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Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA- Environmental Clearance for the proposed Quarry Project in Sy.Nos. 298 at Mupainad Village, Mupainad Panchayath, Vythiri Taluk, Wayanad District, by Sri. M.P.Kuriakose - Granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 901/EC4/3462/ SEIAA/2015

Dated, Thiruvananthapuram 17-01-2018

- Ref: 1. Application received on 25.08.2015 from Sri. M.P.Kuriakose, Muttath House, P.O.Chettapalam, Pullpaly, Wayanad District Kerala -673 579
2. Minutes of the 55th SEAC held on 10th, 11th and 20th of May, 2016.
3. Minutes of the 59th Meeting of SEAC held on 11th & 12th July 2016.
4. Minutes of the 58th meeting of SEIAA held on 8th September 2016.
5. Minutes of the 63rd meeting of SEAC, Kerala, held on 04th October, 2016.
6. Minutes of the 71st meeting of SEAC held on 20th & 21st April 2017.
7. Minutes of the 79th Meeting of SEAC held on 25th & 26th September, 2017.
8. Minutes of the 80th meeting of SEAC held on 11th October, 2017.
9. Minutes of the 81st meeting of SEAC held on 30th & 31st October, 2017.
10. Minutes of the 76th meeting of SEIAA held on 16 November 2017.
11. Affidavit received on 08.12.2017 from Sri. M.P.Kuriakose.

ENVIRONMENTAL CLEARANCE NO. 08/2018

Sri.M.P.Kuriakose, Muttath House, P.O.Chettapalam, Pullpaly, Wayanad District, Kerala vide his application received on 25.08.2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy.Nos. 298 at Mupainad Village, Mupainad Panchayath, Vythiri Taluk, Wayanad District, for an area of 1.7726 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 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 categorised 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.	901/EC4/3462/SEIAA/2015
Name /Title of the project	The Stone Quarry (Minor Mineral) of Mr. M. P. Kuriakose
Name and address of project proponent.	Mr. M.P. KURIAKOSE, Muttath House, P.O. Chettapalam, Pullpaly, Wayanad District, Kerala-673579.
Owner of the land	Mr. M.C CHERIYAN
Survey No. District/ Taluk/ and Village etc.	Survey No. 298, Mupainad Village & Panchayat, Vythiri Taluk, Wayanad District, Kerala
Category/Sub Category and Schedule	Category B / B2 & Schedule 1(a)
Details of period of lease or permit with number including the beginning and expiry date of lease /permit period (Copy to be attached)	Not applicable. New Quarry Project
Present Status of the project	Not applicable. New Quarry Project
Date & Year of starting the work of the quarry project.	Not applicable. New Quarry Project
Whether the quarry is working at present or not ?	Not applicable. New Quarry Project
If stopped working since when?	Not applicable. New Quarry Project
Date of submission of Application	25/02/2016
Brief description of	The Proposed Stone Quarry (Minor Mineral) of Mr. M. P. Kuriakose is situated at Survey No. 298, Mupainad Village & Panchayat, Vythiri Taluk,

the project.	Wayanad District, Kerala for an area of 1.7726 hectares. The land for the proposed quarry is Private land and the land is possessed in the name of Mr. M.C. Cheriyan The targeted production of mine will be 50,000 MTA. The estimated project cost will be Rs. 1.0 Crore. The expected life of mine estimated will be about 8 years. The working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.		
GPS Co-ordinate	Latitude (N) = 11°32'20.03" to 11°32'25.87" Longitude(E) = 76°12'04.29" to 76°12'10.56"		
Details of Authorized Signatory and address for correspondence	Mr. M.P. KURIAKOSE, Muttath House, P.O. Chettapalam, Pullpaly, Wayanad District, Kerala-673579		
LAND DETAILS			
Extent of area in hectares	1.7726 hectare		
Is the property forest land/ Govt. land/own land/patta land	Private own land		
Quantity of top soil/over burden produced and managed	It is estimated that around 3,830 cu. m. of top soil will be generated from the proposed pit, which will be properly stacked and will be utilized for plantation over the reclaimed areas. Also it is estimated that 3,192 cu. m. of OB is generated throughout the mine life. 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.		
Latitude and Longitude	Latitude (N)	11°32'20.03" to 11°32'25.87"	
	Longitude (E)	76°12'04.29" to 76°12'10.56"	
Topography of land and elevation	Part of the proposed land is exposed rock and the remaining land is covered with native trees, shrubs, herbs, grass, climbers, bushes etc. The topography of the lease area is hilly. As the proposed area is hill rock, the drainage of the lease area is towards south. No habitants are located in the lease area.		
Slope analysis	Slope is towards South side.		
Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	Due care will be taken to provide channel all around the foot of the hill to collect run off and also to avoid soil erosion.		
Access road to the site width and condition	6m wide road		
Will there be any adverse impact on the	No, the land used will be fully reclaimed and rehabilitated by backfilling the pond and plantation. Plantation and afforestation will add to the improvement in environment and aesthetic beauty of the area.		

aesthetics of the proposal site	
MINING DETAILS	
Minimum and Maximum height of excavation.	The exploitation of mineral is done from 905 m to 860m MSL in conceptual phase.
Life of mine proposed.	About 8 years
Underground mining if any proposed	No underground mining. The working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.
Method of Mining	The working will be carried out by opencast semi-mechanized method as per the approved Mining Plan
Distance from the adjacent quarry	There is no quarry in operation within 500m radius.
Cluster condition if any	No cluster condition
Has "No cluster certificate" submitted?	Yes, cluster certificate is already submitted with Environment Clearance Application.
Distance from nearby habitation	The nearest habitation is about 149m towards west side
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	Karapuzha Reservoir, 5 km., NW Chulikka River, 5.5 km., W
Is ESA applicable? If so distance from ESA limit	Not in ESA
Has approved mining plan, prepared by RQP submitted?	Yes, the approved mining plan prepared by RQP is already submitted with E.C. Application.
Capacity of production in TPA	50,000 MTA
Details of	The mining will be done by open cast semi-mechanized method of mining.

mining process	The bench height and width will be maintained 5 m. Excavated material is transported to the crusher unit for further processing. The ultimate depth of the mine workings is estimated to reach up to 860m MSL	
DETAILS OF PROJECT COST		
Land cost	Rs. 1.0 Crore (All inclusive)	
Plant and Machinery	Rs. 1.0 Crore (All inclusive)	
Total Cost	Rs. 1.0 Crore (All inclusive)	
Financial Statement including funding source and details of insurance etc.	Project Cost = Rs. 1.0 Crore Insurance = Insurance to the quarry workers would provide through insurance company. Funding = Own source & bank loan	
Environment Management Plan	Air Pollution	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. <ul style="list-style-type: none">• Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust.• To avoid the dust generation from the drilling operations, wet drilling method will be adopted.• Drill machines will be equipped with dust collectors.• Use of appropriate explosives for blasting and avoiding overcharging of blast holes.• Controlled blasting techniques will be adopted.• Watering of haul road and other road at regular intervals.• Provision of dust filters/ mask to workers working at highly dust prone and affected areas.• Provision of green belt all along the periphery of the lease area.• Periodical monitoring of ambient air quality in and around the lease area. The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions. <ul style="list-style-type: none">• In case of long transportation the trucks after loading will be covered with tarpaulin sheets.• Speed of the vehicles will be maintained within the prescribed limits.• Trucks will not be over loaded and will be maintained to the body level
	Water Pollution	Provision of storm water collection pond with an 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.
	Noise	The major noise generating source from the proposed

		<p>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"> • Proper maintenance of machinery, equipments and improvement on design of machines. • Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas. • Creation of wide green belt of dense foliage between mine areas and residential colonies. • Proper training to personnel to create awareness about adverse noise level effects. • Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.
	Solid Waste Management	<p>Topsoil Management</p> <p>The topsoil excavated from the quarry will be dumped / stacked separately at pre-determined place and subsequently will be utilized in spreading over reclaimed areas for plantation as part of eco-restoration. Precautions will be taken to limit the height of the topsoil dump / stacked 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>Overburden Management</p> <p>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>
	Eco-restoration	<p>The year wise programme of eco-restoration for life of mine will be made and about 1,277 trees will be planted in an area of 1.2773 ha.</p>
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Detailed Environment Management Plan is already submitted with E.C. Application.	
Does it suggest mitigation measures for each activity	Detailed Environment Management Plan is already submitted with E.C. Application.	
Is Pre-Feasibility Report (PFR) satisfactory	Detailed Pre-Feasibility Report (PFR) is already submitted with E.C. Application.	

Does it need public hearing	Not Applicable
Details of litigation and Court verdict if any	No litigation pending
Details of public complaint, if any	None
Details of statutory sanction required	The following Govt. Orders / Policies are to be followed:- ➤ Kerala Minor Mineral Concession Rules, 2015. ➤ Mines Act, 1952 ➤ Explosive Rules, 2008 ➤ Kerala Panchayat Raj Act, 1994 ➤ Environment Protection Act, 1986 ➤ EIA Notification, 2006 / 2009 ➤ The Kerala Promotion of Tree Growth in Non-Forest Areas (Amendment) Act, 2007.
4If CRZ recommendation applicable?	Not Applicable
PART B ENVIRONMENT IMPACT ASSESSMENT AND MITIGATION MEASURES	
Details of water requirement per day in KLD	The total water requirement is about 5 KLD in which 1 KLD is for domestic which would be sourced from open well, 2 KLD for dust suppression system in mine and 2 KLD for plantation purposes will be sourced from storm water pond.
Water source/sources.	1 KLD is for domestic which would be sourced from open well, 2 KLD for dust suppression system in mine and 2 KLD for plantation purposes will be sourced from storm water
Expected water use per day in KLD.	5 KLD
Details of water requirements met from water harvesting.	2 KLD for dust suppression system in mine and 2 KLD for plantation purposes will be sourced from storm water
What are the impact of the proposal on the ground water?	No significant impact envisaged on ground water due to the mining project.
How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste	No STP proposed for treatment of waste water.

treatment)	
What is the incremental pollution load from waste water generated from the proposed activities?	The sewage to a tune of 0.80 KLD generated from the mine office will be diverted to the septic tank followed by soak pit.
How is the storm water from within the site managed?	The run-off from the lease area will be suitably collected through channels and will be stored in storm water pond for further utilization in Mine unit. However, all measures will be taken to not to disturb the natural drainage system of the surrounding area.
IMPACT ON BIODIVERSITY AND ECO RESTORATION PROGRAMMES	
Will the project involve extensive clearing or modification of vegetation (Provide details)	Due to the mining activities, there will be loss of some native species and vegetation. However, some of these species will be planted at the end use for eco-restoration.
What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/landscaping)	The year wise programme of eco-restoration for life of mine will be made and about 1,277 trees will be planted in an area of 1.2773 ha.
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)	Not applicable No endangered species found at site
IMPACT ON AIR ENVIRONMENT	
What are the mitigation measures on generation of dust, smoke and	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. <ul style="list-style-type: none"> • Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust.

air quality	<ul style="list-style-type: none"> To avoid the dust generation from the drilling operations, wet drilling method will be adopted. Drill machines will be equipped with dust collectors. Use of appropriate explosives for blasting and avoiding overcharging of blast holes. Controlled blasting techniques will be adopted. Watering of haul road and other road at regular intervals. Provision of dust filters/ mask to workers working at highly dust prone and affected areas. Provision of green belt all along the periphery of the lease area. Periodical monitoring of ambient air quality in and around the lease area.
Details of internal traffic management of the site.	<p>The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions.</p> <ul style="list-style-type: none"> In case of long transportation the trucks after loading will be covered with tarpaulin sheets. Speed of the vehicles will be maintained within the prescribed limits. Trucks will not be over loaded and will be maintained to the body level
Details of noise from traffic, machines and vibrator and mitigation measures	<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"> Proper maintenance of machinery, equipments and improvement on design of machines. Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas. Creation of wide green belt of dense foliage between mine areas and residential colonies. Proper training to personnel to create awareness about adverse noise level effects. Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	No DG Set proposed
Air quality monitoring in detail	The ambient air quality monitoring of the project site was carried out and the copy of report is already submitted with E.C. Application.
ENERGY CONSERVATION	
Details of power requirement and source of supply.	The total power requirement will be 75 kW, which will be drawn from diesel engine. Fuel Quantity – 16 to 20 lt/ hr.
Details of	The total power requirement will be 75 kW, which will be drawn from

renewable energy (non – conventional) used.	diesel engine. Fuel Quantity – 16 to 20 lt/ hr.
RISK MANAGEMENT	
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Detailed Environment Management Plan is already submitted with E.C. Application.
Are proposals for fencing around the quarry satisfactory?	Barbed wire fencing will be done all around the quarry site.
Storage of explosives /hazardous substance in detail	The stone quarry mine will result in increase in frequency of blasting for mining the mineral. However, controlled blasting with optimum charge of holes will be carried out to loosen the rock. Explosion hazards are envisaged due to mishandling of explosives. Explosives will be handled with utmost care in compliance of conditions imposed by Chief Controller of Explosive & Metalliferous Mines Regulation, 1961.
Facility for solid waste management	Top soil and over burden generated from the site will be stored separately on earmarked place and will be used for eco-restoration and internal road development.
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 directly / indirectly develop the area by providing employment opportunities. With the proposed development in and around the area there will be supporting facilities/ infrastructure eventually leading to the development of the area.
Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	Part of the proposed land is existing quarry area and there is no vegetation in that area. The remaining land in the proposed land is mostly covered with native trees, shrubs, herbs, grass, climbers, bushes etc. The topography of the lease area is hilly terrain. The highest elevation of the lease area is 905 MSL and lowest is 860 m MSL. As the proposed area is hill rock, the drainage of the lease area is towards South.

Details of CSR commitment	The project proponent set apart an amount of Rs. 11 Lakhs as recurring expenses and Rs. 12 Lakhs as Non recurring expenses for CSR activities for the welfare of local community in consultation with the Grama Panchayat.
What are the projects benefits in terms of employment potential?	Due to the mining activity and due to the attached ancillary unit, there will be workers attracted to the project area. It is proposed to employ 18 persons in the project.
PART C	
Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	M/s Environmental Engineers & Consultants Pvt. Ltd. (NABET 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.
SUMMARY AND CONCLUSION	
Overall justification for implementation of the project.	It is predicted that socio-economic impact due to this project will positively increase the chance of more employment opportunities for local inhabitants. There are no Resettlement and Rehabilitation issues involved in this project. The project infrastructures will be of use to people of the area. The revenue of the State Govt. will be definitely increasing due to the proposed activity. The entire project area is devoid of any endangered flora and fauna. It is proposed to reclaim the land and develop green cover for eco-restoration with native species to a maximum possible extent. Additionally, an area is earmarked outside the proposed mining area for compensatory mass plantation. Also, a storm water pond is proposed outside the mining area for storage of rain water and for its subsequent use so as to conserve fresh water consumption. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.
Explanation of how adverse impact have been mitigated.	Detailed Pre-Feasibility Report (PFR) with Environment Management Plan (EMP) is already submitted with E.C. Application.

2. The proposal was considered in 55th SEAC held on 10th, 11th and 20th of May, 2016. The Committee deferred the item for field visit. Site visit was conducted on 23.6.2016 by a subcommittee consisting of Dr. P.S. Harikumar, Dr. George Chackachery and Sri. S. Ajayakumar. The details are as follows:

“Observations

- *Virgin site*
- *No proper road to the quarry*

- The quarry is inside a coffee plantation area

Recommendations

- The activity should be started only after providing approach roads to the quarry with a minimum width of 6 m
- The boundary shall be clearly demarcated before starting any activity
- Storm water drainage from the quarry must be let out to the valley only after clarification
- Fencing should be provided around the area with proper sign boards
- The overburden should be stored at designated place
- Stipulate other general conditions.

3. The proposal was again considered in the 59th Meeting of SEAC held on 11th & 12th July 2016. The Committee after examining the mining plan, prefeasibility report, field inspection report and all other documents submitted by the proponent, decided to Recommend for issuance of EC subject to general conditions in addition to the following specific conditions for mining.

1. The activity should be started only after relevant authorities confirm that approach roads to the quarry are provided with a minimum width of 6 m.
2. The boundary shall be clearly demarcated before starting any activity
3. Storm water drainage from the quarry must be let out to the valley only after clarification
4. Fencing should be provided around the area with proper sign boards
5. The overburden should be stored at designated place.

The Committee also recorded that:

‘The proponent agreed to set apart Rs 13 lakhs (non-recurring) and 15 lakhs per annum (recurring) for next 5 years for CSR activities for the welfare of the local community in addition to the 1% of the profit towards the KSBB. The proponent also agreed to spend this amount in consultation with the local Panchayath’.

The proponent has to make a written undertaking to the above effect.

Authority noted that among the floral diversity at site the following species are listed as endangered:

Sl.No.	Name	Family	Status
1	Ochlandraebracteata Raizada & Chatterjee	Poaceae	Endemic, Endangered
2	Vernoniagossypina Gamble, Bull.	Asteraceae	Endemic, Critically endangered

There are also a few endemic species. Special measures have to be stipulated to protect the above individual plants at the remaining land owned by the proponent.

4. The proposal was considered in the 58th meeting of SEIAA held on 8th September 2016. The minutes of the said meeting that “while recommending for issue of E.C, It was stated that after the site inspection by the subcommittee on 23/06/2016, the following observations were made”.

- Virgin site
- No proper road to the quarry
- The quarry is inside a coffee plantation area

There is reference to critically endangered and endemic plant species in the PFR. Authority decided to refer the case back to SEAC for reappraisal with special reference to the following terms:

Whether the ambience is ecologically suitable for mining of rock.

Whether the quarry site inside the coffee plantation which is a virgin site having endangered and endemic floral diversity could be subjected to blasting and mining activities as proposed.

Whether trees need be cut for site clearance for mining, road formation or other activities as per the PFR.

Whether the approach road to the quarry can be provided by the proponent within his own land available at site.

Whether the endangered and endemic plants at site could be transplanted and protected in the remaining land owned by the proponent.

5. The proposal was considered in the 63rd meeting of SEAC, Kerala, held on 04th October, 2016. The Committee examined the suggestions made by SEIAA and decided to defer the item for a second site inspection.

Accordingly, the Subcommittee Members of SEAC were carried out site inspection and the report is given below:

Field visit to the Quarry project site of Sri. M. P. Kuriakose in Mupainad Village, Vythiri Taluk, Wayanad District was carried out on 01.04.2017 by the sub-committee of SEAC, Kerala, comprising Dr. Khaleel Chowwa and Sri. John Mathai. The proponent along with his partners was present at the site at the time of site visit. A reappraisal of the site has been carried out as suggested by SEIAA, Kerala

This project is located at about 3.5 km east of Muppainad junction with the approach road from Padivayal located on the Meppadi-Vaduvanchal road. The proposed lease area falls in the elevated part of a hillock reaching to an elevation of 900 m amsl. Boundary pillars of the proposed quarry area are erected with fencing and numbered as given in the surface plan. The

GPS coordinates of some them were checked and found to be correct. The overall slope of the land is towards southwest. The west sloping segment is barren exposing hard rock. The rock type is mostly composite gneiss with a higher content of mafics. The OB thickness in the rocky ridge is negligible while in the vegetated part it may exceed 2 m. The storm water from the entire lease area is not channelized and presently flows as sheet flow into western part leading to a valley. Dominant landuse is coffee all around with shade trees. Floral and faunal biodiversity is not observed as the area is mostly rocky and disturbed for planting coffee. Critically endangered species as mentioned in the PFR were not seen in the proposed lease area. Dwelling units are not seen within 100 m. Quarry operations are yet to be initiated. SEIAA had raised following points to be included during the reappraisal

- a) Whether the ambience is ecologically suitable for mining of rock- The surrounding area is all green with Coffee and other trees except for this barren rocky patch. A quarry in this locality will affect the overall ambience.
- b) Whether the quarry site inside the coffee plantation which is a virgin site having endangered and endemic floral diversity could be subjected to blasting and mining activities as proposed.- The proponent himself has declared the presence of IUCN red listed Critically Endangered Species of *Vernonia* and *Ochlandra*, Eventhough it is not observed in the immediate vicinity of bare rock area, utmost care must be taken to protect these species and other endemic species. So the barren rocky area devoid of soil cover and not put to other useful landuse can be recommended for quarry. Conversion of a land under natural vegetation into coffee plantation has already affected the virgin status of the site.
- c) Whether trees need be cut for site clearance for mining, road formation or other activities as per the PFR-. A few trees and part of the coffee grown area in the upper part will be cut and removed in the process of quarrying.
- d) Whether the approach road to the quarry can be provided by the proponent within his own land available at site- Approach road with sufficient width has already been provided
- e) Whether the endangered and endemic plants at site could be transplanted and protected in the remaining land owned by the proponent?- Utmost care must be taken to protect the critically endangered and endemic species in the vicinity. These can be transplanted and protected in a separate plot in the remaining land owned by the proponent.

The project may be recommended with the following conditions

1. The proponent may be advised to limit the quarry operations to the rocky area and leave a 40 m wide zone presently under coffee in the western part and proposed to be quarried.
2. The storm water from the quarry to be directed to a large RWH structure for desiltation and clarification. This structure may be placed adjacent to the road.
3. Trees and plants that are rare/ endangered and seen in the nearby area may be conserved in a plot specifically set apart for this purpose.

6. The proposal was placed in the 71st meeting of SEAC held on 20th & 21st April 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 direct the proponent to revise the Mining Plan limiting the quarrying operation to the exposed rock area alone.

7. The proponent has submitted the revised Mining Plan as suggested by the 71st SEAC. The proposal was then placed in the 79th Meeting of SEAC held on 25th & 26th September, 2017. After examining all the documents the Committee decided to have a presentation of the revised mining plan so as to ensure that the mining operations are limited to the barren rock out crop and carried out without causing damage to local ecosystems.

8. The proposal was placed in the 80th meeting of SEAC held on 11th October, 2017 . The proponent did not turn up for presenting the details. The Committee decided to defer the item .

9. The proposal was placed in the 81st meeting of SEAC held on 30th & 31st October, 2017. The proponent appeared before the committee and explained the changes made in the revised mining plan. The effective mining area has been reduced from 1.7726 ha to 1.2766 ha. Committee also observed that though presence of two endemic and critically endangered species were reported in the documents submitted along with the application, the Sub Committee which visited the area could not notice the presence of such species in the area proposed for mining.

10. After considering all aspects of the application , the committee decided to modify its earlier recommendation by limiting the mining area to 1.2766 ha with the following specific conditions in addition to the general conditions.

1. *The quarrying operation to be strictly limited to the rock outcrop in 1.2766ha..*
2. *The storm water from the quarry to be directed to a large RWH structure for de-siltation and clarification. This structure may be placed adjacent to the road.*
3. *If any endangered or endemic plant species are noticed in the mining area the same shall be transplanted and preserved in a nearby plot set apart for the purpose.*

The proponent agreed to set apart Rs. 12 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local body.

11. The proposal was placed in the 76th meeting of SEIAA held on 16 November 2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to general conditions in addition to the following specific conditions.

1. *The quarrying operation to be strictly limited to the rock outcrop in 1.2766ha..*
2. *The storm water from the quarry to be directed to a large RWH structure for de-siltation and clarification. This structure may be placed adjacent to the road.*
3. *If any endangered or endemic plant species are noticed in the mining area the same shall be transplanted and preserved in a nearby plot set apart for the purpose.*

. The proponent should set apart Rs.12 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local body and the details should be forwarded to SEIAA. The specific conditions of the first inspection report as noted

in para 3 should also be fulfilled. A notarised affidavit for the commitment of CSR activities and also agreeing to all the general and specific conditions should be submitted before the issuance of EC. The proponent has submitted the Affidavit vide reference 11th cited.

12. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the proposed quarry project of Sri.M.P.Kuriakose, Muttath House, P.O.Chettapalam, Pullpaly, Wayanad District Kerala -673 579, in Sy. No. 298 at Mupainad Village, Mupainad Panchayath, Vythiri Taluk, Wayanad District,, Kerala for an area of 1.2766 Ha, subject to the specific conditions as in para 11 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.

13. 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 undertakings and conditions subject to all the mining features, Environmental Management Plans as undertaken in the Mining Plan and EMP submitted to SEIAA will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

14. 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.

15. 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. 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.

- i. Instances of violation if any shall be reported to the District Collector, Wayanad.

- ii. The given address for correspondence with the authorised signatory of the project is Sri.M.P.Kuriakose, Muttath House, P.O.Chettapalam, Pullpaly, Wayanad District Kerala -673 579.

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

To,


Sri.M.P.Kuriakose,
Muttath House, P.O.Chettapalam,
Pullpaly, Wayanad District Kerala -673 579

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, Wayanad.
4. Director, Mining & Geology, Thiruvananthapuram -4.
5. The Member Secretary, Kerala State Pollution Control Board
6. District Geologist, Wayanad.
7. Tahsildhar, Vythiri Taluk, Wayanad
8. Chairman, SEIAA.
- ✓ 9. Website.
10. S/f
11. O/c



Forwarded/By Order


Administrator, SEIAA


STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

GENERAL CONDITIONS (for mining projects)

1. Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.
2. Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.
3. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
4. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
5. Sprinklers shall be installed and used in the project site to contain dust emissions.
6. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
7. At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco-friendly, if no other specific condition on reclamation of pit is stipulated in the E.C.
8. Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
9. The lease area shall be fenced off with barbed wires to a minimum height of 4ft around, before starting of mining. All the boundary indicators (boards, stores, markings, etc) shall be protected at all times and shall be conspicuous.
10. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
11. Control measures on noise and vibration prescribed by KSPCB should be implemented.
12. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
13. Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
14. A licensed person should supervise/ control the blasting operations.
15. Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.
16. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
17. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention is the mining plan/specific condition.
18. Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
19. Maximum depth of mining from general ground level at site shall not exceed 10m
20. No mining operations should be carried out at places having a slope greater than 45°.
21. Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.
22. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
23. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
24. The transportation of minerals should be done in covered trucks to contain dust emissions.
25. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
26. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.
27. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
28. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
29. 100 m buffer distance should be maintained from forest boundaries.

30. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.
31. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.
32. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponents shall apply and get the approval of this Authority.
33. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
34. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
35. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
36. A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/ District Panchayat/ Municipality/ Corporation/ Urban Local Body and also to the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.
37. The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office.
38. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public
39. The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.
40. No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.
41. The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.
42. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
43. The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

44. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
45. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM₁₀ and PM_{2.5} such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
46. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
47. Measures should be taken for control of noise levels below 85 dBA in the work environment.
48. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
49. The funds earmarked for environmental protection measures and CSR activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.
50. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.
51. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
52. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
53. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or this implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
54. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.
55. This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Government of Kerala, whichever is earlier.
56. The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.
57. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
58. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area'
59. Project proponent should obtain necessary prior permission of the competent authorities for drawal of requisite quantity of surface water and ground water for the project.
60. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.
61. Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.



For Member Secretary, SEIAA Kerala

