

Validity expires on 28/11/22

Proceedings of the State Environment Impact Assessment Authority Kerala

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

SEIAA- Environmental Clearance for the proposed quarry project in Sy. Nos. 347/5-Sub: 1, 347/5-2, 347/5-3, 347/5-4,347/5-5 347/5-6 & 347/5-7of Thachanattukara-1 Village, Mannarkkad Taluk, Palakkad District, Kerala by Sri. P.T.V. Mustafa, granted- Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No.1098 / EC / SEIAA /KL/2017

Dated, Thiruvananthapuram 29/11/2017

Ref:

- 1. Application received on 1/3/2017 from Sri. P.T.V. Mustafa. Pothyil Thottiparampil Vadakethil House Nattukal P.O. Mannarkkad Taluk Palakkad Dist. - 678 583,
- 2. Judgement dated 8/3/17 of honourable High Court in WP@4854/17
- 3. Minutes of 71st Meeting of SEAC held on 20th & 21st April 2017 4. Minutes of the 7th meeting SEAC held on 7th August 2017.
- 5. Minutes of the 74th meeting of SEIAA held on 09thOctober2017
- 6. Affidavit dated 27/11/17 from Str. P.T.V. Mustafa
- 7. Certificate of Charted Engineer no. PV/50/17 dated 31/10/17

ENVIRONMENTAL CLEARANCE NO. 96/2017

Sri.P.T.V. Mustafa. Pothyil Thottiparampil Vadakethil House, Nattukal P.O., Mannarkkad Taluk Pantakan Mannarkkad Mannarkkad Taluk Pantakan Mannarkkad Taluk Pantakan Mannarkkad Taluk Pantakan Mannarkkad Taluk Pantakan Mannarkkad Mannarlakkad Dist. 678 583 vide his applicationread as(1)above, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in survey Nos. Sy. Nos. 347/5-1, 347/5-2, 347/5-3, 347/5-4,347/5-5 347/5-6 & 347/5-7 of Thachanattukara-1 Village, Mannarkkad Taluk, Palakkad District, Kerala for an area of 5.40.96 Hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II(M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the notification NoS.O.141(E) dated 15/1/2016 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

The proposed project site falls within Latitude 10°58'44.30"N to 10°58'52.79"N to Longitude 76°19'48.27"E to 76°20'01.33"E. The lease area consists of 5.40.96 hectares, which is own land. The proposed project is for quarrying of 18444 m³ per Annum of building stone. Distance of the mining area from the nearest human settlement is located at 1 km S.

About 17 KLD sourced through nearby open wells/rain water reservoirs. The total cost of the project as recorded by the proponent is only 55 lakhs.

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

 1	Project details
File No.	1098/EC/SEIAA/KL/2017
Name /Title of the project	Proposed Building Stone Quarry project by Mr. PTV Mustafa
Name and address of project proponent.	Mr. PTV Mustafa PothyilThottiparampilVadakethil House, NattukalP.O,MannarkkadTaluk,Palakkad Dist.
Owner of the land	Mr. PTV Mustafa, Mrs. Sajna, Mrs.Fathima PTV, Mr.Jamshad Ali, Mr.Muhammed Ashif, Mr. Abdul Gafoor,
Survey No. District/Taluk/ and Village etc.	347/5-1, 347/5-2, 347/5-3, 347/5-4,347/5-5 347/5-6 & 347/5-7
Details of period of lease or permit with number including the beginning and expiry date of lease/permit period(Copy to be attached)	Mining Permit No. 7/GBS/DOP/117/2014/A1/CRPS Dated: 07:04.2014 Valid up to 09:02.2015
Present Status of the project Date & Year of startingthe work of the quarry project. whether the quarries working at present or not? If stopped working since when?	Not Working Work Started: 2011 Work Stopped: 06.12.2016
Date of submission of Application	1/03/2017
Brief description of the project.	Proposed Building Stone Quarry in an area of 5.40.96 Hectares at Thachanattukara-1 Village, Mannarkkad Taluk, Palakkad District, Kerala with maximum rate of production 18,444 m³/ annum.
 Details of Authorized Signatory and address for correspondence	Mr. PTV Mustafa PothyilThottiparampilVadakethil House, NattukalP.O,MannarkkadTaluk,Palakkad Dist.

Land Details				
Extent of area in hectares	5.40.96 Hectares			
Is the property forest land/Govt. land/own land/patta land	Own land			
Quantity of top soil/over burden produced and managed	Top soil - 9024m3 Over burden 5364m3			
Latitude and Longitude	10°58'44.30"N 10°58'52.79"N 76°19'48.27"E 76°20'01.33"E			
Topography of land and elevation	Hilly terrain			
Slope analysis	Lease area is sloping towards South			
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				
Mining do	etails .			
Minimum and Maximum height of excavation.	47 m			
Life of mine proposed.	10 Years			
Underground mining if any proposed	No			
Method of Mining	Open cast, semi mechanized mining			
Distance from the adjacent quarry	100m			
Cluster condition if any	No			
Has "No cluster certificate" submitted?	No			
Distance from nearby habitation	Thalachhira – 1.0 km S			

Distance from nearby forest, if applicable	None within the study area			
Distance from protected area, Wildlife Sanctuary, National Park etc.	Silent valley national park- 12km,NE			
Distance from nearby streams/rivers/National Highway and Roads	Kunthi River – 6.0 km, SSE NH - 213 connecting Palakkad - Malappuram – 2 km, SE			
Is ESA applicable? If so distance from ESA limit	Not applicable			
Has approved mining plan, prepared by RQP submitted?	Yes			
Capacity of production in TPA	18444m3 per annum (Max.)			
Details of mining process	Open cast method of mechanized mining will be adopted to extract rough stones of required size from the mine area. While opening a new mine, several long term aspects of mining should be considered like semi-permanent roads, planning the development work, formation of working faces, approach road to various benches for movement of dumpers, selection and recruitment of man power, machineries, construction of infrastructures, selection of dump sites, stacking yards for undressed blocks, finished products and other facilities.			
D	etails of Project cost			
Land cost	35.0 Lakhs			
Plant and Machinery	20.0 Lakhs			
Total Cost	55.0 Lakhs			
Financial Statement including funding sourceand details of insurance etc.	The funding will be given by the Own funding of Mr. PTV Mustafa			
Management Plan	MANAGEMENT PLAN: Air pollution Water sprinkling will be done by water tanker fitted with water pump to reduce			

	generation of dust during
	loading. Dust masks will be provided to operators and other persons near loading.
	Force of the control dust pollution.
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.
	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
Noise	Force of the surround of the mine lease boundary in order to reduce noise pollution in the surroundings.
	Controlled Blasting will be carried out to minimize noise generation. Blasting will be done in day time.
	➤ Drilling will be done with sharp drill bits, which reduces generation of noise during drilling.
Solid	➤ Solid waste will be disposed

	WasteManage or utilized for filling excavated areas, road construction and artificial soil for greenhouse pot trails for grass & tree growth at mining area.				
	From restoration From the mine lease boundary, around mine office haul road, etc to restore the ecology and aesthetics of the mine site.				
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes. Environment Management Plan is provided with EC application				
\Does it suggest mitigation measures for each activity	Yes				
If Pre-Feasibility Report (PFR) satisfactory	Yes				
Does it need public hearing	Not required				
Details of litigation and Court verdict if any	No court case is pending against this project				
Details of public complaint, if any	No complaints against this project				
Details of statutory sanction required	Not required				
If CRZ recommendation applicable?	Not required				
PAR' Environment Impact A	T B Assessment and Mitigation Measures				
I	Impact on water				
Details of water requirement per day in KLD	17 KLD (Domestic – 2 KLD, Green belt & Dust suppression – 15 KLD)				
Water source/sources.	Open well and harvested water from Rain water harvesting pits				

	Expected water use per day in KLD.	17 KLD				
	Details of water requirements met from water harvesting.	15 KLD				
	What are the impact of the proposal on the ground water?		ground water due to this vity is terminated 3m above			
	How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Sewage will be disposed the soak pit.	to Septic tank followed by			
	What is the incremental pollution load from waste water generated from the proposed activities?	No incremental pollution loads due to wastewater generation. It will be treated in Septic tank followed by the soak pit.				
How is the storm water from within the site managed? The mine pit will be used as a st reservoir. Excess water will be diverted to reach the external drainage.						
	Impact on Biodiversit	y and Eco restoration Pr	ogrammes			
	Will the project involve extensive clearing or modification of vegetation (Provide details) There shall be minor clearing activities which we take place to clear the shrubs and trees and it was be suitably planted after the mining or subseque years					
		Due to this project, small amount of vegetation loss will occur. The following trees will proposed to plant in the greenbelt area.				
		Botanical Name	Vernacular Name			
***	W/l	Tectona grandis	Teak			
	What ate the measures proposed to minimize the likely impact on	HaldiniaCardifolia	Manjakadambu			
	vegetation (details of proposal for tree plantation/ landscaping)	Alstoniascholaris	Pala			
		Artocarpushirsutus	Anjili			
		Artocarpusheterophyll us	Jack Tree			
		Dalbergialatifolia	Rosewood			
	Is there any displacement of fauna – both terrestrial and	The proposed activity is terrestrial or aquatic faun	neither displacing any a. There is no endangered			

aquatia If so what are the	anguing found in the study area
aquatic. – If so what are the mitigation measures?	species found in the study area.
Presence of any endangered species or red listed category (in detail)	
Impact	on Air Environment
What are the mitigation measures on generation of dust, smoke and air quality	Control measures like suppression of dust by water sprinkling and developing green belt along the periphery of the pit will be carried out for controlling the dust.
Details of internal traffic management of the site.	Haul road will be developed at the point of loading. Width of the access road to site is 8m. The mine roads are also semi-permanent nature and hence will not be any impact after the closure of mine
Details of noise from traffic, machines and vibrator and mitigation measures	Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum.
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site.
Air quality monitoring in detail	Periodic air quality survey will be carried out to monitor the quality and for timely corrective actions. The environmental monitoring plan is provided in the EMP.
Ene	rgy Conservation
Details of power requirement and source of supply.	3Nos of 35 HP Generator will be used Fuel usage – 60 Lit/day
Details of renewable energy (non – conventional) used.	
Ris	sk Management
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	First aid facility will be provided at the site and emergency vehicle will be provided in case emergency.

	Are proposals for fencing around the quarry satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management	Explosives will be stored as Explosive Act 1958 & explosive re Solid waste will be proposed t along the lease boundary and w finally within the mine lease area	ules 1983. o stack initially
	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?	The proposed project will a disturbance to the local communit sacred sites or cultural values near	ies. There are no
	Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	No	
١	Are the CSR proposals satisfactory. Give details	Common CSR activities afread Description Sanitary facilities for Schools (Toilets, Drinking water facilities, etc.)	Approx. Amount proposed (Lakhs)
		Organizing Health camps Repairing of karinkallathani to alanallur road	2.0
		Total Proposed CSR activity details are e	5.0 enclosed.
	What are the projects benefits in terms of employment potential?	About 31nos of local people will due to this project implementation.	get employment
		PART C	
	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	Certificate No.: NABET/EIA/1619 No. 400, 13th Street, SIDCO Indust North Phase, Ambattur, Chennai - 6 Ph: +91 -422 -2453737	trial Estate,

Summary and Conclusion					
Overall justification for implementation of the project.	Adequate resources are available in the project site and adjacent facilities & infrastructure are adequate. Currently market value of the building stone is good in the surrounding area.				
	Land Environment				
	Source of impact: Change of land use				
	Mitigation measures: Construction of check dams, greenbelt development				
	Water Environment				
	Source of impact: Domestic wastewater				
	Mitigation measures:Domestic sewage will				
	beseptic tank followed by soak pit.				
To all and in a Channel	Air Environment:				
Explanation of how adverse impact have been mitigated.	Source of impact: Excavation, loading, transportation				
Impact have been imagated.	Mitigation measures: water sprinkling & greenbelt development.				
	Noise Environment:				
	Source of impact: drilling, blasting, loading and unloading of mineral				
	Mitigation measures:Proper maintenance of machinery and equipments & design, Use of				
	personnel protective devices i.e. earmuffs and				
	earplugs by workers				

PROPOSED CSR ACTIVITY PLAN

CI		Amount (Lakhs)				
SI. No	Description	2016 & 17	2018 & 19	2020 & 21	2022 & 23	2024 & 25
1	Repairing of Alanallur Road &Thalachira Round ring Road	1.0	1.0	1.0	1.5	1.5
2.	Providing books and amenities like computer, smart board to Alanallur Govt. Higher Secondary School students	0.5	0.5	0.5	0.5	0.5

3.	Organizing Health Camps in the vicinity	0.5	0.5	0.5	0.5	0.5
4.	Sanitary facilities for Vettathur Govt. Higher Secondary School	2.0	1.0	1.0	1.0	1.0
5.	Infrastructure development for Alanallur Govt. LP School	1.0	1.5		1.5	1.5
5.	Infrastructure development for Vettathur Govt. Higher Secondary School	1.0		1.0		1.0
	Total	6.0	4.5	4.0	4.5	6.0
	Grand Total		·	25.0		

The proponent has filed writ petition on 08.03.2017 WP (C) 4854/2017. In the writ petition, the prayer of the petitioner is essentially for a direction to the SEIAA (1st respondent) to expedite the process of environmental clearance. The proponent has submitted revised application (Form1, prefeasibility Report, EMP report) in the office on 1.3.2017

The Hon'ble High Court of Kerala, in its Judgment directed SEIAA (1st respondent) to complete the process of scrutiny and assessment of the applications for environmental clearance within an outer time limit of three months from the date of receipt of a copy of this judgement..

2. The proposal was placed in the 71 Meeting of SEAC held on 20th & 21st April 2017. Further to the intimation of SEAC, the Proponent and the RQP attended the meeting and RQP made a power point presentation about the salient features of the project. The Committee appraised the proposal based on the Mining Plan, Pre-feasibility Report and all other documents submitted along with Form1.

The proponent agreed to set apart Rs.10 lakh (non-recurring) and Rs.10 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

The Committee decided to defer the item for field inspection. The committee also directed the proponent to submit the list of plant species proposed to be planted at the site.

Subsequently, site visit was conducted on 29th July 2017by Subcommittee consisting of Dr. E.A. Jayson & Dr.K.G.Padmakumar. The report is as follows;

This quarry project is in Sy. Nos. 347/5-1 to 7 for an area of 5.4096 ha. The application is for quarrying 18444 m3 per annum

- The proposed site is located 12km NE of Silent valley National park.
- The Kunthi river is 6.0 km SE

- The project area does not come under any ESA village
- Distance of the mining area from the nearest human settlement is at over 400m, aerial)
- This has been a working quarry till December and the work got suspended since then for want of environmental clearance. Now not in operation.
- The proponent is running a crusher unit using the rocks brought from outside, according to the proponent
- For water storage he is maintaining a storage pond in the previously extracted site.
- There exist a valley bottom wetland on the lower edge of the hill presently considered for mining.

The proponent has approached the Hon'ble High Court and obtained a direction to complete the process of scrutiny and assessment for environmental clearance within 3 months The WPC order is dated 8th March 2017. The proposal was appraised in the 71 st Meeting of SEAC held on 20/21 April 2017

Observations

- The approach road to the quarry on the eastern side is in very poor condition. The proponent shall be directed to maintain this road in proper condition
- The office and the basic facilities for labour have to be improved drastically and sign boards fixed
- The proponent should establish a clarification pond/sedimentation tank at a lower elevation,
- Shall ensure that the debris or suspended matter form the quarry dol not enter the lower wetland strip on the valley bottom, which seems to serve as an effective recharge system.
- Quarrying depth shall be restricted not to go beyond the level of the lower wetland on the valley bottom of the hill.
- The proposal was considered in the 77th meeting SEAC held on 7th August 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, Mining Plan, field inspection report of the Sub Committee and all other documents submitted with the proposal. The Committee decided to **Recommend for issuance of EC** subject to general conditions in addition to the specific condition for mining suggested by the inspection team as noted above

The proponent agreed to set apart Rs.10 lakh (non-recurring) and Rs.10 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat. If the proponent is going ahead with quarrying operation in the adjacent plot, both the Mining Plans should be integrated.

5. Finally the proposal was placed before the 74 th SEIAA meeting held on 9 October 2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to general condition in addition to the following specific conditions.

- The approach road to the quarry on the eastern side is in very poor condition. The proponent shall be directed to maintain this road in proper condition
- The office and the basic facilities for labour have to be improved drastically and sign boards fixed
- The proponent should establish a clarification pond/sedimentation tank at a lower elevation,
- Shall ensure that the debris or suspended matter from the quarry do not enter the lower wetland strip on the valley bottom, which seems to serve as an effective recharge system.
- Quarrying depth shall be restricted, not to go beyond the level of the lower wetland on the valley bottom of the hill.
- If any rare, endemic and threatened plant species are noticed, they shall be properly protected insitu or transplanted to a suitable site inside the lease area.

Non Cluster Certificate should be produced from the District Geologist. The project cost seems to be underestimated. A certificate from a Chartered Accountant stating that the project cost is reasonable should be submitted. The proponent should set apart an amount of Rs.10 lakh (non-recurring) and Rs.10 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 and an affidavit to this effect should be submitted. A notarised affidavit for the commitment of CSR activities and also agreeing all the general and specific conditions should be submitted

The proponent has submitted the Affidavit vide reference 6th cited satisfying all the above conditions. The proponent also submitted the project cost certificate from charted Engineer vide reference No 7th cited stating that the total project cost certified as Rs. 2,11,17,500.00 (Rupees two crore eleven lakks seventeen thousand five hundred only)

- Environmental Clearance as per the EIA notification 2006 is hereby accorded for the proposed Quarry project of Shri. P.T.V. Mustafa .Pothyil Thottiparampil Vadakethil House, Nattukal P.O, Mannarkkad Taluk, Palakkad Dist. 678 583, in . Sy. Nos. 347/5-1, 347/5-2, 347/5-3, 347/5-4,347/5-5 347/5-6 & 347/5-7 of Thachanattukara-1 Village, Mannarkkad Taluk, Palakkad District, Kerala for an area of 5.40.96 Hectares subject to the specific conditions as recommended by SEAC in para 5 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, appended hereto will be applicable and have to be strictly adhered to.
- 7. 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 6 (Mining), Chapter 7 (Blasting), Chapter 8 (Mine Drainage), Chapter 11 (EMP) Chapter 12 (Progressive Mine Closure Plan) of the Mining Planas submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

- 8. 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 compliants from residents within the security area of the quarry.
- 9. 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, and 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 Kerala to take tegal action under the Environment (Protection) Act 1986.
 - iii. The given address for correspondence with the authorised signatory of the projectisP.T.V.Mustafa.PothyilThottiparampilVadakethilHouse,NattukalP.O, Mannarkkad Taluk,Palakkad Dist. 678 583

Sd/-

JAMES VARGHESE.I.A.S, Member Secretary (SEIAA

To,

Shri.P.T.V. Mustafa.
PothyilThottiparampilVadakethil House,
Nattukal P.O,
Mannarkkad Taluk,
Palakkad Dist. – 678 583

Copy to,

- 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. The Advocate General, Ernakulam
- 4 District Collector, Palakkad District
- 5 Director, Mining & Geology, Thiruvananthapuram -4.
- 6 The Member Secretary, Kerala State Pollution Control Board
- 7 District Geologist, Palakkad District.
- 8 Tahsildhar Mannarkkad Taluk, Palakkad District, Kerala 678 583
- 9. Chairman, SEIAA.
- 10 Website.
- **1**1 S/f
- 12. 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.
- 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.
- 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.
- 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.
- 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 proponentshall 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.
- 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 thisimplementation 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

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