



सत्यमेव जयते

Proceedings of the State Environment Impact Assessment Authority Kerala

*Present : Prof. (Dr.) K.P. Joy, Chairman; Dr. J. Subhashini, Member and Sri. P. Mara Pandiyan, I.A.S.,
Member Secretary.*

Sub: SEIAA- Environmental clearance for the quarry project in Sy. No. 52/3-1, 52/3-2, 52/3, 53/3-1, 53/3-2, 53/3, 53/4, 54/1, 54/3-3, 54/3-3, 54/4-1, 54/4, 55/4, 55/7, 57/7-1, 57/7, 57/8, 57/9-1, 57/11-1, 57/12, 60/3, 60/4-2, 60/4, 61/1 and 61/7 at Pallichal Village, Pallichal Panchayath, Neyyattinkara Taluk, Thiruvananthapuram District by Sri. Arun Varghese for M/s K. K. Rocks-Granted- Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY

No. 541/SEIAA/KL/3885/2014

dated, Thiruvananthapuram 27-04-2016

- Read:-**
1. Application dated 29-7-2014 from Sri. Arun Varghese, Managing Director, K. K. Rocks & Granites India Pvt. Ltd, Kottakkal, T.C. No. 2/3497, Pattom, Thiruvananthapuram-4.
 2. Judgment dated 24-2-2015 of the Hon: High Court of Kerala in W.P No. 2413/2015 filed by M/s K.K. Rocks & Granites (India) (Pvt Ltd).
 3. Letter dated 15-5-2015 from the Managing Director, K.K. Rocks.
 4. Minutes of the 45th meeting of SEAC held on 11/12-9-2015
 5. Judgment dated 2-11-2015 of the Hon: High Court of Kerala in W. P. No. 37207/2015 filed by M/s K.K. Rocks & Granites (India) (Pvt Ltd)
 6. Minutes of the 52nd meeting of SEAC held on 8/9-2-2016.
 7. Letter dated 2-3-2016 from the Managing Director, K.K. Rocks.
 8. Letter no. B7/37203/16 dated 3-3-2016 from the District Collector, Thiruvananthapuram.
 9. Minutes of the 51st meeting of SEIAA held on 29-3-2016

Environmental Clearance No. 43/2016.

Sri. Arun Varghese, Managing Director, K.K rocks and Granites India (P) Ltd. TC 2/3497, Kottakkal House, Pattom palace P.O., Thiruvananthapuram (D) vide his application received on 05/08/2014 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No. 52/3-1, 52/3-2, 52/3, 53/3-1, 53/3-2, 53/3, 53/4, 54/1, 54/3-3, 54/3-3, 54/4-1, 54/4, 55/4, 55/7, 57/7-1, 57/7, 57/8, 57/9-1, 57/11-1, 57/12, 60/3, 60/4-2, 60/4, 61/1 and 61/7, at Pallichal Village, Pallichal Panchayath, Neyyattinkara Taluk, Thiruvananthapuram District for an area of 7.8603 hectares. The project comes under

Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA-II (M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dtd. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. The proposed project site falls within 8028'16.36" to 80 28'02.21" Latitude and 77001'31.01" to 77001'18.87" Longitude. The land use classification as per revenue records is private own land. The lease area consists of 7.8603 hectares and mineral specific. The proposed project is for quarrying of 660,000 MTA of building stone.

BASIC INFORMATION OF THE PROJECT

2. The proposed quarry site is private land. The estimated project cost will be Rs. 4.5 Crores. The expected life of mine will be 12 years. Mining will be done by open cast semi-mechanized method of mining. The height and width of the bench will be maintained at 5-5 m. The exploitation of mineral will be done from 147 m MSL to 62 m MSL in conceptual phase. Excavated material is transported by 15T trucks/tippers to the crusher unit located within the complex for further processing. The top soil of 23,581 cu.m. will be generated from the mining operations, which will be properly stacked and will be utilized for plantation over the reclaimed areas. About 78,603 cu.m of overburden will be generated throughout the mine life. These wastes shall be utilized within the pit for laying of haul roads. At the end use, OB can be reutilized as soil base for plantation. At the end of life of mine, the reclaimed area will be suitably planted with about 8,000 trees leaving no void. The main aim of the green belt development is to restore the ecosystem to its original form to a maximum possible extent by designing the green cover with the same native species. The sewage to a tune of 0.8 KLD generated from the mine office will be diverted to the septic tank followed by soak pit. To avoid the dust generation from the drilling operations, wet drilling methods will be adopted. Periodical monitoring of ambient air, noise, water & waste water quality in and around the lease area will be carried out. The workers will be provided with personal protective equipments i.e., earmuffs, earplugs and dusk masks. Periodic health/medical checkups for all the workers as per Factories Act will be done to ascertain good health and safety.

3. As a part of corporate social responsibility, it is proposed to spent about Rs. 19,95,000/- (Recurring = Rs. 12,82,500/- + Non Recurring = Rs. 7,12,500/-) for various local development activities in consultation with local village authorities. About Rs. 9 lacs per annum is proposed to be spent for the environment protection programme / measures. Due to the proposed project the surrounding environment will not face any problem related to pollution. The Environmental Action Plan (EAP) will be strictly followed for abating the pollution.

4. OTHER DETAILS OF THE PROJECT PROPOSAL

1.	Category/Sub category & Schedule	Category B2, 1(a), (i)
2.	Distance of the mining area from the nearest human settlement	103 m E

3.	Right & nature of ownership of land	Private land.
4.	Is the property forest land/govt. land/own land	Private own land
5.	Extent of land in hectares	7.8603
6.	Proposed production capacity	660,000 MTA,
7.	Ultimate depth of mining (in MSL)	65 m MSL,
8.	Quantity of topsoil estimated to be removed	23581 m ³ ,
9.	Method of mining	Open cast mining.
10.	Underground mining if any proposed	No
11.	Details of Authorised Signatory	Sri. Arun Varghese Managing Director, K.K rocks and Granites India (P) Ltd. TC 2/3497, Kottakkal House, Pattom palace P.O., Thiruvananthapuram (D) Ph:09447064649 E-mail: kkrocksindia@gmail.com
12.	Details of NABET approved EIA consultant organisation	M/s Environmental Engineers & Consultants Pvt.Ltd, A-1-198, JanakPuri, New Delhi, 11058. Sr. No. 54 Rev.33 (August 05, 2015)

5. The proposal was considered in the 45th meeting of SEAC held on 11-12 of September 2015 and deferred the proposal for field visit and intimated the proponent to submit the following documents.

1. Copies of the documents produced for certification of mining plan.
2. Copies of details regarding the court cases and orders issued by government regarding the mining of quarries at Mookkunnimala.
3. The letter of intent as per the provisions of KMMC rules 2015.

6. The field visit to the quarry was carried out on 22/1/2016 by the sub-committee of SEAC, Kerala, comprising Dr. George Chakkacherry, Sri. Ajaya Kumar and Sri. John Mathai. The Proponent Sri Arun Varghese along with his team was present at the site. The report is as follows:

"The project is located at about one km south of Malayam and more than 250 m east of Air force station. This quarry lease area of 7.86 ha falling in proponents own land occupy the eastern slopes of Mukkunni Mala exposing hard rock. The area demarcated with pillars with distinctive numbers along with GPS coordinates is a well-developed quarry with benches especially in the western part. The quarry pit includes the excavated parts of Govt. poramboke land (Sy no. 52/2 and 53/2) that was operated with NOC (to be verified) and permits. The eastern part closer to the public road is yet to be quarried. The rock type is a mixture of leucocratic gneiss and charnockite. Pockets of weathered rock with about 1 m thick over burden (OB) and top soil is seen interspersed with rock out crops. The drainage from the elevated

land is channelized through abandoned pits into the culvert on the MLA road. The water let out was found to be turbid at the time of inspection. Abandoned pits are presently used as RWH structures. Rubber plantation is the dominant land use. Floral biodiversity is not observed as the area is considerably disturbed. No dwelling units were observed on the western side of MLA road. Three other quarries are functioning within 500m but the total area as estimated from satellite image is less than 25 ha.

Based on an overall evaluation of the site, the quarry operations may be recommended with following conditions:

1. Fragments of Govt. Poramboke land seen interspersed within the proposed lease area should be included in the quarry land (to be taken as a whole unit). Relevant clearances may be obtained from Revenue authorities.
2. The western part of the quarry is completely exploited with benches and must be left for eco-restoration.
3. A clear buffer distance of 100 m should be provided from the MLA road to the quarry face.
4. Considering the topography catch water drain should be provided along the eastern boundary. Turbid water presently let out should be clarified by suitable mechanism before it is let out.
5. The old pits that collect water should be maintained as RWH structures.
6. Ultimate depth of the quarry should be above the road level."

7. The proponent has also submitted the documents sought by 45th meeting of SEAC. Hence the proposal was again considered by SEAC in its 52nd meeting held on 8/9-02-2016. The subcommittee during its filed visit observed that the area included in the proposal is interspersed with about 5 bits of revenue land. The Committee also observed that the mining operation has been already done in these bits and therefore, the proponent has to revise the mining plan including the above bits of land with relevant clearance from Revenue Department. As regards the nature of assignment of the land it is observed that the Honourable High Court in its judgement dated 2/11/2015 directed the Geology Department to issue permission for quarrying. However SEIAA was not a party to above WP(C) No. 32207 dated 2/11/2015. Meanwhile SEIAA may examine this aspect and take necessary decision. The Secretariat may also contact the District Collector and ascertain whether there is a general ban on quarrying in Mookkunnimala area.

8. Accordingly it was got clarified by the District Collector Thiruvananthapuram that at present there is no ban imposed by revenue authorities on mining in Mookkunnimala area. It has also been informed that on enquiry through the V& ACB Department, it has been revealed that Government has incurred heavy loss owing to the illegal quarrying in Government lands. Instructions have been given to V&ACB and Survey Department to demarcate the private land s and government lands.

9. Pursuant to the decision of SEAC in its 52nd meeting , the proponent has represented that they have 24.00 ha of patta land in the site out of which only 7.86.03 ha is proposed to be used for quarrying as [per the mining plan submitted. In between there are 5

bits of government lands in which 2 are suitable for mining. As they have no N.O.C at present these bits are excluded from the mining plan. It is stated that NOC for the govt. lands would be available only if and after E.C is obtained for the own lands! Without NOC, M& G Department will not issue lease for the Govt. land, whereby revised Mining plan with the Govt. land included for quarrying as proposed by SEAC will not be approved. They have also submitted a sworn affidavit that they will conduct quarrying operations in their patta land only as per the Mining Plan already submitted, and that quarrying in government lands will be done only after obtaining NOC from the authorities concerned.

10. The matters of the proposal as reported by the SEAC were examined by the authority in its 51st meeting held on 29-3-2016. The issue related to the functioning of this quarry had been examined by the Hon. High Court of Kerala, District Collector Thiruvananthapuram, M&G Department, District Law Officer, Thiruvananthapuram, and Tahsildar, Neyyattinkara, The main Writ Petitions and decisions therein are as follows:

Writ Petition No.	Date of Judgment	Petitioner	Decision
10238/12	23-5-2012	Proponent	Interim order to conduct mining in Sy.No.61/4,49/3, and 54/1 of Pallichal village under permit.
22766/14	29-8-2014	Proponent	SEIAA to consider application if otherwise in order, to take up either on 2-9-2014 or 3-9-2014.
2413/15	24-2-2015	Proponent	Ban order of D.C. If there is encroachment, it is always open for the concerned authorities to intervene at any stage, taking appropriate steps in accordance with law. If the petitioners are otherwise eligible to carry out operations in accordance with law.
27137/15	22-9-15	Preeth.M, Aswathy Bhavan, Machel, Thiruvananthapuram.	Filed challenging operations of the quarry. If the proponent didn't obtain E.C, the District Geologist should ensure that activities of the quarry based on the permit are stopped forthwith.
23995/15	7-8-2015	Proponent	Non consideration of application for E.C. Disposed of as per Judgment in W.P No 22768/13. Petitioner has not taken steps to file contempt against that order. This court is not inclined to pass orders one after another directing the very same relief. Closed. Application will have to be considered.

32207/15	2-11-2015	Proponent	Against action of Geologist in having called for certificate showing that the land is not assigned for special purpose .The application shall be considered if otherwise satisfies the eligibility for quarrying permit , <i>dehors</i> the fact that , it has been assigned by Government for rubber cultivation. The petitioner need not produce any certificate showing that it has been assigned for special purpose in the light of the fact that quarrying lease was given as per Ext.P1 and by other leases.
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11. The Court has finally settled the issue regarding land and the legality of the land for quarrying. The contention of the proponent that the assignment deeds themselves contain a clause wherein the right of the Government over the mines and quarries subjacent to the lands are reserved for the Government and the Government in exercise of its sovereign power decided to grant quarrying lease /permit on the basis of the said reserved right, has since been upheld by the Hon. High Court. Quarrying in patta lands is thus rendered legal if carried out under lease or permit issued under mining rules, even if the land is assigned for rubber cultivation.

12. Smt. Latha. S. Aswathy Bhavan, Machel, Mookkunnimala has petitioned the Authority that the quarrying by the proponent is illegal and he is conducting mining in 100 survey numbers though permit is only for two survey numbers. She has also complained that the waste water from the quarry/crusher is polluting the stream nearby and her well. Permits have been granted by Mining & Geology Department in respect of Government land also without N.O.C of the revenue authorities and without N.O.C of the Air Force which has a facility nearby. They had filed W.P No. 27137/15 in which the Hon. High Court has directed that, if the proponent didn't obtain E.C, the District Geologist should ensure that activities of the quarry works based on the permit are stopped forthwith. But the District Geologist did not implement the order so far. A report of the District Law Officer Thiruvananthapuram on the said complaints has also been produced in which the recommendation was to forward the complaint to the District Geologist for urgent enquiry and immediate action with assistance of Police.

13. It is on 22-1-2016 that the subcommittee of SEAC visited the site. The report does not say anything in support of Smt. Latha's complaints except proximity to the Air Force Station. The recommendation of the 52nd meeting of SEAC held on 8/9-2-2016 was to include the interspersed Government land for E.C with clearance of revenue authorities and to ascertain whether there is general ban on quarrying in Mookkunnimala area. It is clarified in the judgment 2nd cited that, if there is encroachment, it is always open for the concerned authorities to intervene at any stage, taking appropriate steps in accordance with law, if the petitioners are otherwise eligible to carry out operations in accordance with law. The District Collector Thiruvananthapuram has informed that that the temporary ban imposed on 19-1-2015

expired in 2/2015 itself. In the enquiry conducted by the Vigilance & Anti-Corruption Bureau, in the cases pending in NGT and High Court it has been revealed that Government has suffered heavy loss due to the illegal rock mining and therefore directions have been given for demarcation of Government land and private land. In pursuance of the recommendations of SEAC the project proponent represented to the Authority that out of 24 .00 ha of patta land they have at the site, only 7.86.03 ha as per the approved mining plan is proposed for mining. In between there are 5 bits of Government lands out of which only 2 are suitable for mining. As they do not have N.O.C of revenue authorities, and N.O.C will not be granted without E.C, and mining plan with the Government land therein will not be approved by the Mining & Geology Department these bits are excluded from mining. The proponent has filed a notarised affidavit to the effect that they will conduct quarrying operations of granite building stones from their patta land only as per Mining Plan and that they will conduct quarry operations in the Government land only after obtaining necessary N.O.C from the authorities concerned.

14. No major environmental issues have been pointed out by SEAC. That the interspersed Government lands have not been included in the mining plan does not appear to be an impediment in grant of E.C. There is no ban on quarrying at the site. SEIAA therefore decided to grant E.C to the quarry with the following specific conditions.

1. The proponent shall obtain N.O.C of the respective authorities referred to above, for conducting quarrying operations at the site as per the conditions in the E.C and Mining Plan.
2. The 5 bits of interspersed government lands shall be left untouched with buffer distance as per the Mining Plan.
3. The quarrying operations should not affect the 'Arumath' stream nearby and no waste water shall be let out. Effluent water shall conform to standards as undertaken in the Environment Management Plan.
4. Proper garland drains, slit traps, dust suppression measures noise reduction measures etc. will be mandatory so that human habitations are least affected.
5. As applied for and approved the lease area will be 7.86.03 ha with production limit of 660,000 MTA MTA.
 - a. Land use within the lease area during mining will be as follows:

b. Pit	7.0003 ha (reclaimed by plantation)
c. Green belt	0.086 ha
d. Road	nil
e. Undisturbed	nil
f. Total	7.8603 ha
6. The boundaries of the lease area shall be properly demarcated and the geographic coordinates conspicuously exhibited on boards clearly visible.
7. Life of mine is expected to be 12 years.
8. The bench height will be maintained at 5m and width 6m.
9. At the end of the life of the mine, excavated pit (7.0003ha) will be fully reclaimed and rehabilitated by plantation, leaving no voids.
10. The topsoil excavated (23,581cu.m) from the quarry will be dumped separately at predetermined place and utilised for spreading over the reclaimed areas for plantation. OB will be utilised for laying internal haul roads and reclamation.

11. Mining, blasting, mine drainage; stacking of mineral rejects and disposal of wastes environmental management and progressive mine closure shall be strictly in accordance with the documents submitted to SEIAA.
12. Controlled blasting should be carried out by adopting all safety measures as per 'MMR 1961' and with the permission of DGMS.
13. Blast timings should be restricted to the times of least traffic as 11- 11.30 am and 2- 2.30pm.
14. CSR activity must be conservation oriented in consultation with the Bio Diversity Management Committee of Pallichal Grama Panchayat.
15. At the end of mining, the total mined area should not exceed 7.0003ha.
16. The quarry shall not function between 6.00 p. m. and 8.00 a. m. If the timing condition fixed by the PCB is more stringent that will prevail.
17. Blasting shall be strictly in accordance with the conditions of the Mine Safety Directorate and Chapter 5 of the Mining Plan submitted.
18. The above conditions shall be without prejudice to compliance of more stringent conditions as may be stipulated as per any other statutory requirements or government orders and in such situations the more stringent conditions will prevail.

15. Environmental clearance under the EIA notification 2006 is therefore granted to the quarry project in Sy. Nos. 52/3-1, 52/3-2, 52/3, 53/3-1, 53/3-2, 53/3, 53/4, 54/1, 54/3-3, 54/3-3, 54/4-1, 54/4, 55/4, 55/7, 57/7-1, 57/7, 57/8, 57/9-1, 57/11-1, 57/12, 60/3, 60/4-2, 60/4, 61/1 and 61/7 at Pallichal Village, Pallichal Grama Panchayath, Neyyattinkara Taluk, Thiruvananthapuram District, for an area of 7.8603 hectares subject to the specific conditions in para 10, the general condition appended and the mitigation measures undertaken in the EMP in the PFR and Mining plan submitted.

16. Before granting consent to operate, the Kerala State Pollution Control Board shall ensure that the condition precedents to be complied with as in the specific and general conditions. The proponent shall submit notarized affidavit to the effect that the above specific conditions, the general conditions in the appendix and the conditions in para 13 below will be adhered to till the life of the mine as now estimated

17. The clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures in the Environment Management Plan in chapter 4 of the Pre-Feasibility Report and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The above undertakings and the conditions and undertakings in Chapter 4(Mining), Chapter 5 (Blasting), Chapter 6 (Mine Drainage), Chapter7 (stacking of mineral rejects and disposal of wastes) Chapter 11 (EMP) of the Mining Plan and the entire Progressive Mine Closure Plan (Chapter 12) as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

18. Validity of the environmental clearance will be five years form the date of this clearance, subject to para 10 (1) and earlier review in the event of violation or non-compliance of any of the conditions stipulated herein, or on genuine complaints from residents within the security area of the quarry.

19. Compliance report on the EMP and the continuing specific and general conditions shall be submitted to the Authority once in six months till the validity of the E.C expires. Breach of this condition shall entail cancellation of the E.C.

20. Compliance of the conditions herein will be monitored by the Authority or its agencies at occasions as may be decided by the Authority, and also by the regional office of the Ministry of Environment & Forests, Govt. of India, Bangalore.

- i. Necessary assistance for entry and inspection should be provided by the project proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring.
- ii. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram to take legal action under the Environment (Protection) Act 1986.
- iii. The given address for correspondence with the authorized signatory of the project is:
Sri. Arun Varghese,
Managing Director,
K. K. Rocks and Granites India Pvt. Ltd.,
TC 2/3497, Kottakkal House,
Pattom Palace P.O.,
Thiruvananthapuram, Kerala.
Ph: 09447064649,
E-mail: kkrocksindia@gmail.com.
- iv. Accredited Consultant : M/s Environmental Engineers & Consultants Pvt. Ltd,
A1-198, Janak Puri,
New Delhi, 11058.

Sd/
P. Mara Pandiyan., I.A.S
Member Secretary (SEIAA)
&
Additional Chief Secretary to Government
Environment & Forest Department
Government of Kerala.

To,

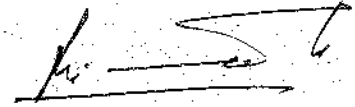
Sri. Arun Varghese,
Managing Director,
K. K. Rocks and Granites India Pvt. Ltd.,
TC 2/3497, Kottakkal House,
Pattom Palace P.O.,
Thiruvananthapuram, Kerala.



Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E& F Wing, II block, Koramangala, Bangalore-560034.
2. Principal Secretary to Government, Environment Department.
3. Member Secretary, Kerala State Pollution Control Board, Pattom, Thiruvananthapuram.
4. The District Collector, Thiruvananthapuram.
5. The Director, Department of Environment & Climate Change.
6. The Director, Mining and Geology Department, Kesavadasapuram, Thiruvananthapuram-4
7. The Secretary, Pallichal Grama Panchayat, Vedyechanacovil P.O, Thiruvananthapuram-695020
8. Chairman, SEIAA
9. E.C File
10. Stock File
11. O/C.

Forwarded/ By order



Administrator
SEIAA

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

GENERAL CONDITIONS (for mining projects)

1. Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.
2. Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.
3. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
4. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
5. Sprinklers shall be installed and used in the project site to contain dust emissions.
6. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
7. At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco-friendly, if no other specific condition on reclamation of pit is stipulated in the E.C.
8. Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
9. **The lease area shall be fenced off with barbed wires to a minimum height of 4ft around, before starting of mining. All the boundary indicators (boards, stores, markings, etc) shall be protected at all times and shall be conspicuous.**
10. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
11. Control measures on noise and vibration prescribed by KSPCB should be implemented.
12. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
13. Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
14. A licensed person should supervise/ control the blasting operations.
15. Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.
16. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
17. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention is the mining plan/specific condition.
18. Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
19. Maximum depth of mining from general ground level at site shall not exceed 10m
20. No mining operations should be carried out at places having a slope greater than 45°.
21. Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.
22. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
23. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
24. The transportation of minerals should be done in covered trucks to contain dust emissions.
25. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
26. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.
27. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
28. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
29. 100 m buffer distance should be maintained from forest boundaries.

30. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.
31. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.
32. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority.
33. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
34. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
35. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
36. A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/ District Panchayat/ Municipality/Corporation/Urban Local Body and also to the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.
37. The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office.
38. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public
39. The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.
40. No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.
41. The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.
42. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
43. The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.
44. Catch drains and siltation ponds of appropriate size shall be constructed around the mine

- working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
45. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM_{10} and $PM_{2.5}$ such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
 46. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
 47. Measures should be taken for control of noise levels below 85 dBA in the work environment.
 48. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
 49. The funds earmarked for environmental protection measures and CSR activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.
 50. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.
 51. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
 52. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 53. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or this implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
 54. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license or consent given by any other authority for the same project.
 55. This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Government of Kerala, whichever is earlier.
 56. The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.
 57. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
 58. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area.
 59. Project proponent should obtain necessary prior permission of the competent authorities for drawal of requisite quantity of surface water and ground water for the project.
 60. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.
 61. Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.


For Member Secretary, SEIAA Kerala

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21.04.2017
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