

EXECUTIVE SUMMARY

The project has been proposed for Mining of Lime Stone from the Private Land occupied by the lessee by open cast semi-mechanized method. Mining will be confined to the allotted lease area which lies in

| Lessee/applicant | Area (Ha) | Location | Lessee Address | Type of property |
|-------------------------|----------------------|---|--|-----------------------------|
| Shri Arbis Tangdhara | 2.05 | ‘Ri Kaleng’, Sohbar Sirdarship, Lynti Dkhar Area, District- East Khasi Hills, Meghalaya | Address- 65, Sohbar Village, Sohbar Sirdarship, District-East Khasi Hills, Meghalaya | Private |

The proposed project is an opencast semi-mechanized mining project, where mining of Lime Stone will be done. Excavators shall be deployed for the removal of overburden & inter burden. Methods of mining will be open cast semi-mechanized with drilling and blasting. Mining will be confined to the allotted lease area located at ‘Ri Kaleng’, Sohbar Sirdarship, Lynti Dkhar Area, District-East Khasi Hills, Meghalaya from which a maximum of 201150.00 Tons/Annum of lime stone will be excavated every year. Drilling and Blasting is proposed in this mining activity. Terms of Reference (ToR) for the proposed project has been granted by the Directorate of Environment, Meghalaya vide its letter no.ML/SEIAA/EKH/MIN/41/2019/1006 Dated Shillong, the 9 March 2020.

Salient features of the project

| | | |
|----|---------------------------------------|---|
| 1. | Online Proposal No. | SIAA/ML/MIN/42999/2019 dated 28/11/2019 |
| 2. | File No. Allotted By SEIAA, Meghalaya | ML/SEIAA/EKH/MIN/41/2019 |
| 3. | Name Of Proponent | Shri Arbis Tangdhara |

| 4. | Full Correspondence Address Of Proponent And Mobile Number | Address- 65, Sohbar Village, Sohbar Sirdarship, District-East Khasi Hills, Meghalaya | | | | | | | | | | | | | | | | | | | | | |
|--------|--|---|--------|----------|-----------|---|----------------|---------------|---|---------------|---------------|---|---------------|---------------|---|---------------|---------------|---|----------------|---------------|---|----------------|---------------|
| 5. | Name of Project | Lime Stone Mine | | | | | | | | | | | | | | | | | | | | | |
| 6. | Project Location | ‘Ri Kaleng’, Sohbar Sirdarship, Lynti Dkhar Area, District-East Khasi Hills, Meghalaya | | | | | | | | | | | | | | | | | | | | | |
| 7. | (Plot/Khasra/Gata No.) | Meghalaya (Area: 2.05 Ha) | | | | | | | | | | | | | | | | | | | | | |
| 8. | Name Of Village | ‘Ri Kaleng’, Sohbar Sirdarship | | | | | | | | | | | | | | | | | | | | | |
| 9. | Tehsil | - | | | | | | | | | | | | | | | | | | | | | |
| 10. | District | East Khasi Hills | | | | | | | | | | | | | | | | | | | | | |
| 11. | Name Of Minor Mineral | Lime Stone | | | | | | | | | | | | | | | | | | | | | |
| 12. | Sanctioned Lease Area In Ha | 2.05 Ha | | | | | | | | | | | | | | | | | | | | | |
| 13. | Mineable Area In Ha | 2.05 Ha | | | | | | | | | | | | | | | | | | | | | |
| 14. | Max. & Min mRL Within Lease Area | 110 mRL to 71 mRL | | | | | | | | | | | | | | | | | | | | | |
| 15. | Pillar Coordinates | <table border="1"> <thead> <tr> <th>Pillar</th><th>Latitude</th><th>Longitude</th></tr> </thead> <tbody> <tr> <td>1</td><td>25°11’11.41” N</td><td>91°45’6.90” E</td></tr> <tr> <td>2</td><td>25°11’9.00” N</td><td>91°45’8.04” E</td></tr> <tr> <td>3</td><td>25°11’7.18” N</td><td>91°45’5.74” E</td></tr> <tr> <td>4</td><td>25°11’7.36” N</td><td>91°45’2.46” E</td></tr> <tr> <td>5</td><td>25°11’10.07” N</td><td>91°45’1.78” E</td></tr> <tr> <td>6</td><td>25°11’12.92” N</td><td>91°45’4.43” E</td></tr> </tbody> </table> | Pillar | Latitude | Longitude | 1 | 25°11’11.41” N | 91°45’6.90” E | 2 | 25°11’9.00” N | 91°45’8.04” E | 3 | 25°11’7.18” N | 91°45’5.74” E | 4 | 25°11’7.36” N | 91°45’2.46” E | 5 | 25°11’10.07” N | 91°45’1.78” E | 6 | 25°11’12.92” N | 91°45’4.43” E |
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| 6 | 25°11’12.92” N | 91°45’4.43” E | | | | | | | | | | | | | | | | | | | | | |
| 16. | Total Mineable Reserve | 18,66,000 tons | | | | | | | | | | | | | | | | | | | | | |
| 17. | Proposed Production / Year | 201150.00 Tons / Annum | | | | | | | | | | | | | | | | | | | | | |
| 18. | Sanctioned Period of Mine Lease | 30 years | | | | | | | | | | | | | | | | | | | | | |
| 19. | Production Of Mine/Day | 745.00 tons | | | | | | | | | | | | | | | | | | | | | |
| 20. | Method of Mining | Open Cast Semi Mechanized with Drilling and Blasting | | | | | | | | | | | | | | | | | | | | | |
| 21. | No. of Working Days | 300 | | | | | | | | | | | | | | | | | | | | | |
| 22. | Working Hours/Day | 08 hrs max, Day Time | | | | | | | | | | | | | | | | | | | | | |

| | | |
|-----|---|---|
| 23. | No. of Workers | 69 |
| 24. | No. of Vehicles Movement/Day | 4 Dumpers. |
| 25. | Type Of Land | Private Land |
| 26. | Max Depth of Mining | 55 mRL during the 5 years of the Mining Plan |
| 27. | Nearest Metalled Road From Site | 315 meters |
| 28. | Water Requirement | <u>WATER REQUIREMENT</u> 1- Drinking & Domestic 2.75 KLD 2-Dust Suppression.2.25 KLD 3-Plantation 1.00KID Total water requirement is about 6.00 KLD |
| 29. | Name of the QCI Accredited Consultant With QCI No. And Period Of Validity | GEOGREEN ENVIRO HOUSE PVT LTD, LUCKNOW NABET/EIA/1720/IA0023 Extended 8 October 2020. |
| 30. | Any Litigation Pending Against The Project Or Land In Any Court. | No |
| 31. | Proposed CER Cost | 1,10,000/- |
| 32. | Propose EMP Cost | 4,28,000/- |
| 33. | No. of trees to be planted | 300 Saplings |

The baseline data was collected for the winter season i.e. December 2019 to February 2020 in the 10 km study area. The maximum value for $PM_{2.5}$ was observed, $43.80 \mu g/m^3$ at the project site (AQ1) while 24 hours applicable limit is $60 \mu g/m^3$ for industrial and mixed use areas. The area observes average $PM_{2.5}$ concentration in the range of $35.60-43.80 \mu g/m^3$. The maximum value for PM_{10} was observed as $90.40 \mu g/m^3$ at project site (AQ1) while 24 hours applicable limit is $100 \mu g/m^3$ for industrial and mixed use areas. The area observes average PM_{10} concentration in the range of $77.80-90.40 \mu g/m^3$. The maximum value for SO_2 was observed, as

16.8 $\mu\text{g}/\text{m}^3$ at project site (AQ1) while 24 hours applicable limit is 80 $\mu\text{g}/\text{m}^3$ for industrial and mixed use areas. The average **SO₂** concentration is 12.20-16.80 $\mu\text{g}/\text{m}^3$.

The maximum value for **NO₂** was observed, as 27.3 $\mu\text{g}/\text{m}^3$ at project site (AQ1) while 24 hours applicable limit is 80 $\mu\text{g}/\text{m}^3$ for industrial and mixed use areas. The area observes average **NO₂** concentration in the range of 21.1-27.3 $\mu\text{g}/\text{m}^3$. All the villages have observed value well under the prescribed limit. The maximum value for **CO** was observed, as 496 $\mu\text{g}/\text{m}^3$ at project site (AQ1) while 08 hours applicable limit is 2000 $\mu\text{g}/\text{m}^3$ for industrial and mixed use areas. The area observes average **CO** concentration in the range of 450-496 $\mu\text{g}/\text{m}^3$ with the lowest concentration recorded at (AQ1). All the villages have observed value well under the prescribed limit.

Environmental Management Plan (EMP)

Proper environmental management plan is proposed for “Lime Stone” mining project to mitigate the impact during the mining operation.

- No labour camps will be established on site.
- No cooking, or burning of woods will be allowed in the nearby area.
- Prior to commencement of mining, a short awareness program will be conducted for labours to make them aware of way of working and various precautions to be taken while at work. Such program will be repeated occasionally.
- In the event of any some causality or injury to any animal occurs, proper treatment will be given.
- No tree cutting, chopping, lumbering, uprooting of shrubs and herbs will be allowed.
- Corridor movement of wild animals, if exists mining operations will be avoided in the area.
- It will be ensured that noise produced due to vehicles movement while carrying stone is within the permissible noise level.
- No piling of Stone will be done in adjoining area.
- If wild animals are noticed crossing the area, they will not be disturbed or chased away, instead the labors will move away from their path.

Environment Monitoring Program

| S. No. | Activity | Schedule |
|---------------------------------|---|--|
| Air Pollution Monitoring | | |
| 1. | Ambient air monitoring of parameters specified by MoEF (PM ₁₀ , SO ₂ & NO ₂). | Twice in a Year except monsoon |
| Water Quality Monitoring | | |
| 2. | Monitoring water quality surface water from the river | Twice in a Year except monsoon |
| 3. | Monitoring of one sample of tube well and open well at mine / nearby location. Parameters are essential parameters as per IS: 10500:1991. | Twice in a Year except monsoon |
| 4. | Monitoring of water spray requirements | Log-sheet of water spray will be maintained on daily basis |
| Noise Quality Monitoring | | |
| 5. | Noise in the ambient atmosphere in mining lease | Twice in a Year except monsoon |
| Greenbelt Maintenance | | |
| 6. | Monitoring schedule for Greenbelt development as per mining plan | Yearly |
| Soil Quality Monitoring | | |
| 7. | Soil at six locations | Twice in a Year except monsoon |

The proposed project is expected to provide employment to local people in different activities such as mining, sizing (sieving) transportation and plantation activities. The revenue generated from the production and sale of mineral will also add to the exchequer of government, which in turn will help in the growth of state economy. Excavated material will cater the huge increasing demand of mineral in the fast-growing construction industry of Meghalaya and nearby states etc. The project is not expected to have any major adverse impact on the environment and whatever impacts are anticipated during the EIA study will be minimized with the help of suitable mitigation measures.