EXECUTIVE SUMMARY

OF

DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Matcha-Nokpante Stone Mine

Production of 25,637.7 TPA Boulder Stone through Opencast Semi-Mechanized Mining method spread over 1.68 Acres (0.68 ha) at Village– Matcha-Nokpante, P.O. – Dhanua, P.S. – Tura, District- West Garo Hills, State- Meghalaya

By

Shri. Simsang Ch. Marak

Village- Rochonpara, P.O. Dhanua, P.S.- Tura, District-West Garo Hills, State- Meghalaya.

Executive Summary

Introduction

Name of the Project

The proposed project is a mining project for production of 25,637.7 TPA Boulder Stone through semi-mechanised opencast mining method, spread over 1.68 acres (0.68 ha.) in village Matcha-Nokpante, P.O. – Dhanua, P.S. – Tura, District – West Garo Hills, State – Meghalaya by Shri Simsang Ch. Marak.

The proposed project is a mining proposal under schedule 1(i) (a) "Mining of Minerals" of the EIA notification 2006 and its amendments. It falls under Category B1 (minor mineral). The method of mining adopted will be an opencast semi-mechanized method.

Project location

The Project is located in the village Matcha-Nokpante, P.O. – Dhanua, P.S. – Tura, District – West Garo Hills, State – Meghalaya by Shri Simsang Ch. Marak. Matcha-Nokpante Stone Mine is situated near about 74 km SW away from Mendipathar Railway Station. The nearest National Highway is NH127-B 0.17km in the West direction. The Nearest airport is Lokpriya Gopinath Airport, Assam at a distance of 170 km in NE direction. Tura, the district headquarter is at a distance of 33 km in SE direction.

Resource Requirement

<table>
<tr><td>Land Details</td><td colspan="4">1.68 Acre (0.68 ha)</td></tr>
<tr><td>Water Requirements</td><td colspan="4">7.38 KLD</td></tr>
<tr><td>Power Requirement</td><td colspan="4">NA</td></tr>
<tr><td>Fuel Requirement</td><td colspan="4">HSD – 676 Liters/day (202.8 KL/year)</td></tr>
<tr><td>Manpower Requirement</td><td colspan="4">26</td></tr>
<tr><td>Explosive requirement</td><td colspan="4">23 kg/Day</td></tr>
<tr><td rowspan="8">Machinery Requirement</td><td>No.</td><td>Type</td><td>Nos.</td><td>Size/Capacity</td></tr>
<tr><td>1</td><td>Wagon Drill</td><td>1</td><td>100 mm dia</td></tr>
<tr><td>2</td><td>Excavator</td><td>1</td><td>0.9 m^3</td></tr>
<tr><td>3</td><td>Compressor</td><td>1</td><td>300 cfm</td></tr>
<tr><td>4</td><td>Diesel Pump</td><td>1</td><td>For Water Pumping</td></tr>
<tr><td>5</td><td>Tippers</td><td>2</td><td>10 T</td></tr>
<tr><td>6</td><td>Rock Breaker</td><td>1</td><td>For rock breaking</td></tr>
<tr><td>7</td><td>Water Tanker</td><td colspan="2">For Water Sprinkling</td></tr>
</table>

Mitigation Measures

Air Environment

Dust generation during drilling of shot holes, haul road, smoke from vehicles shall be controlled by following practices:

- Dust extractor or wet drilling will be followed to control dust at source of emission during drilling.
- Sharp drill bits will be used for drilling and regrinding will be done periodically to reduce the dust generation.
- Controlled blasting to reduce dust emission and reduction in NOx emission
- All machineries and transport vehicles will be properly maintained and pollution check will be done once in a year to keep the emissions from machineries and vehicle under control.
- Water sprinkling will be done on haul road to control emission of dust while transporting minerals and waste. Provision for water spray by tankers on 'kaccha' road shall be done.
- Water sprinkling at loading area.
- Tree plantation along the haul roads & approach road will be done. A total of 550 trees would be planted.
- Use of personal protective equipment like dust mask.
- Ambient air pollution monitoring will be carried out.

Water Environment

- Mining is planned to above the ground water table. Therefore, pumping of ground water from mine pit does not arise in this mine. The rain water during rainy season is proposed to settle in a pit and shall be use for dust suppression and plantation. Excess water, if any shall be discharged in natural stream after settling of suspended particles in the pit. Pump having required capacity will be installed to lift accumulated rain water from working pit and pumped to the settling tank.
- Garland drain shall be made around the Waste dump and the rain water shall be collected in garland drain and allowed to settle in a small pit for settling suspended particles before allowing discharge to natural drainage system.
- For domestic waste water Septic Tank with Soak Pit shall be provided, discharge from Soak Pit, if any shall be used for plantation.
- It shall be ensured that quality of drinking water for the worker is hygienic and good sanitation system shall be made available.

Noise Environment

Drilling, Blasting & increased vehicular traffic is the main source of noise Pollution. Blasting will be done occasionally. Mining activity will be done only day hours.

- Generation of noise during blasting shall be controlled by delay blasting and use of adequate charge per blast.
- Diesel powered machineries, which is major source of noise in open cast mining shall be properly maintained. Attention shall be paid towards rigorous maintenance of the silencer of the diesel engines.
- Protective devices shall be provided for use of persons employed in the vicinity of high noise areas.
- With the adoption of controlled blasting techniques, the ground vibrations will be minimized.
- Plantation around the lease boundary will cut the noise levels.

Solid Waste Management

- No hazardous & other solid waste generation is envisaged from the stone mining activities.
- Gradation of dump shall be done automatically as coarser materials go to the bottom and finer at the top and therefore drain of rain water flow freely to the bottom without endangering the stability of dump.
- Stabilization of dump with top soil and tree plantation shall make the dump more stable on long. Dump should be terraced for every 5 m height and stabilized
- 1m height parapet shall be constructed for dumps more than 6 m height along the toe to prevent and control wash out from dumps entering into natural system through rain water
- Garland drainage around dump shall prevent under wash of dump by hydrostatic pressure to be developed by surface water and control wash outs and collapse.

Capital Cost of the Project

The proposed project cost is Rs. 62.7 Lakh Rupees.

Baseline Environmental Studies

Baseline Monitoring Period: March 2024 – May 2024

Type	Parameter
AAQ Parameter at 8 locations	PM_{10} = 66.4 µg/m³ to 60.2 µg/m³ $PM_{2.5}$ = 36.7 µg/m³ to 30.2 µg/m³ SO_2 = 13.6 µg/m³ to 9.1 µg/m³ NO_x = 17.6 µg/m³ to 11.1 µg/m³

Noise quality at 8 locations	Daytime 53.1 to 40.6 dB(A) Night-time 42.8 to 40.1 dB(A)
Surface water at 2 locations	pH – 6.88 to 6.72 TDS – 274 to 259 mg/l Sulphate – 30.5 to 28.4 mg/l Fluoride – 0.291 to 0.268 mg/l
Ground water at 8 locations	pH – 7.25 to 6.85 TDS – 383 to 312 mg/l Sulphate – 35.2 to 22.7 µS/cm
Soil at 8 locations	pH – 7.24 – 6.45 Potassium – 135 to 114 mg/kg Nitrogen – 286 to 245 mg/kg

Environment Management Plan

Sl. No.	Category	Capital Cost (Rs)	Recurring Cost (Rs)
1	Water Sprinkling & Dust Suppression System	-	80,000
2	Plantation (@ Rs. 500 per plant) 598 x 500 = 2,99,000 (Includes fertilizer, pesticides, maintenance)	2,99,000	40,000
3	Environment Monitoring (One Day Monitoring) • Ambient air (3 points) 24 hrs – Rs. 5000 • Surface Water (Per sample) – Rs. 1500 • Ground Water (Per sample) – Rs. 1500 • Noise (3 points) 24 hrs – Rs. 2000 • Stack Monitoring (D.G. Set) – Rs. 2000 Total – Rs. 12,000 (per season) At least two season in a year – Rs. 12,000 x 2 = Rs. 24,000	0.0	24,000
Total		**2,99,000**	**1,44,000**