

- Location: on MC 73418
- Capacity: 1 million of ore t/a
- The project has a service life of 15 years
- Target mineral: spodumene
- Final product: lithium concentrate

- Concentrate grade: 5%
- Water source: 40 boreholes to be drilled (16250m^3/d).
- Power:
    - ✓ 10 kV diesel generator set
    - ✓ The oil depot is equipped with 4 horizontal oil tanks of 50m^3, which are arranged in the open air.
    - ✓ The oil tank is provided with a concrete foundation with a height of 500mm.

Two phases:

- Construction of the plant (18 month)
- Operation of the plant (12 years lifespan)

Source of lithium

- Lithium to be sourced from mining claims 73409 – 73418

Presentation of the project

Processing process will involve:

- Crushing to ore 0.5-8mm
- Grinding
- Classification
- Heavy medium separation (HMS) to produce a concentrate
- Re-crushing & re-separation of middlings
- Magnetic separation
- Fine ore flotation
- Fine ore dehydration

3) Main Potential Impacts

Potential impacts during construction and operational phases:

- Biodiversity (dust, noise),
- Air quality (Exhaust gas, raw ore, concentrate transportation, crushing and screening unloading),
- Noise (crusher, heavy duty vehicles) and socio-economic (96 employees, entrepreneurial opportunities, boost local businesses),
- Waste (waste engine oil, tailings & magnetic water, wastewater),
- Visual impacts (loss of existing land cover and changes in landscape views),
- Archaeology (No artefacts within the project area, NHC report was completed),
- Potable water usage
- Ground water obstruction

The potential impacts will be assessed and where necessary measures will be put in place to ensure that they avoided / minimized, where possible. Environmental protection budget has been forms part of the investment.

Wastes:

- Exhaust gas & dust
  - ✓ Dust will be generated at the unloading points of crushing and screening workshops, crushed product storage yards, powder ore storage yards, and tailings storage yards: the dust concentration will be 1-2g/m^3
  - ✓ Dry fog dust suppression measures suppression efficiency of ≥ 95% will be put in place, at various dust producing points such as crushing and screening workshops, product storage yards and silos, and discharge points at the head and tail of belt conveyors.
  - ✓ The TSP (total suspended Particles) hourly concentration meets the requirement of 1.0mg/m^3 fugitive emission limit of particulates in the "Integrated Emission Standard of Air Pollutants" (GB16297-1996).
  - ✓ regular watering of production sites and transportation routes will effectively reduce dust generation
- Solid waste
  - ✓ The project will process 1000kt/a of ore, which adopts a single dense medium separation process to produce spodumene concentrate with a Li_2O grade of 5%.
  - ✓ The tailings output will be 1944 t/d (dry ore) with the is controlled moisture content of 20%.
  - ✓ Tailings will dumped at the tailing site after dehydration - dry tailings
  - ✓ Tailings stockpile will be located 500m south of the plant,
  - ✓ The tailing stockpile area is 98,950 square meters, the stacking height is 20m, the height of each layer is 10m,
  - ✓ The stacking slope ratio is 1:2, the platform width is 20m,
  - ✓ The design volume is 1.325 million m^3, which can meet the tailing stockpiling demand of 1.132 million m^3 for three years.
- Waste liquid
  - ✓ Thickener overflow water, dense overflow water, and filter press water & magnetic tail water will be collected and pumped back to the concentrator for reuse), 86.15% will recycled,
  - ✓ domestic waste water to be treated treatment and used for greening)
- Sewage water
  - ✓ will be treated and used on roads to suppress dust and irrigating the premises
- Noise
  - ✓ The noise in the workplace should not exceed 90dB(A)
  - ✓ Production equipment for mineral processing, will produce the noise level of about 80-110dB(A).

- ✓ The plant's design adopts measures such as selecting low-noise equipment, setting up soundproof rooms (machine room sound insulation and sound absorption measures) and wearing protective equipment for staff to eliminate noise hazards,
- ✓ After taking noise prevention and control measures, the noise value of high-noise equipment in the workshop can be reduced to below 85dB(A), and
- ✓ the noise at the factory boundary can reach the Class 2 standard of the "Environmental Noise Emission Standards for Industrial Enterprise Boundary" (GB12348-2

Visual impact

- ✓ The combination of different plant species is an important means of creating a green landscape.
- ✓ To shape the green landscape, different species and corresponding planting methods should be selected to form rich visual effects while strengthening the spatial enclosure relationship.
- ✓ Large areas of lawns can be artificially sloped to avoid monotony, or planted with flowers as embellishments.
- ✓ Arbors are planted on both sides of the road to divide the space and guide the direction.
- ✓ Properly plant isolated trees to embellish the environment to achieve the purpose of plant
- ✓ Implement effective dust control measures to reduce airborne dust and debris, maintaining clear views and reducing visual disturbances.
- ✓ Use minimum and informative signage to avoid visual clutter and maintain a clean aesthetic.
- ✓ Consider the appearance of temporary structures, such as fences and barriers, and use materials and colors that complement the surroundings.
- ✓ Properly manage nighttime lighting to minimize light pollution and glare that may impact the nocturnal visual experience.
- ✓ Minimize topsoil disturbance, preserve existing trees, and add native plants to encourage re-vegetation.
- ✓ As part of the restoration procedure, overburden will be reinserted into the excavation.
- ✓ Keep off-road equipment and vehicles inside the approved area

4) Way forward /Process that follows

- Finalize the EIA draft Report,
- Specialist studies to be undertaken,
- submit the EIA to the Ministry of Environment and Tourism where public comments will be welcomed for 14 days,
- submit the Final EIA report

To Whom it may concern

I hope this email finds you well. I am writing to request clarity on several important aspects regarding the proposed lithium processing plant on Mining Claim 73418 and its potential environmental impact.

I am particularly interested in obtaining more information about the following areas:

Air Quality Impacts: Could you please provide more details on the emissions expected from the generators used for power generation? I am keen to understand how these emissions might affect the local air quality and the potential health implications for nearby communities.

Water Consumption and Contamination: Considering the significant water requirements of lithium processing, can you elaborate on the anticipated water consumption of the plant? Additionally, what measures are being put in place to address concerns about water contamination from processing by-products?

Biodiversity and Habitat Disturbance: As the proposed plant's location is close to Uis, I am eager to know more about the potential impact on local biodiversity and habitats. Are there any specific plans to mitigate habitat disturbance and protect wildlife in the area?

Noise and Light Pollution: Given the operation of generators and the plant's proximity to a road, could you provide insights into the expected levels of noise and light pollution? How do you plan to mitigate any potential adverse effects on wildlife and the surrounding environment?

Traffic Impact: With the plant being situated near a road, what is the projected increase in heavy vehicle traffic? How do you plan to manage potential impacts on the road infrastructure and address concerns raised by local communities?

Waste Generation and Management: I am interested in understanding the type and volume of waste that the lithium processing plant is expected to generate. How will you handle and dispose of waste responsibly, especially if hazardous materials are involved?

Greenhouse Gas Emissions: Given that generators will be used for power generation, what steps are being taken to minimize the plant's greenhouse gas emissions and reduce its overall carbon footprint?

Human Waste of Mine Workers: Could you provide information on the measures in place to manage human waste generated by the mine workers? How will you ensure proper sanitation and prevent any potential environmental contamination?

Potential Issues with Fuel Storage: Can you elaborate on the safety measures that will be implemented to address potential issues with fuel storage? How do you plan to prevent spills, groundwater contamination, and other hazards associated with on-site fuel storage?

Operating Life Span: Additionally, could you please provide information on the projected operating life span of the proposed lithium processing plant? Understanding the estimated duration of its operation will help in assessing the long-term environmental impacts and planning for potential site rehabilitation measures.

Site Rehabilitation Plans: As part of responsible environmental management, I am keen to know about the site rehabilitation plans for the plant. Considering that mining and processing operations often result in significant disturbances to the environment, I am interested in learning about the measures and strategies you have in place to rehabilitate the site once the plant's operational life comes to an end.

Ore Stockpiles: What is the projected size and appearance of the ore stockpiles that will be present on the plant site? How will the stockpiles be managed to minimize their visual impact on the surrounding landscape, especially considering the site's tourist attraction status?

Waste Stockpiles: Similarly, could you provide information on the waste stockpiles generated during the lithium processing operations? How will you handle and manage these stockpiles to prevent them from becoming an eyesore and affecting the scenic beauty of the region?

Stockpile Locations: Where are the planned locations for both the ore and waste stockpiles? Have efforts been made to strategically position these stockpiles to reduce their visibility from prominent tourist areas?

Visual Mitigation Measures: Are there any planned visual mitigation measures to enhance the visual appeal of the site and minimize the impact of stockpiles on the overall aesthetics of the area? For instance, will landscaping or screening be employed to shield the stockpiles from view?

Community Consultation: Have you engaged with the local community and tourism stakeholders to understand their concerns about the visual impact of the proposed plant and stockpiles on the tourism experience? How have you incorporated their feedback into your plans?

Thank you for your prompt attention to these inquiries. I appreciate your willingness to provide clarity on these important environmental aspects of the proposed plant.

Looking forward to your response.

Sincerely,

Desmond van der Smit

Uis Property Owner

After the project is put into production, according to the monitoring system, monitoring factors and monitoring point locations required by the environmental impact assessment report, daily monitoring of air, water, sound and slag pollution sources inside and outside the plant will be carried out, and regular monitoring of the air, surface water, groundwater and acoustic environment near the plant will be carried out. Monitor. In addition to establishing monitoring ledgers and archiving the monitoring results, they should also be reported to the local environmental authorities in a timely manner.

2) Wastewater The main production wastewater of the dressing plant is the overflow water of the thickener and the press filter water of the filter press workshop. The total displacement is 14000m3/d. The production wastewater flows into the return pool by itself and is finally reused in the production process. After the domestic sewage is treated by the integrated sewage treatment device, the effluent water quality: COD≤120mg/l, BOD5≤30mg/l, suspended matter SS≤30mg/l, pH=6~9, used for greening.

7.3.2 Pollution source control measures, discharge methods and whereabouts 1) Exhaust gas Take dry fog dust suppression measures at various dust producing points such as crushing and screening workshops, product storage yards and silos, and discharge points at the head and tail of belt conveyors. The dry fog dust suppression efficiency is ≥ 95%, and the TSP (total suspended

Particles) hourly concentration meets the requirement of 1.0mg/m^3 fugitive emission limit of particulates in the "Integrated Emission Standard of Air Pollutants" (GB16297-1996). Regular watering of production sites and transportation routes can effectively reduce dust generation. Noise The main noise sources of this project are production equipment such as crushers and vibrating screens for mineral processing, and the noise level is about 80-110dB(A)

The utilization rate of project recycled water is 86.15%

Dust will be generated at the unloading points of crushing and screening workshops, crushed product storage yards, powder ore storage yards, and tailings storage yards: the dust concentration is 1-2g/m^3. The dry fog dust suppression efficiency of ≥ 95%, and the TSP (total suspended Particles) hourly concentration meets the requirement of 1.0mg/m^3 fugitive emission limit of particulates in the "Integrated Emission Standard of Air Pollutants" (GB16297-1996).

This project will process 1000kt/a, which adopts a single dense medium separation process to produce spodumene concentrate with a Li_2O grade of 5%. The tailings output will be 1944 t/d (dry ore) with the is controlled moisture content of 20%.

7.1 Environmental status of the construction area The project is planned to be built in the inland Damaraland area in the north-central part of Namibia, at 14°31’5.809” east longitude and 21°28’5.477” south latitude. It is 68.5km away from the Atlantic Ocean in a straight line in the southwest direction, 75.7km away from the southwest coastal city of Hentiesbaai, 45.1km away from the nearest inland city of Uis in the northeast, and 290km away from the southeast capital Windhoek. The C35 highway passes through 22km southeast of the mining area, which connects Uis and Hentiesbaai, and is the main channel for the mining area to communicate with the outside world. Since the country is a plain area within 100km of the coast, and there is no perennial surface water system, roads can also pass freely, and several roads for mining and transportation have been formed on the site. There are three large-scale mining enterprises concentrated in the Swakopmund area 120km southeast of the project, and the capital of the area, Swakopmund, has a port available for use. Namibia has a subtropical arid and semi-arid climate, with an average of 300 sunny days per year, making it one of the driest countries south of the Sahara. The average annual rainfall in the whole territory is 270mm, and the annual rainfall varies greatly between regions, ranging from less than 50mm in the coastal area, 350mm in the central region to 700mm in the northeast. Except for the winter (June-September) rainfall in the southernmost part of the country, 70% of the rainfall is concentrated from November to March of the following year. Due to the high terrain, the temperature in Namibia is slightly lower than other regions at the same latitude in the world. It is mild all year round and the temperature difference between day and night is large. The year is divided into four seasons: early spring in September, summer in December, autumn in March, and winter solstice in June. The average daytime temperature in the inland summer is 20-34°C, and the temperature in the remote northern and southern regions is often higher than 40°C. In winter in the Mainland, the average daytime temperature is 18-25°C, and the nighttime temperature is often below 0°C, and there is often ground fog. The coastal area is affected by the Benguela cold current, the temperature is maintained at 15-25°C all year round, and there is often dense fog at

night. The wind direction of the mining area where the project is located is mainly SW-SSW direction and NE-ENE direction, and other wind directions are supplemented. The average wind speed is 17km/h, the maximum wind speed is 35km/h. Located on the east coast of the Atlantic Ocean, Namibia has a subtropical arid and semi-arid climate, with little rainfall. The production and living water of this project uses groundwater as the water supply source. The depth of the groundwater is 40 meters. The bedrock is schist with soft texture, and the 1 meter down from the surface is a soft overburden.