



## ***Proceedings of the State Environment Impact Assessment Authority Kerala***

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

**Sub: - SEIAA- Environmental Clearance for the quarry project in Sy.No.288/1pt Block-32,  
Koodal Village, Konni Taluk, Pathanamthitta District by M/s.Crescent Particles  
Pvt.Ltd –E.C. Granted- Orders issued.**

### **STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY**

**No. 733/SEIAA/KL/06/2015**

**Dated, Thiruvananthapuram 16/01/2017**

- Read:-**
1. Application dated 05/01/2015 submitted by Mr.Anwar Hussain Rawther M/s Crescent Particles Pvt.Ltd. Thyvilayil, Kollakadavu Post, Chengannur, Alappuzha District – 690 509.
  2. Minutes of the meeting of 56<sup>th</sup> SEAC held on 6/7-06/2016.
  3. Minutes of the meeting of 55<sup>th</sup> SEIAA held on 16<sup>th</sup> July 2016.
  4. Minutes of the meeting of 61<sup>st</sup> SEAC held on 11/08/2016
  5. Minutes of the meeting of 62<sup>nd</sup> SEAC held on 6/7-9-2016.
  6. Minutes of the meeting of 60<sup>th</sup> SEIAA held on 27<sup>th</sup> October 2016.

### **Environmental Clearance No.10/2017**

Sri. Anwar Hussain Rawthar, M/s Crescent Particles Pvt. Ltd, Thyvilayil, Kollakadavu P.O., Chengannur, Alappuzha District, vide his application received on 05-01-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No.288/1pt Block -32, at Koodal Village, Konni Taluk, Pathanamthitta District, Kerala for an area of 1.82 hectares. The project comes under Category B/B2, 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 18<sup>th</sup> 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) dt. 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 Latitude 09°08'30.0"N and Longitude 76°54'01.9"E. The land use classification as per revenue records is **Government Land** with

rock and bushes. The lease area consists of 1.82 hectares. The current proposal is for new quarry and mineral specific. Hence no alternate site was examined. Forest land is not involved in the project site. The proposed project is for quarrying of 16625 m<sup>3</sup> per annum of building stone. No top soil is removed from the project site since the area is rocky. About 7484 m<sup>3</sup> of over burden and rejected rocks will be generated during the mining operations. The expected life of mine will be 10 years. The total water requirement is 6 KLD, of which 2 KLD for domestic and drinking purpose, and 4 KLD for dust suppression/green belt. There is an open well in the project site will be the source of water. *The proposed site falls in the Zone-III, moderate damage risk zone as per BMTPC, vulnerability Atlas seismic zone of India IS: 1893-2002.* Achenkovil Forest is situated at a distance 3km east from the project site. Other details of the project are as under:

|   |  |   |                             |
|---|--|---|-----------------------------|
| File No.  |  | 733/SEIAA/KL/06/2015  |                             |
| Name of project                                     |  | Building Stone Quarry Project by M/s. Crescent Particles Pvt. Ltd.  |                             |
| Brief description of the project                    |  | Building stone quarry in an area of 1.82.00 Hectares at Koodal Village, Konni Taluk, Pathanamthitta District, Kerala with maximum rate of production 16625 m <sup>3</sup> / annum.  |                             |
| Category/Subcategory & Schedule                     |  | Category 'B' / Subcategory B2 & Schedule 1(a)   |                             |
| Location Sy no/ district, Taluk/ village etc.       |  | Sy. Nos. 288/1 pt Koodal Village, Konni Taluk, Pathanamthitta District.   |                             |
| GPS co-ordinates                                    |  | Latitude (N)  | 09°08'28.7"N - 09°08'32.7"N |
|   |  | Longitude (E)   | 76°53'58.3"E - 76°54'04.9"E |
| for Mining projects                                 | Extent of area (in hectares)                   | 1.82.00 Ha  |                             |
|   | Minimum and maximum height of excavation (MSL) | 205-155 m RL  |                             |
|   | Life of mine proposed                          | 5 Years   |                             |
|   | Ultimate depth of mining (in MSL)              | 50 m  |                             |
|   | Distance from the adjacent quarry              | 0.30 km, North  |                             |
|   | Capacity of production                         | 16625 m <sup>3</sup> / annum or 41562 TPA   |                             |
|   | Details of project cost                        | 45.20 Lakhs   |                             |
| EnvtMgmt plan/ Eco restoration plan (brief details) | <b>MANAGEMENT PLAN:</b>                        |   |                             |
|   | Air pollution                                  | <ul style="list-style-type: none"><li>➤ Water sprinkling will be done by water tanker fitted with water pump to reduce generation of dust during loading.</li><li>➤ Dust masks will be provided to operators and other persons near loading.</li><li>➤ Green belt will be developed around the mine lease boundary in order to reduce spread of air pollution and plantation will be done around mine office, haul road, etc to control dust pollution.</li></ul> |                             |

|  |                               |  |
|--|-------------------------------|--|
|  | <b>Water pollution</b>        | <ul style="list-style-type: none"> <li>➤ No waste water generation is envisaged during the mining process. The domestic effluent generated from the mine office, will be disposed off in soak pits via septic tanks.</li> <li>➤ Water will be stored in the pit required for irrigation of plants, spraying water on roads and other miscellaneous purposes by diverting direction of the garland drain towards pit when required</li> </ul> |
|  | <b>Noise</b>                  | <ul style="list-style-type: none"> <li>➤ Green belt will be developed around the mine lease boundary in order to reduce noise pollution in the surroundings.</li> <li>➤ Controlled Blasting will be carried out to minimize noise generation. Blasting will be done in day time.</li> <li>➤ Drilling will be done with sharp drill bits, which reduces generation of noise during drilling.</li> </ul>                                       |
|  | <b>Solid Waste Management</b> | <ul style="list-style-type: none"> <li>➤ Solid waste will be disposed or utilized for filling excavated areas, road construction and artificial soil for greenhouse pot trails for grass &amp; tree growth at mining area.</li> </ul>  |
|  | <b>Eco restoration</b>        | <ul style="list-style-type: none"> <li>➤ Green belt will be developed around the mine lease boundary, around mine office, haul road, etc to restore the ecology and aesthetics of the mine site.</li> </ul>  |

#### **ABOUT THE PROJECT**

| <b>Environmental parameters considered</b>   | <b>Description</b>   |
|--|--|
| <b>WATER</b>   |  |
| Water requirement & sources  | 6.0 KLD & Open well near site  |
| RWH units proposed   | Existing pit will be utilized as rain water reservoir.   |
| Facilities for liquid waste treatment  | Domestic wastewater generated will be treated through the septic tank followed by soak pit.  |
| Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers? | --   |
| Water quality meeting requirements   | Water quality to meet requirements as per rules after the treatment of water (filtration, disinfection & sedimentation), to let out from the site. |
| Does it have provisions for use of recycled water  | --   |
| <b>LAND</b>  |  |
| Proximity to forest lands  | None within the study area.  |
| Access road to the site – Width & Condition  | Width of the access road to site is 8m   |
| Storage of explosives /hazardous substances  | Explosives will be stored as per the Indian Explosive  |

|   |  |         |  |                      |                     |
|---|--|---------|--|----------------------|---------------------|
|   | Act 1958 & explosive rules 1983.   |         |  |                      |                     |
| Facility for solid waste management   | It is proposed to stack initially along the lease boundary and will be backfilled finally within the mine lease area                               |         |  |                      |                     |
| Topographic features/ slope   | Topography of the area is hilly terrain.   |         |  |                      |                     |
| Proneness of the area for landslides  | Site area fall under Seismic Zone III. It is not a landslide prone area.   |         |  |                      |                     |
| Significant land disturbance resulting in erosion, subsidence & instability | Due to excavation, significant land disturbance will occur.  |         |  |                      |                     |
| Top soil, overburden etc.   | Over burden 3525 m <sup>3</sup> will be generated during the mining period. It will be stacked separately & backfilled at the end of life of mine. |         |  |                      |                     |
| AIR   |  |         |  |                      |                     |
| Air quality meeting requirements  | Air quality to meet requirements as per rules.   |         |  |                      |                     |
| Noise level meeting requirements  | Noise levels to be within limits as per rules.   |         |  |                      |                     |
| Likely emissions affecting environment                                      | There will not be any other major emissions  |         |  |                      |                     |
| ENERGY  |  |         |  |                      |                     |
| Energy requirement  | 50 KW which will be sourced from KSEB  |         |  |                      |                     |
| Energy sources  | Diesel   |         |  |                      |                     |
| Extent of usage of alternative energy resources                             | ---  |         |  |                      |                     |
| BIODIVERSITY  |  |         |  |                      |                     |
| Presence of any endangered species or red listed category                   | ---  |         |  |                      |                     |
| Loss of native species and genetic diversity                                | The proposed mining activity involves clearing of minor shrubs and weeds and does not cause loss of native species or genetic diversity.           |         |  |                      |                     |
| Likely displacement of fauna  | There will not be any major displacement of fauna  |         |  |                      |                     |
| Any introduction of alien / invasive species                                | The proposed mining activity does not introduce any alien species.   |         |  |                      |                     |
| SOCIAL ASPECTS  |  |         |  |                      |                     |
| Proximity to nearest habitation   | Mancode – 1.2 km, S  |         |  |                      |                     |
| CSR related to the project/ allocation/ time frame (details mandatory).     | S. No  | Year    | Description  | Cost / Annum (Lakhs) | Total/ Year (Lakhs) |
|   | 1  | 2016-17 | Providing Sanitary Facilities to Mancode Govt. Higher secondary School | 2                    | 2                   |
|   | 2  | 2017-18 | 1.Books, Training, Scholarship in the name National Leaders            | 1                    | 1.5                 |
|   |  |         | 2. Health Care to the villages in buffer zone                          | 0.5                  |                     |

|   |   |         |  |           |           |
|---|---|---------|--|-----------|-----------|
|   | 3 | 2018-19 | 1.Books, Training, Scholarship in the name of National Leaders   | 1         | 1.5       |
|   |   |         | 2. Health Care to the villages in buffer zone  | 0.5       |           |
|   | 4 | 2019-20 | 1.Books, Training, Scholarship in the name of National Leaders   | 1         | 1.5       |
|   |   |         | 2. Health Care to the villages in buffer zone  | 0.5       |           |
|   | 5 | 2020-21 | Maintenance of Mancode - Athirumkal village road or Providing funds to local body or Prime Mininisters' fund on Socio economic Development and relief measures | 3.5       | 3.5       |
|   |   |         | <b>Total</b>   | <b>10</b> | <b>10</b> |
|   |   |         |  |           |           |
| <b>GENERAL</b>  |   |         |  |           |           |
| Litigation/court cases, if any, against the project (provide details) |   |         | Nil as declared  |           |           |
| Right & nature of ownership of land                                   |   |         | Govt Land on lease   |           |           |
| Is the property forest land/govt. land/own land                       |   |         | Govt Land on lease   |           |           |
| Details of Authorised Signatory                                       |   |         | Sri. Anwar Hussain Rawther<br>M/s. Crescent Particles Pvt. Ltd.,<br>Thyvilayil, Kollakadavu Post,<br>Chengannur,<br>Alappuzha Dist – 690 509.                  |           |           |

2. The proposal was considered in the 56<sup>th</sup> Meeting of SEAC held on 6<sup>th</sup> & 7<sup>th</sup> June 2016. The Committee appraised the proposal based on the Mining Plan, Prefeasibility report and all other documents submitted along with the Form I application and decided to recommend for issuance of EC for mining subject to the general conditions and to the specific condition that they should submit the revised CSR. The proponent submitted revised CSR as per the decision taken by 56<sup>th</sup> SEAC.
3. The proposal was considered in the 55<sup>th</sup> meeting of SEIAA held on 16/07/2016. The SEIAA saw that site inspection was not conducted by SEAC. It was decided to get Site Inspection conducted by SEAC and to obtain report within a month.
4. The proposal was again considered in the 61<sup>st</sup> meeting of SEAC held on 11/08/2016. As per the instruction of the SEIAA the Committee decided that the South subcommittee of SEAC shall conduct the field visit and report within a month.

The report is as follows:

Field visit to the quarry project site of Sri. Anwar Hussain Rawthar at Koodal Village, Konni Taluk, Pathanamthitta District, Kerala was carried out on 30.08.2016 by Sri. John Mathai, Member, SEAC along with Dr. K. Sreedharan from DoECC.

*"The project site is located at about 5 km East of Koodal on the Punalur-Muvattupuzha road. The access to this site is through a kutchra road connecting the Rajagiri estate roads. This quarry lease area in Govt. land occupies the eastern part of the south facing slope of a large hill ridge exposing hard rock almost in continuous segments. A quarry was operational in this area by the proponent with lease till 2012. The north facing slope is under the lease hold of Vajra granites for which EC was granted earlier. Boundary points of the proposed lease area of 1.82 ha are marked in paint on the rock surface. Permanent boundary pillars are to be erected and entire area to be fenced. Old working faces is not steep but are not provided with benches. Rock has been quarried only till the ground level. The rock type is variants of banded gneiss with charnockite patches. The storm water from the entire area flows as overland flow and gets collected in the flat land of the old working and is further channelized through the rubber plantation on the south belonging to the proponent. The area being rocky is almost devoid of any OB. Isolated patches of grass or shrub are seen in the rocky area. Dwelling units are not seen in the vicinity. The unit is not planning to build a crusher unit.*

*Based on an overall evaluation of the site it can be recommended for EC with the condition that:*

- All the boundary pillars must be erected permanently and fenced all along the boundary and reported.*
- Catch water drain leading to a RWH must be provided on the southern periphery to channelize the storm water, clarify it and to conserve part of it for use in the site.*
- The approach road should be provided with good surfacing.*
- A small plot is to be set apart in the lower part for conservation of rare plants seen in the area.*
- Ultimate depth of mining to be limited to the stream bed level on the southern side of the approach road."*

5. The proposal was placed in the 62<sup>nd</sup> meeting of SEAC held on 6/7-9-2016. The Committee after examining the mining plan, prefeasibility report, field inspection report by Sri. John Mathai and all other documents submitted decided to Recommend for issuance of EC subject to following general conditions and specific conditions

1. All the boundary pillars must be erected permanently.
2. Catch water drain leading to a RWH must be provided on the southern periphery to channelize the storm water, clarify it and to conserve part of it for use in the site.

3. The approach road should be provided with good surfacing.
6. SEIAA in its 60<sup>th</sup> meeting held on 27<sup>th</sup> October 2016 resolved to issue Environmental Clearance on condition that mining shall be started only after the fulfilment of the specific condition No 1 and 3 as pre mining conditions, and an affidavit should be given to this effect.
7. The proponent has submitted the Affidavit specific to the above condition No 1 & 3. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed Quarry project in survey No. S.F.No.288/1pt Block-32, Koodal Village, Konni Taluk, Pathanamthitta District by Sri. Anwar Hussain Rawthar M/s. Crescent Particles Pvt.Ltd - subject to the specific conditions stipulated in para 5& 6, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I and other documents submitted to SEIAA , the mitigation measures proposed in the table in para 1 above. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining, appended hereto will be applicable and have to be strictly adhered to.
8. The clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan 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 of Mining plan (Mining), Chapter 9 (EMP) of the Mining Plan and Chapter 5 of Mining plan (Blasting) and the entire Progressive Mine Closure Plan as submitted will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.
9. Validity shall be five years subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of conditions or genuine complaints from residents within the security area of the quarry. Environmental Clearance is therefore granted to the quarry project of Sri. Anwar Hussain Rawther M/s. Crescent Particles Pvt. Ltd., in S.F No. 288/1pt, at Koodal Village Konni Taluk, Pathanamthitta District, Kerala for an area of 1.82 hectares subject to specific condition in para 5 above and addition the general conditions annexed hereto.

10. Compliance of the conditions herein will be monitored by the Authority or its agencies and also by the regional office of the Ministry of environment & forests, Govt. of India, Bangalore.
- 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.
  - Instances of violation if any shall be reported to the District collector, Pathanamthitta to take legal action under the Environment (Protection) Act 1986.
  - The given address for correspondence with the authorised signatory of the project is Sri. Anwar Hussain Rawther M/s. Crescent Particles Pvt. Ltd., Thyvilayil, Kollakadavu Post, Chengannur, Alappuzha Dist.
  - Clearance is therefore granted to the quarry project of S.F No. 288/1 at Koodal Village, Konni Taluk, Pathanamthitta District, Kerala for an area of 1.82 hectares subject to specific condition in para 5& 6 above and addition the general conditions annexed hereto.

Sd/-

V.S. SENTHIL, I.A.S.,  
Member Secretary (SEIAA)

Copy to:-

Sri. Anwar Hussain Rawther  
M/s. Crescent Particles Pvt. Ltd.,  
Thyvilayil, Kollakadavu Post,  
Chengannur,  
Alappuzha Dist - 690 509.

- MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> Floor, E& F Wing, II block, Koramangala, Bangalore-560034.
- Additional Chief Secretary to Government, Environment Department.
- The District Collector, Pathanamthitta
- The Director, Mining and Geology Department, Kesavadasapuram, Thiruvananthapuram-4
- The Secretary, Kalanjoor Village Panchayat, Konni Taluk, Pathanamthitta District - 689 694.
- Chairman, SEIAA
- E.C File
- Stock File
- ✓ 9. Website
10. O/C.



Forwarded/By Order

*Rajendran*  
Administrator (SEIAA)



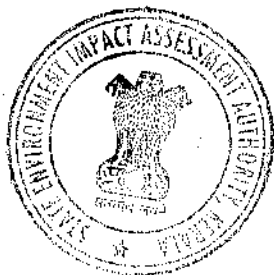
# STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

## 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 proponents 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](http://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<sub>10</sub> and PM<sub>2.5</sub> 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 on 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.



*Rajeshwar*

For Member Secretary, SEIAA Kerala