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Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA - Environmental Clearance for the quarry project in Sy. No. 164/1-1 (1), 164/1-1(2), 164/1-20, 164/1-21, 164/1-22, 164/1-23, 164/1-24, 197/1, 197/2-2, 197/2-3, 200/1-1, 200/1-2, 200/1-3, 200/3-2, 200/4-2, 200/5 and 200/12 of Ayyampuzha Village, Aluva Taluk, Ernakulam district, Kerala by Sri. Joji P.L., M/s. Star Granites - Granted – Orders issued.

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 759/SEIAA/KL/436/2015

Dated, Thiruvananthapuram 17.03.2018

- Ref: 1. Application received on 09.02.2015 & 29.12.2015 from Sri. Joji P.L., Partner, M/s. Star Granites, Thattupara, Chully P.O, Angamaly, Ernakulam District, Kerala – 683 594
2. Minutes of the 54th meeting of SEAC held on 6th & 7th April, 2016.
 3. Minutes of the 62nd meeting of SEAC held on 6th & 7th September 2016
 4. Minutes of the 73rd meeting of SEAC held on 30th & 31st May 2017
 5. Minutes of the 72nd meeting of SEIAA held on 01st August 2017
 6. Minutes of the 73rd meeting of SEIAA held on 15th September 2017
 7. Minutes of the 76th meeting of SEIAA held on 16th November 2017.
 8. Minutes of the 79th meeting of SEIAA held on 09th January 2018.
 9. Minutes of the 81st meeting of SEIAA held on 08th March 2018
 10. Affidavit received on 16.03.2018 from Sri. Joji P.L., Partner, M/s. Star Granites

ENVIRONMENTAL CLEARANCE NO. 41/2018

Sri. Joji P.L., Partner, M/s. Star Granites, Thattupara, Chully P.O, Angamaly, Ernakulam District, Kerala – 683 594 vide his application received on 09.02.2015 & 29.12.2015 has sought Environmental Clearance under EIA Notification, 2006 for proposed stone quarry in Sy. No. 164/1-1 (1), 164/1-1(2), 164/1-20, 164/1-21, 164/1-22, 164/1-23, 164/1-24, 197/1, 197/2-2, 197/2-3, 200/1-1, 200/1-2, 200/1-3, 200/3-2, 200/4-2, 200/5 and 200/12 of Ayyampuzha Village, Aluva Taluk, Ernakulam district, Kerala for an area of 6.2375 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 Notification No.S.O.141 (E) dt.15.01.2016 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

Details of the project as furnished by the applicant are as follows;

**BASIC INFORMATION OF QUARRY
(To be filled in by the Project Proponent)
PART A**

Project details	
File No.	759/SEIAA/KL/2015
Name /Title of the project	Stone Quarry Project of M/s. Star Granites.
Name and address of project proponent.	M/s. Star Granites, Mr. Joji PL - Partner Thattupara, Chully-post, Angamaly, Ernakulam District, Kerala - 683 594
Owner of the land	Star Granites
Survey No. District/Taluk/ and Village etc.	Sy. Nos. 164/1-1(1), 164/1-1(2), 164/1-20, 164/1-21, 164/1-22, 164/1-23, 164/1-24, 197/1, 197/2-2, 197/2-3, 200/1-1, 200/1-2, 200/1-3, 200/3-2, 200/4-2, 200/5, 200/12
Details of period of lease or permit with number including the beginning and expiry date of lease/permit period (Copy to be attached)	Lease period - 10 years (10.03.2008 to 09.03.2018)
Present Status of the project Date & Year of starting the work of the quarry project. Whether the quarry is working at present or not? If stopped working since when?	It is an existing quarry with mining lease period of 10years
Date of submission of Application	09.02.2015
Brief description of the project.	Building stone quarry in an area of 6.2375 Hectares at Ayyampuzha village, Aluva taluk, Ernakulam district, Kerala with maximum rate of production 21727 m ³ / annum.
Details of Authorized Signatory and address for correspondence	M/s. Star Granites, Mr. Joji PL - Partner Thattupara, Chully-post, Angamaly, Ernakulam District, Kerala - 683 594
Land Details	
Extent of area in hectares	6.23.75 Hectares
Is the property forest land/Govt. land/own land/patta land	Patta Land

Quantity of top soil/over burden produced and managed	Top soil 1999 m ³ & Over burden 5145 m ³ will be generated during the mining period. It will be stacked separately & backfilled at the end of life of mine.
Latitude and Longitude	10°14'31.22"N 76°27'34.16"E
Topography of land and elevation	Hilly terrain & 185 - 140 m RL
Slope analysis	The overall pit slope is taken as 60° from the horizontal
Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	Due to excavation, significant land disturbance will occur
Access road to the site width and condition	Width of the access road to site is 8m. Whole land will be used for quarry purpose.
Will there be any adverse impact on the aesthetics of the proposal site	No
Mining details	
Minimum and Maximum height of excavation.	56m
Life of mine proposed.	5 years
Underground mining if any proposed	No
Method of Mining	Open cast method of mining
Distance from the adjacent quarry	Angel Granites, Adjacent
Cluster condition if any	No
Has "No cluster certificate" submitted?	No
Distance from nearby habitation	Kutti para – 1.0 km WNW
Distance from nearby forest, if applicable	None within 10km radius of the site
Distance from protected area, Wildlife Sanctuary, National Park etc.	None within 10km radius of the site
Distance from nearby streams/rivers/National Highway and Roads	Water Bodies: Chalakudy River-6.0 km, N Periyar River-6.6 km, S National Highway: NH-47 connecting Kochi – Kanyakumari- 9.5km, W
Is ESA applicable? If so distance from ESA limit	Not Applicable
Has approved mining plan, prepared by RQP submitted?	Yes. S. Suriyakumar Reg. No: RQP/MAS/013/87/A
Capacity of production in TPA	54318 TPA
Details of mining process	Open cast method of mechanized mining will be adopted to extract rough stones of required size from the mine area. Based on the mode and method, taking into the consideration of geological parameters of the charnockite body, the quarry pit will be designed such that the height of the bench is kept about 5m max.
Details of Project cost	
Land cost	60 Lakhs
Plant and Machinery	26.7 Lakhs
Total Cost	86.7 Lakhs
Financial Statement including	Own Fund

funding source and details of insurance etc.	
<p>Management Plan</p>	<p>Air Pollution ➤ Water sprinkling will be done by water tanker fitted with water pump to reduce generation of dust during loading.</p> <p>➤ Dust masks will be provided to operators and other persons near loading.</p> <p>➤ 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</p> <p>Water Pollution ➤ 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.</p> <p>➤ 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</p> <p>Noise ➤ Green belt will be developed around the mine lease boundary in order to reduce noise pollution in the surroundings.</p> <p>➤ Controlled Blasting will be carried out to minimize noise generation. Blasting will be done in day time.</p> <p>➤ Drilling will be done with sharp drill bits, which reduces generation of noise during drilling</p> <p>Solid Waste Management ➤ Solid waste will be disposed or utilized for filling excavated areas, road construction and artificial soil for greenhouse pot trails for grass & tree growth at mining area.</p> <p>Eco-restoration ➤ 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.</p>
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes
Does it suggest mitigation	Yes

measures for each activity	
If Pre-Feasibility Report (PFR) satisfactory	Yes
Does it need public hearing	No
Details of litigation and Court verdict if any	Not Applicable
Details of public complaint, if any	No
Details of statutory sanction required	Not Applicable
XIII. If CRZ recommendation applicable?	Not Applicable
PART B	
Environment Impact Assessment and Mitigation Measures	
Impact on water	
Details of water requirement per day in KLD	Total - 10.0 KLD Domestic & Drinking – 4 KLD Dust Suppression / Water sprinkling & Greenbelt development – 6 KLD
Water source/sources.	Bore well & Mine Pit Water in the Project site
Expected water use per day in KLD.	Total - 10.0 KLD Domestic & Drinking – 4 KLD Dust Suppression / Water sprinkling & Greenbelt development – 6 KLD
Details of water requirements met from water harvesting.	Around 6 KLD for Dust Suppression / Water sprinkling & Greenbelt development will be met from water harvesting pond.
What are the impacts of the proposal on the ground water?	The ground water table is at a depth of 27 m from the ground level. Since there are no toxic elements present in the mining area there is no possibility of contamination of water.
How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Not Applicable
What is the incremental pollution load from waste water generated from the proposed activities?	Not Applicable
How is the storm water from within the site managed?	<ul style="list-style-type: none"> ➤ Storm water drains with silt traps will be suitably constructed all along the periphery of the pit area to collect the runoff from the lease area and divert in to the storm water ponds. ➤ Appropriate channelization of storm water with sufficient width ➤ All measures will be taken not to disturb the existing drainage pattern adjacent to the other property.
Impact on Biodiversity and Eco restoration Programmes	
Will the project involve extensive clearing or modification of vegetation (Provide details)	There will not be any loss of native species of genetic diversity as the quarry already exists and continuation of the same will not affect or loss of native species in general
What are the measures proposed to minimize the likely impact on vegetation (details of proposal for	It is proposed to develop green belt to about 80 % which includes areas like along mine lease boundary (7.5 m width), all along the periphery of the mine lease area and

tree plantation/ landscaping)	the reclaimed area. Grass and bushes will be planted in areas prone to erosion especially at the foot of the mine lease area. Other areas will be fertilized and planted with local species. The characteristics of this vegetation will resemble that of the natural environment
Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures? Presence of any endangered species or red listed category (in detail)	This region does not have any endemic or endangered species, so any development activity in the region does not have any direct bearing or significant influences in the ecosystem stability or biodiversity
Impact on Air Environment	
What are the mitigation measures on generation of dust, smoke and air quality	<ul style="list-style-type: none"> ➤ Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air - borne dust ➤ To avoid the dust generation from the drilling operations, wet drilling method will be adopted. ➤ Drill machines will be equipped with dust collectors ➤ Use of appropriate explosives for blasting and avoiding overcharging of blast holes
Details of internal traffic management of the site.	<ul style="list-style-type: none"> ➤ In case of long transportation the trucks after loading will be covered with tarpaulin sheets. ➤ Speed of the vehicles will be maintained within the prescribed limits. ➤ Trucks will not be over loaded and will be maintained to the body level
Details of noise from traffic, machines and vibrator and mitigation measures	<ul style="list-style-type: none"> ➤ Proper maintenance of machinery, equipment's and improvement on design of machines. ➤ Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas. ➤ Creation of wide green belt of dense foliage between mine areas and residential colonies
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	<ul style="list-style-type: none"> ➤ Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air - borne dust. ➤ To avoid the dust generation from the drilling operations, wet drilling method will be adopted. ➤ Drill machines will be equipped with dust collectors ➤ Use of appropriate explosives for blasting and avoiding overcharging of blast holes ➤ Controlled blasting techniques will be adopted
Air quality monitoring in detail	Air quality is monitored from four different corners of the project site and results are found within the limits.
Energy Conservation	
Details of power requirement and source of supply.	Power requirement will be met from KSEB & Diesel Generators.
Details of renewable energy (non – conventional) used.	Not Applicable
Risk Management	
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Yes

Are proposals for fencing around the quarry satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management	Yes
Socio Economic Impacts	
Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	Nil
Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	Nil
Are the CSR proposals satisfactory. Give details	The proponent should set apart Rs 10 lakhs (Non recurring) and 5 lakhs per annum (recurring) for next 5 years for CSR activities for the welfare of the local community for waste disposal, scholarship to children, etc. The proponent should spend this amount in consultation with the local Panchayat.
What are the projects benefits in terms of employment potential?	The quarrying activity will benefit local villages in both directly and in-directly. Direct beneficiary will be those who get employed in Quarry as skilled and unskilled workers
PART C	
Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	ABC Techno Labs India Pvt. Ltd. No. 400, 13th Street, SIDCO Industrial Estate, North Phase, Ambattur, Chennai - 600098 NABET/EIA/1619/RA0048
Summary and Conclusion	
Overall justification for implementation of the project.	It is predicted that socio-economic impact due to this project will positively bring prosperity and improvements in physical and social infrastructure in the area. It will increase the chance of more employment to local people. There is no resettlement and rehabilitation involved in this project. Revenue of the state government and central government will be increased through collection of various taxes. The entire project area is devoid of any endangered flora and fauna. It is proposed to reclaim the land to a maximum possible extent by providing green belt in refilling and surrounding areas. In addition to this 10% of the total area is converted to water pond. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.
Explanation of how adverse impacts have been mitigated.	All working places will have safe means of access, safe working platform and exit. Persons working in hazardous dust prone area will be provided with dust mask. Personal protective equipment's like respirators, ear plug,

	<p>noise muff, helmet etc. Will be provided to the workers.</p> <p>Proper unit design and engineering controls in order to protect workers, including by control of process and fugitive emissions.</p> <p>Adequate arrangement of drinking water will be done.</p> <p>Education & training will be provided to the workforce about facilities, protective equipment, risk associated, potential health effects, etc.</p> <p>Display board will be provided showing the hazards associated and recommend precautionary measures</p>
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2. The proposal was placed in the 54th meeting of SEAC held on 6th and 7th April, 2016. The Committee examined the proposal and decided to inform the proponent to submit a realistic CSR and also the details of existing flora and fauna, especially the status of the endangered species if any. The proponent should submit the contour map and storm water drainage management plan of the area for further appraisal. Hence the item was deferred.

Subsequently, the proponent submitted the additional details/documents sought by the 54th SEAC. Meanwhile, the proponent also submitted revised application form, Form I, PFR and EMP report.

3. The proposal was placed in the 62nd meeting of SEAC held on 6th & 7th September 2016 and decided to defer the item for field visit.

Subsequently, site visit was conducted on 08.04.2017 by Subcommittee consisting of Er.P.Sreekumaran Nair, Dr.K.G.Padmakumar & Dr.E.A.Jayson. The report is as follows;

The committee conducted field visit to the plot of Sri. Joji P.L., Partner, M/s. Star Granites, Angamaly, Ernakulam District vide his application dated nil received on 09/02/2015 wherein Environmental Clearance is sought under for proposed expansion of building stone quarry in an area of 4.4796 Hectares. The proponent had also submitted mining plan for 6.2375 Ha. of Block - 19 at Ayyampuza Village, Aluva Taluk, Ernakulam District. The total mine area consists of 4.4796 hectares, which is own land. The proposed project is for quarrying of 37036 m³ per annum of building stone.

There is no settlement within 2.5km. There is no forest or eco sensitive areas nearby. Quarry is presently working on a lease, for 6.23ha valid up to March 2018. The quarrying operations are presently done adhering to benching. A crusher is also in

operation. Lease land area is 1.82 ha and the balance is owned land (6.23754 ha). A sedimentation tank for removal of outflow debris water arrangements is available and storm water drainage management plan has been explained. Fencing is properly done. However, sign boards are lacking. The dust suppression arrangements are inadequate, It shall be insisted. Worker facilities, resting area are poor.

4. The proposal was considered in the 73rd meeting of SEAC held on 30th and 31st May 2017. The Committee verified the additional documents submitted by the proponent and found satisfactory. Based on the Mining plan, Form.1, all other documents submitted with the proposal and the field visit report, the committee decided to Recommend for issuance of EC subject to general conditions in addition to the following specific condition.

1. If any plant species endemic to Western Ghats are noticed in the area they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.

A commitment may be obtained from the proponent to set apart Rs.5 lakh (non-recurring) and Rs.5 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local body.

5. Authority considered the proposal in the 72nd meeting of SEIAA held on 01st August 2017 and found that the proponent has not submitted the basic information inspite of repeated reminders. Authority decided to defer the proposal for receipt of basic information asked for. Meanwhile, the proponent has submitted the basic information.

6. The proposal was again placed in the 73rd meeting of SEIAA held on 15th September 2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to obtaining legal opinion as decided in the 66th SEIAA meeting whether quarrying on lease areas without Environmental Clearance also come under the scope of violation.

EC is recommended subject to the general condition in addition to the following specific conditions.

1. Fencing should be properly done.
2. Mandatory sign boards are to be in place.
3. More numbers of sprinklers is to be provided around the crusher unit to suppress dust.

4. *Worker facilities, resting area are poor. So the general conditions are to be strictly adhered to immediately.*
5. *If any plant species endemic to Western Ghats are noticed in the area they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.*

The proponent should set apart an amount of Rs.5 lakh (non-recurring) and Rs.5 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat. EC will be issued only after fulfilling all the pre-mining conditions in the project site. A notarised affidavit stating that all the above conditions have been fulfilled should be submitted and also agreeing to all the general and specific conditions.

7. Decision on legal opinion was taken in the 76th meeting of SEIAA held on 16th November 2017.
8. The proposal was placed in the 79th meeting of SEIAA held on 09th January 2018. As the lease area is above 5 ha and accorded lease after EIA Notification, in the light of the legal opinion received, Authority apprehended whether this is a case of violation.

The proponent submitted a reply dt.16.02.2018 stating that the mineable area is less than 5 ha after deducting the area utilized for infrastructure like crusher, road area, plantation area etc.

9. The proposal was finally placed in the 81st meeting of SEIAA held on 08th March 2018. Authority accepted the recommendation of SEAC and decided to issue EC subject to general conditions in addition to the above specific condition as suggested by SEAC as above. The proponent should set apart Rs.5 lakh (non-recurring) and Rs.5 lakh per annum (recurring) for CSR activities for the welfare of the local community. The CSR amount should be included in the annual account of the company and the expenditure statement should be submitted to SEIAA along with the compliance report after getting certified by a Chartered Accountant. A notarised affidavit for the commitment of CSR activities and also agreeing all the general and specific conditions should be submitted before the issuance of EC. The proponent has submitted the affidavit vide reference 10th cited agreeing all the conditions imposed by SEIAA.

10. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the quarry project of Sri. Joji P.L., Partner, M/s. Star Granites, Thattupara, Chully P.O, Angamaly, Ernakulam District, Kerala – 683 594 in Sy. No. 164/1-1 (1), 164/1-1(2), 164/1-20, 164/1-21, 164/1-22, 164/1-23, 164/1-24, 197/1, 197/2-2, 197/2-3, 200/1-1, 200/1-2, 200/1-3, 200/3-2, 200/4-2, 200/5 and 200/12 of Ayyampuzha Village, Aluva Taluk, Ernakulam District, Kerala for an area of 6.2375 Ha, subject to the specific conditions as in para 6 & 9 above, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. 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 (items 1 to 61), appended hereto will be applicable and have to be strictly adhered to.

11. 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 the undertakings in Chapter 04 (Mining), Chapter 05 (Blasting), Chapter 06 (Mines Drainage), Chapter 09 (EMP) Chapter 10 (Mine Closure Plan) of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

12. Validity of the Environmental Clearance will be five years from the date of this clearance, 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.

13. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices 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, Ernakulam

- iii. The given address for correspondence with the authorised signatory of the project is
Sri. Joji P.L., Partner, M/s. Star Granites, Thattupara, Chully P.O, Angamaly,
Ernakulam District, Kerala – 683 594.

Sd/-
P.H.KURIAN I.A.S,
Member Secretary (SEIAA)

To,

Sri. Joji P.L.,
Partner, M/s. Star Granites,
Thattupara, Chully P.O, Angamaly,
Ernakulam District,
Kerala – 683 594

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala.
3. District Collector, Ernakulam
4. Director, Mining & Geology, Thiruvananthapuram -4.
5. The Member Secretary, Kerala State Pollution Control Board
6. District Geologist, Ernakulam
7. Tahsildhar, Aluva Taluk, Ernakulam
8. Chairman, SEIAA.
9. Website.
10. S/f
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 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. 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 PM₁₀ 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 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.


For Member Secretary, SEIAA Kerala