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Validity expires on 21.11.2022

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.

Sub: **SEIAA- Environmental Clearance for the proposed quarry project in Sy. Nos. 475/9, 475/9-1, 475/10, 477/9-1, 477/15-1, 236/1, 236/3, 236/4, 236/6, 236/7, 236/8, 236/9, 236/9-1, 235/3 & 235/10 of Manickal & Thekkada Villages, Nedumangad Taluk, Thiruvananthapuram District, Kerala by Sri. Abdul Kareem, Owner M/s. Al - Falah Metal Crusher - Granted – Orders issued.**

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1097/EC/SEIAA/KL/2017 ***Dated,Thiruvananthapuram 22.11.2017***

Ref: 1. Application received on 01.03.2017 from Sri. Abdul Kareem, Owner M/s. Al – Falah Metal Crusher, Al-falah, Mandapam, Vembayam Post, Thiruvananthapuram–695615
2. Minutes of the 71st meeting of SEAC held on 20th & 21st April 2017
3. Minutes of the 74th meeting of SEAC held on 14th & 15th June 2017
4. Minutes of the 76th meeting of SEAC held on 25th& 26th July, 2017
5. Minutes of the 77th meeting of SEAC held on 7th August 2017
6. Minutes of the 74th meeting of SEIAA held on 09th October 2017
7. Affidavit received on 20.11.2017 from Sri. Abdul Kareem
8. Certificate from Chartered Engineer dt.07.11.2017

ENVIRONMENTAL CLEARANCE NO.84/2017

Sri. Abdul Kareem, Owner M/s. Al - Falah Metal Crusher, Al-falah, Mandapam, Vembayam Post, Thiruvananthapuram - 695615, vide his application received on 01.03.2017 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in survey Nos. Sy. Nos. 475/9, 475/9-1, 475/10, 477/9-1, 477/15-1, 236/1, 236/3, 236/4, 236/6, 236/7, 236/8, 236/9, 236/9-1, 235/3 & 235/10 of Manickal & Thekkada Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala state for an area of 6.2764 Ha. 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.	1097/EC/SEIAA/KL/2017
	Name /Title of the project	Proposed Stone Quarry project by M/s. Al - Falah Metal Crusher
	Name and address of project proponent.	Mr. Abdul Kareem M/s. Al - Falah Metal Crusher , Al-falah, Mandapam, Vembayam Post, Thiruvananthapuram dist Kerala State
	Owner of the land	Mr. Abdul Kareem, Mrs. Naseeha, Mrs. Shyla Kareem, Mrs. MajidaBeevi
	Survey No. District/Taluk/ and Village etc.	475/9, 475/9-1, 475/10, 477/9-1, 477/15-1, 236/1, 236/3, 236/4, 236/6, 236/7, 236/8, 236/9, 236/9-1, 235/3 & 235/10
	Details of period of lease or permit with number including the beginning and expiry date of lease/permit period**(Copy to be attached)**	Quarry Permit No: CRPS/2/2016-17/GBS/1996/DOT/ML/2015 dated 27.04.2016 Valid upto 26.07.2017
	Present Status of the project Date & Year of startingthe work of the quarry project. whether the quarryis working at present or not ? If stopped working since when?	Not Working Work Started:27.04.2016 Work Stopped:26.04.2017
	Date of submission of Application	01.03.2017
	Brief description of the project.	Proposed Building Stone Quarry in an area of 6.2764 Hectares at Manickal & Thekkada Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala with maximum rate of production 3,49,446 M.T. / annum.
	Details of Authorized Signatory and address for correspondence	Mr. Abdul Kareem 10/197, Al Falah, Thekkada,Vembayam P.O., Thiruvananthapuram – 695615.
	Land Details	
	Extent of area in hectares	6.2764 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 52317 M.T Over burden 90218 M.T
	Latitude and Longitude	08°38'41.11"N - 08°38'53.85"N 76°57'04.68"E 76°57'18.76"E ,
	Topography of land and elevation	hilly terrain
	Slope analysis	Lease area is sloping towards North
	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 details	
	Minimum and Maximum height of excavation.	69 m
	Life of mine proposed.	5 Years
	Underground mining if any proposed	No
	Method of Mining	Open cast, semi mechanized mining
	Distance from the adjacent quarry	50m
	Cluster condition if any	No
	Has "No cluster certificate" submitted?	No
	Distance from nearby habitation	Vembayam – 2.0 km SW
	Distance from nearby forest, if applicable	None within the study area
	Distance from protected area, Wildlife Sanctuary, National Park etc.	None within the study area
	Distance from nearby streams/rivers/National Highway and Roads	Karamana River – 10.0 km, SE NH - 47 connecting Kollam - Trivandrum – 11.3 km, SW
	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	349446 M.T. 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.
Details of Project cost		
	Land cost	50 lakh
	Total project Cost	71.70 lakh
	Financial Statement including funding sourceand details of insurance etc.	The funding will be given by the Own funding ofM/s. Al - Falah Metal Crusher
	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. ➢ 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. **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** ➢ Green belt will be developed around 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 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.
		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.
	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	
PART B			
Environment Impact Assessment and Mitigation Measures			
Impact on water			
	Details of water requirement per day in KLD	3 KLD (Domestic – 1 KLD, Green belt & Dust suppression – 2 KLD)	
	Water source/sources.	Mineral water industries and harvested water from Rain water harvesting pits	
	Expected water use per day in KLD.	3 KLD	
	Details of water requirements met from water harvesting.	2 KLD	
	What are the impact of the proposal on the ground water?	There is no impact on ground water due to this project. The mining activity is terminated 3m above the water table.	
	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 to Septic tank followed by the soak pit.	

	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 storm water reservoir. Excess water will be diverted to drainage to reach the external drainage.
Impact on Biodiversity and Eco restoration Programmes		
	Will the project involve extensive clearing or modification of vegetation (Provide details)	There shall be minor clearing activities which will take place to clear the shrubs and trees and it will be suitably planted after the mining or subsequent years
	What ate the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	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
Grevillearobusta	Silver oak
Cocosnucifera	Thengu (Coconut)
Alstoniascholaris	Pala
Garciniacambogia	Kodampuli (Malabar Camboge)
Carica Papaya	Kappanga / Omakaya
Mangiferaindica	Mavu (Mango)

	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)	The proposed activity is neither displacing any terrestrial or aquatic fauna. There is no endangered species found in the study area.
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	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

	measures	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.
Energy Conservation		
	Details of power requirement and source of supply.	4 Nos of 35 HP Generator will be used Fuel usage – 80 Litre/day
	Details of renewable energy (non – conventional) used.	--
Risk 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 per the Indian Explosive Act 1958 & explosive rules 1983. Solid waste will be proposed to stack initially along the lease boundary and will be backfilled finally within the mine lease area.
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 not cause any disturbance to the local communities. There are no sacred sites or cultural values nearby.
	Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	No
	Are the CSR proposals satisfactory? Give details	Common CSR activities already carried out Description / Approx. Amount proposed (Lakhs) Repairing of Thekkada to Panavoor road – 1.5 Organizing Health camps – 1.0 Sanitary facilities for Schools (Toilets, Drinking water facilities, etc.) – 1.5 Total – 4.0 Proposed CSR activity details are enclosed.
	What are the projects benefits in terms of employment potential?	About 17 nos of local people will get employment due to this project implementation.

PART C		
	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	Certificate No.: NABET/EIA/1619/RA0048 No. 400, 13th Street, SIDCO Industrial Estate, North Phase, Ambattur, Chennai - 600098 Ph: +91 -422 -2453737
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.
	Explanation of how adverse impact have been mitigated.	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. Air Environment: Source of impact:Excavation, loading , transportation 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

2. The proposal was placed in the 71st 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.15 lakh (non-recurring) and Rs.15 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 following additional documents.

1. *A copy of Letter of Intent from the Department of Mining & Geology.*
2. *The Certificate [27.2(f)]of KMMC Rule, 2015] from the Village Officer certifying that the land is not assigned for any specific purpose.*
3. *A list of plant species proposed to be planted at the site should also to be provided.*

Field visit to the Quarry project site of M/s Al-Falah Metal Crusher, Manickal and Thekkada villages, Nedumangad Taluk, Thiruvananthapuram district, was carried out on 10.06.2017 by the sub-committee of SEAC, Kerala, comprising Dr. Oommen V Oommen and Sri. John Mathai. Sri. Abdul Kareem and other representatives were present at the site at the time of site visit.

The proposed lease area consists of 6.2764 ha falling in own land. This project is located at about 2 km northeast of Vembayam junction. Boundary pillars are erected and numbered as given in the surface plan, but fencing is incomplete. The lease land falls on the upper western slopes of a hillock with moderate to steep slopes. The area in general is covered with boulders and rock outcrops and the soil cover/OB is thin. The rock type belongs to Khondalite suite of rocks. The proposed quarry is partly developed by working with permits but is not working presently. Storm water management is planned through catch water drains leading to a crusher unit on the south at a lower level from where it will be clarified and let out. The main haulage road and the approach road are well laid with hard top. Rubber is seen in patches. The area is mostly rocky and disturbed but very small bits of natural vegetation are seen. One building is observed around 100 m from the quarry area. Two Quarries (one of Covenent Stones for which EC has been given and another small sized quarry) that are currently working are seen within 500 m but the combined area is less than 25 ha. Based on an overall evaluation of the site it can be recommended after considering the following:-

- *The certificate that the land is not assigned for any special purpose, issued by the village officer is not verified.*
- *A map with cadastral base to be submitted indicating the total land under possession and the proposed quarry area within it.*
- *A clear distance of 100 m must be left from the dwelling units seen on the eastern side.*
- *A separate plot may be set apart to relocate and protect shrubs and plants in the area that are rare to the locality.*
- *Catch water drains to be provided to channelize storm water and check dams for clarification before safe disposal.*
- *The stack of OB on the western side should be provided with adequate side protection*
- *Dedicated RWH structure may be provided in the lower part near the crusher unit to enhance water availability.*

3. The proposal was placed in the 74th meeting of SEAC held on 14th & 15th June 2017 and decided to defer the item for the submission of following documents.

1. *A copy of Letter of Intent from the Department of Mining & Geology.*
2. *The Certificate [27.2 (f) of KMMC Rule,2015] from the Village Officer certifying that the land is not assigned for any specific purpose.*
3. *A map with cadastral base to be submitted indicating the total land under possession and the proposed quarry area within it.*

4. The proponent has submitted the documents sought by 74th SEAC meeting. The proposal was placed in the 76th meeting of SEAC held on 25th& 26th July, 2017 and decided to defer the item for submission of the following document.

1. *Copy of the certificate [27.2(f)]of KMMC Rule, 2015] from the Village Officer certifying that the land is not assigned for any specific purpose.*

The proponent had submitted the documents sought by 76th meeting of SEAC.

5. 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 following specific condition for mining.

- *A clear distance of 100 m must be left from the dwelling units seen on the eastern side.*
- *Catch water drains to be provided to channelize storm water and check dams for clarification before safe disposal.*
- *The stack of OB on the western side should be provided with adequate side protection*
- *Dedicated RWH structure may be provided in the lower part near the crusher unit to enhance water availability.*
- *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.*

The proponent agreed to set apart Rs.15 lakh (non-recurring) and Rs.15 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

6. Authority considered the proposal in the 74th meeting held on 09th October 2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to general conditions in addition to the following specific conditions.

- *A clear distance of 100 m must be left from the dwelling units seen on the eastern side.*
- *Catch water drains to be provided to channelize storm water and check dams for clarification before safe disposal.*
- *The stack of OB on the western side should be provided with adequate side protection*
- *Dedicated RWH structure may be provided in the lower part near the crusher unit to enhance water availability.*
- *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.*

7. As the project cost seems to be under estimated a certificate from a Chartered Accountant stating the exact project cost should be submitted. The proponent should set apart an amount of Rs.15 lakh (non-recurring) and Rs.15 lakh per annum (recurring) for CSR

activities for the welfare of the local community in consultation with the local Panchayat. A notarised affidavit that a clear distance of 100m will be left from the nearest dwelling unit and 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 7th cited. Certificate from a Chartered Engineer vide reference 8th cited has been submitted stating that the total project cost is Rs.1,61,50,000/-.

8. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the proposed quarry project of Sri. Abdul Kareem, Owner M/s. Al - Falah Metal Crusher, Al-falah, Mandapam, Vembayam Post, Thiruvananthapuram - 695615, in Sy. Nos. 475/9, 475/9-1, 475/10, 477/9-1, 477/15-1, 236/1, 236/3, 236/4, 236/6, 236/7, 236/8, 236/9, 236/9-1, 235/3 & 235/10 of Manickal & Thekkada Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala for an area of 6.27.64 Ha, subject to the specific conditions as in para 6 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.

9. 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 (Mines Drainage), Chapter 8 (Stacking of Mineral rejects and Disposal of waste), Chapter 10 (EMP) Chapter 11 (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.

10. 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.

11. 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, Thiruvananthapuram

iii. The given address for correspondence with the authorised signatory of the project is Sri. Abdul Kareem, Owner M/s. Al - Falah Metal Crusher, Al-falah, Mandapam, Vembayam Post, Thiruvananthapuram - 695615.

Sd/-

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

To,

Sri. Abdul Kareem,
Owner M/s. Al - Falah Metal Crusher,
Al-falah, Mandapam, Vembayam Post,
Thiruvananthapuram
Kerala – 695615

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, Thiruvananthapuram
4. Director, Mining & Geology, Thiruvananthapuram -4.
5. The Member Secretary, Kerala State Pollution Control Board
6. District Geologist, Thiruvananthapuram
7. Tahsildhar, Nedumangad Taluk, Thiruvananthapuram
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 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.

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^{0}. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

44. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

45. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM_{10} and $PM_{2.5}$ such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

46. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.

47. Measures should be taken for control of noise levels below 85 dBA in the work environment.

48. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

49. The funds earmarked for environmental protection measures and CSR activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.

50. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.

51. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

52. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

53. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or 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