



सत्यमेव जयते

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

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

Sub: Environmental Clearance -Application for environmental clearance for the quarry project in Sy. Nos. 274 and 275/1A3 at Thirumittacode Village II, Thirumittacode Panchayath, Pattambi Taluk, Palakkad District, Kerala by M/s Triphy Granites- E.C-Granted-Orders issued.

**STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY**

No. 826/SEIAA/EC1/2609/2015

*dated, Thiruvananthapuram 17-08-2016*

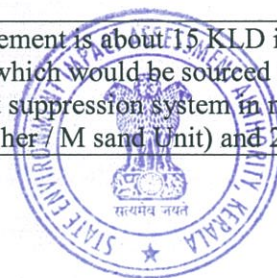
- Read:* - 1. Application dated 27-06-2015 from Sri. Benny Pathrose, Partner, M/s Triphy Granites, Pallippadam, Malatyamkunnathu, Chaliyattiri P.O., Palakkad District-679535.  
2. Minutes of the 48<sup>th</sup> meeting of SEAC held on 6-7/11/2015.  
3. Minutes of the 56<sup>th</sup> meeting of SEAC held on 6-7/06/2016.  
4. Minutes of the 55<sup>th</sup> meeting of SEIAA held on 16/07/2016.

**ENVIRONMENTAL CLEARANCE NO. 116/2016**

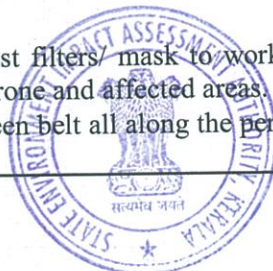
Sri. Benny Pathrose, Partner, M/s Triphy Granites, Pallippadam, Malatyamkunnathu, Chaliyattiri P.O., Palakkad District-679535, vide his application received on 07-07-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 274, 275/1A3 at Thirumittacode Village II, Thirumittacode Panchayath, Pattambi Taluk, Palakkad District, Kerala for an area of 4.7811 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 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) dated 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. Other details of the project are as follows:



<b>Basic Details</b>	
Name of the Project	M/s Triphy Granites (Building Stone Quarry)
Survey Numbers	Survey Nos. 274, 275/1A3
Village	Thirumittacode-II
Tehsil	Pattambi
District	Palakkad
Extent of land in hectares	4.7811 hectares
Is the property forest land/Govt. land/ own land	Private own land
Latitude (N)	10°42'51.47" to 10°42'42.61"
Longitude (E)	76°09'56.39" to 76°09'45.99"
Minimum and maximum height of excavation (MSL)	70 m MSL to 160 m. MSL
Life of mine proposed	About 8 years
Distance of mining area from nearest human settlement	About 143m in NE side from the site.
Ultimate depth of mining (in MSL)	70m MSL.
Distance from the adjacent quarry	There is a quarry of M/s Malayakam Aggregates and Sands Pvt. Ltd. in operation within 500m. for an area of 1.7800 ha.
Cluster condition (if any)	There is a quarry of M/s Malayakam Aggregates and Sands Pvt. Ltd. in operation within 500m. for an area of 1.7800 ha.
Proposed production capacity	2,00,000 MTA
Expected cost of the project	Rs. 2.635 Crores
Interlinked project (if any)	The proposed quarry project will be interlinked with Crusher Unit to be developed within the complex.
Whether CRZ is applicable	NA
Status of litigation/complaint/cases	Nil as declared
Permanent or temporary change on land use, land cover or topography	The project site is private owned land. The proposed area is hilly. Drainage is towards south-west. Significant impact will be confined within the lease area.
Topography of land and elevation	The topography of the lease area is hilly. Drainage of the lease area is towards south-west
Vegetation	The area for proposed quarry has some native trees, climbers, grass, shrubs, herbs etc. There is no existing building in the proposed area.
Nearest water body	Aloor River, 3.50 km., S Bharathpuzha River, 8 km., N
Change in water bodies due to mining activities	Nil
Proneness to natural hazards	None
<b>Environmental parameters considered</b>	
<b>Water</b>	
Water (expected use and sources in KLD)	The total water requirement is about 15 KLD in which 1 KLD is for domestic which would be sourced from open well, 12 KLD for dust suppression system in mine as well as ancillary unit (Crusher / M sand Unit) and 2 KLD for



	plantation purposes and will be sourced from storm water pond.
Sources of generation and facilities for liquid waste treatment	There will be no industrial waste generation due to proposed project.
Facilities for liquid waste treatment	There will be no industrial waste generation due to proposed project.
Water quality meeting requirements	Water quality requirements to be as per rules after treatment (filtration, disinfection & sedimentation).
Water Regime	Open Well, Storm water pond.
<b>LAND</b>	
Access road to the site –Width & Condition	11 m., tarred road towards East Side.
Proximity to forest lands	Chitanda Reserve Forest, 7 km., SE
Storage of explosives /hazardous substances	Considering low consumption, a 550 kg magazine is for storing the explosive. The magazines are exists within the complex
Hazardous waste management	<p><b>Industrial Waste Management</b> There will be no industrial waste generation due to proposed project.</p> <p><b>Solid Waste Management</b> About 43,030 cu. m. of top soil is estimated from the pit of the proposed mine. Other than top soil, about 19,124 cu. m. of overburden will be generated throughout the mine life.</p>
Facility for solid waste management	A total quantity of 43,030 cu. m. of topsoil and 19,124 cu. m of over burden will be removed during the mining operations. The topsoil excavated from the quarry will be dumped separately at pre-determined place and subsequently will be utilized in spreading over reclaimed areas for plantation. OB will be utilized for laying internal haul road and will form base in reclamation / plantation.
Envt Mgmt plan/ Eco restoration plan	<b>MANAGEMENT PLAN:</b>
	<p><b>Air pollution</b></p> <ul style="list-style-type: none"> <li>• Mining activities will generate certain quantities of dust during drilling, blasting, loading and transportation operations. The following measures will be taken to mitigate the fugitive dust from different operations.</li> <li>• Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust.</li> <li>• To avoid the dust generation from the drilling operations, wet drilling method will be adopted.</li> <li>• Drill machines will be equipped with dust collectors.</li> <li>• Use of appropriate explosives for blasting and avoiding overcharging of blast holes.</li> <li>• Controlled blasting techniques will be adopted.</li> <li>• Watering of haul road and other road at regular intervals.</li> <li>• Provision of dust filters/ mask to workers working at highly dust prone and affected areas.</li> <li>• Provision of green belt all along the periphery of the lease area.</li> </ul>



		<ul style="list-style-type: none"> <li>• Periodical monitoring of ambient air quality in and around the lease area.</li> <li>• The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions.</li> <li>• In case of long transportation the trucks after loading will be covered with tarpaulin sheets.</li> <li>• Speed of the vehicles will be maintained within the prescribed limits.</li> </ul>
	<b>Water pollution</b>	Provision of storm water collection pond with appropriate capacity. The water requirement for sprinkling on sources of dust emission, on roads, landscaping etc.. can be met from the stored rainwater in the pond.
	<b>Noise</b>	<p>The major noise generating source from the proposed activity is working machinery, drilling, blasting and plying of vehicles. The following control measures are to be undertaken to bring down the noise levels:-</p> <ul style="list-style-type: none"> <li>• Proper maintenance of machinery, equipments and improvement on design of machines.</li> <li>• Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas.</li> <li>• Creation of wide green belt of dense foliage between mine areas and residential colonies.</li> <li>• Proper training to personnel to create awareness about adverse noise level effects.</li> </ul> <p>Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.</p>
	<b>Solid Waste Management</b>	<p><b>Topsoil Management</b> A total quantity of 43,030 cu. m. of topsoil is proposed to be removed during the mining operations. The topsoil excavated from the quarry will be dumped separately at pre-determined place and subsequently will be utilized in spreading over reclaimed areas for plantation. Precautions will be taken to limit the height of the topsoil dump to 5 to 6 meters in order to preserve its fertility and shelf life. It will be suitably protected from soil erosion and infertility by planting fodder grass and leguminous plants during temporary storage.</p> <p><b>Overburden Management</b> About 19,124 cu. m of overburden will be generated throughout the mine life. This waste will be utilized within the pit for lying of haul roads. At the end use, OB can be reutilized as soil base for plantation.</p>
	<b>Eco restoration</b>	The year wise programme of eco-restoration for the life of mine, about 4,500 trees will be planted in an area of 4.7811 ha.
<b>Noise</b>		
Noise level monitoring		Noise levels should be maintained within the permissible standard limits.
<b>AIR</b>		



Likely emissions affecting environment	Emissions from the vehicles only.			
Air quality monitoring	Ambient air quality should be maintained within the permissible standard limit			
<b>ENERGY</b>				
Energy requirement	The total power requirement will be 75 kW for compressors which will be operated by Diesel Engine.			
<b>BIODIVERSITY</b>				
Presence of any endangered species or red listed category (In detail)	No.			
Loss of native species and genetic diversity (In detail)	The some area of proposed quarry has native trees, climbers, grass, shrubs, herbs etc			
Eco restoration programmes (In detail)	The year wise programme of eco-restoration for the life of mine, about 4,500 trees will be planted in an area of 4.7811 ha.			
<b>SOCIAL ASPECTS</b>				
Proximity to nearest densely populated or build-up area	Nearest Town Pattambi 15 km, N direction			
CSR components suggested	<b>Proposed common CSR Budget</b>			
	Sl.No.	Particulars	<b>Amount Rs. in lakhs</b>	
			Recurring	Non Recurring
	1	Education	3.30	5.73
	2	Health	5.60	2.80
	3	Community Development	4.10	1.00
	4	Ensuring environmental sustainability	3.00	--
5	Reduction in carbon footprint & CO <sub>2</sub> emission	--	0.90	
	<b>Total</b>	<b>16.00</b>	<b>10.43</b>	
<b>GENERAL</b>				
Details of Authorised Signatory & Address for correspondence)	Sri. Benny Pathrose, Partner M/s Triphy Granites, Pallippadam, Malatyamkunnathu, Chaliyattiri Post, Palakkad District, Kerala-679535.			
Details of NABET approved EIA consultant Organisation	M/s Environmental Engineers & Consultants Pvt. Ltd. ( Sr. No. 58 as per MoEF&CC list of Accredited Consultant Organization) <i>Head Office :-</i> A1-198, Janak Puri, New Delhi. <i>Branch Office:-</i> C-306, Kanchanjunga Apartments, Palarivattom P.O., Kochi, Kerala			
3. The proposal was first considered in the 48 <sup>th</sup> meeting of SEAC held on 6 <sup>th</sup> and 7 <sup>th</sup> November, 2015. The Committee deferred the item for Field Inspection to assess the				



ground realities including the possibility of cluster situation and production of an approved mining plan as per KMMC Rule 2015.

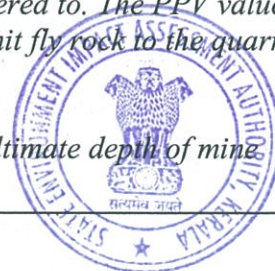
4. Field visit to the Quarry project site was carried out on 03.05.2016 by a Subcommittee of SEAC, Kerala, comprising of Dr. Jayson E.A. and Dr. Padmakumar. The representatives of the Proponent were also present at the site. The site inspection report is extracted as follows:

*“This is a new quarry proposed with a short term quarrying permit issued by Mining & Geology Department, Govt of Kerala for an area of 4.7811 Ha. The mining activity will have localized impact and create physical change in the existing environment due to the change in the land use. The mining plan submitted is as per KMMC Rule 1967 and hence a revised mining plan as per KMMC Rule 2015 is required. The life of mine is 8 years. The highest elevation of the proposed site is 160 m AMSL and lowest is 70 m AMSL. Annual production of the unit proposed is 2,00,000 MTA. No quarries were found within 500 m radius of the area.*

*The method of operation proposed is through controlled blasting. No activities were carried out in the quarry site. This quarry area falling in own land is moderately sloping to north- south direction, exposing hard rock, mostly fractured charnockite suite of rocks. The rock type is mostly with sub-horizontal foliation in folded attitude. Pockets of weathered rock with limited over burden (OB) is seen in the upper eastern part. Being an elevated land, streams are not seen in the site. However fairly good seepage of water is seen at the interface of rock and OB. Garland drains has to be developed to drain the water to the western side and silting ponds has to be provided before draining the water outside the lease area. Dwelling units are not seen in the immediate vicinity of 100 m. The water demand of the quarry is proposed to be met from the wells in the premises. The workers should be provided with good accommodation and canteen facilities.*

*Based on an overall evaluation of the site, following points may be considered:*

- 1. No quarrying activity has been initiated in the site.*
- 2. Over burden should be stored in a planned manner in the designated place. It must be provided with protective support and no soil should be send outside the lease area.*
- 3. The drainage from the quarry should be directed to the settling pond.*
- 4. The approach road to the quarry from the main road is not maintained at all. This road must be maintained in good motorable condition by the proponent.*
- 5. The blasting time must be displayed and strictly adhered to. The PPV values must be less than 10 mm/sec. Steps to be taken to limit fly rock to the quarry area.*
- 6. Dust suppression mechanism must be in place.*
- 7. In the absence of perennial streams in the vicinity, ultimate depth of mining*



*will depend on the possible benches in the lease area.*

8. *Vegetation is seen all around the quarry but must be maintained till the entire life of quarry.*
9. *The whole area is a Rubber plantation and compensatory planting should be done with native tree species.*
10. *The whole lease area should be protected with fence.*
11. *Sign boards should be fixed in the proper places.*

*Other items from general conditions and CSR may be added”.*

5. The proposal was again considered by SEAC in its 56<sup>th</sup> meeting held on 06/07-06-2016. The Committee appraised the proposal based on Form I, Pre-feasibility report, Mining Plan & Field Inspection Report. The Committee recommended the proposal for issuance of EC with the general conditions subject to the following specific conditions.

1. Over burden should be stored in a planned manner in the designated place. It must be provided with protective support and no soil shall be taken outside the lease area.
2. The drainage from the quarry should be channelled through a settling tank.
3. The approach road to the quarry from the main road is not maintained at all. This road must be maintained in good motorable condition by the proponent.
4. Dust suppression mechanism must be in place.
5. Fencing shall be provided at vulnerable points of the quarry to avoid accidents.
6. Sign boards should be fixed in the proper places.

6. The proposal was considered by SEIAA in its 55<sup>th</sup> meeting held on 16<sup>th</sup> July 2016. The Authority considered the recommendations and approved for issuance of E.C for the quarry project subject to the above specific conditions and the usual general conditions for mining projects.

7. Environmental Clearance under the EIA notification 2006 is therefore granted to the quarry project of M/s Triphy Granites in 4.7811 hectares comprised in Sy. No. 274 and 275/1A3 at Thirumittacode-II, Thirumittacode Panchayat, Pattambi Taluk, Palakkad District, subject to the specific conditions in para 5 above and the general conditions stipulated for mining projects. The grant of E.C is also subject to production of non-cluster certificate, affidavit and the mitigation measures undertaken in the EMP in the PFR. However if any genuine complaints about the quarry is received, E. C issued shall be reviewed.

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 are relied on for grant of this clearance. The above undertakings and the conditions and undertakings in chapter 4 of Mining plan (Mining), Chapter 5 of Mining plan (Blasting), Chapter 6 of Mining Plan (Mine



drainage), Chapter 7 of Mining Plan (Stacking of Mineral rejects and Disposal of waste), Chapter 11 of Mining plan and Chapter 4.3.4 of pre-feasibility report (EMP), the Chapter 11 of PFR (Disaster Management), 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 from the date of issuance of E.C, 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. Benny Pathrose, Partner, M/s Triptyh Granites, in 4.7811 hectares comprised in Sy. No. 274 and 275/1A3 at Thirumittacode-II, Thirumittacode Panchayat, Pattambi Taluk, Palakkad District subject to the specific conditions in para 5 above and 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.

- 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, Palakkad to take legal action under the Environment (Protection) Act, 1986.

The given address for correspondence with the authorised signatory of the project is Sri. Benny Pathrose, Partner, M/s Triptyh Granites, Pallippadam, Malatyamkunnathu, Chaliyattiri P.O., Palakkad District-679535.



Sd/-

V.S. SENTHIL, I.A.S.,  
Member Secretary, SEIAA  
&

Addl. Chief Secretary  
Environment & Forests Department  
Government of Kerala.



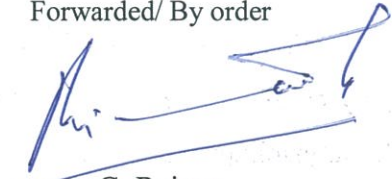
To,

Sri. Benny Pathrose, Partner,  
M/s Triphy Granites,  
Pallippadam,  
Malatyamkunnathu,  
Chaliyattiri P.O.,  
Palakkad -679535.

Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wing, II Block, Koramangala, Bangalore-560034
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala
3. The District Collector, Palakkad
4. The Director, Mining and Geology Department, Kesavadasapuram, Thiruvananthapuram-4
5. Panchayath Secretary, Thirumittakkode Panchayath Office, Chathanur Post, Pattambi, Palakkad-679535
6. Chairman, SEIAA, Kerala
7. Website
8. E.C File
9. S/f
10. O/c

Forwarded/ By order



G. Rajeev,  
Administrator,  
SEIAA.



SEELAA



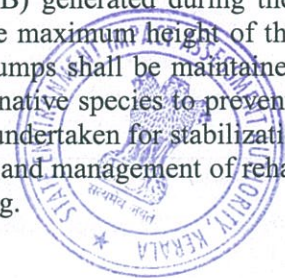
# STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

## 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 100 m 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](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.



For Member Secretary, SEIAA Kerala

**G. RAJEEV**  
Administrator

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