



Validity expires on 16.03.2023

***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 Re Survey Nos. 354/4, 354/5, 355/1 pt, 351/1 pt, 350, 352/1pt, at Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala by Sri. George Kochuparambil - Granted – Orders issued.

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1137/EC/SEIAA/KL/2017

Dated Thiruvananthapuram 17.03.2018

- Ref:
1. Application received on 13.07.2017 from Sri. George Kochuparambil, Kochuparambil House, Vazhithala. P.O., Thodupuzha, Idukki, Kerala - 685583
 2. Minutes of the 79th meeting of SEAC held on 25th & 26th September 2017.
 3. Minutes of the 80th meeting of SEAC held on 11th October 2017.
 4. Minutes of the 81st meeting of SEAC held on 30th & 31st meeting.
 5. Minutes of the 76th SEIAA meeting held on 16th November 2017.
 6. Minutes of the 79th meeting of SEIAA held on 09th January 2018.
 7. Minutes of the 82nd meeting of SEIAA held on 15th March 2018.
 8. Affidavit dt. 17.03.2018 from Sri. George Kochuparambil

ENVIRONMENTAL CLEARANCE NO.56/2018

Sri.George Kochuparambil, Kochuparambil House, Vazhithala. P.O., Thodupuzha, Idukki, Kerala - 685583, vide his application received 13.07.2017 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Re Survey Nos. 354/4, 354/5, 355/1 pt, 351/1 pt, 350, 352/1pt, at Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala for an area of 12.2987 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
PART A**

PROJECT DETAILS	
File No.	1137/EC/SEIAA/KL/2017
Name /Title of the project	Quarry (Minor Mineral) project of Mr. George Kochuparambil
Name and address of project proponent.	Mr. GEORGE KOCHUPARAMBIL Kochuparambil House, Vazhithala P.O., Thodupuzha, Idukki, Kerala-685583. E-mail :- unitedgranitesandmetals@gmail.com
Owner of the land	Private own land
Survey No. District/ Taluk/ and Village etc.	Re-Survey No. 354/4, 354/5, 355/1pt., 351/1pt., 350, 352/1pt., Manakkad Village, Thodupuzha Taluk, Idukki 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)	The project is for expansion of an existing quarry project and the existing project is accorded with Environmental Clearance vide Order No. 36/SEIAA/KL/6091/2012 for an area of 4.2321 ha. The cumulative area is 12.2987 ha. The EC accorded area is part of the area in the instant application. Mining is in progress in the EC accorded area of 4.2321 ha with the support of mining lease vide No. 405/2013-2014/3099/M3/2013 Dt. 12/09/2013 issued by Mining and Geology Department, Govt. of Kerala with validity up to October, 2023 and the copy of mining lease is attached.
Present Status of the project	Part of the proposed quarry is working quarry (EC accorded area) with mining lease
Date & Year of starting the work of the quarry project.	11/10/2013
Whether the quarry is working at present or not ?	Working quarry with mining lease
If stopped working, since when?	Not applicable
Date of submission of Application	13.07.2017
Brief description of the project.	The building Stone Quarry (Minor Mineral) mining project of Mr. George Kochuparambil is situated at Re-Survey No. 354/4, 354/5, 355/1pt., 351/1pt., 350, 352/1pt., Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala for an area of 12.2987 hectares. The land for the proposed quarry is private owned land and the land is possessed in the name of Mr. George Kochuparambil. The targeted production of mine will be 4,00,000 MTA. The estimated project cost will be Rs. 12 Crores. The expected life of mine estimated will

	be of about 16 years. The mining operation will be carried out by opencast semi-mechanized method as per the approved Mining Plan.	
GPS Co-ordinate	Latitude (N) = 09°53'32.72"N to 09°53'48.09"N	
	Longitude(E) = 76°38'21.51"E to 76°38'36.07"E	
Details of Authorized Signatory and address for correspondence	Mr. GEORGE KOCHUPARAMBIL Kochuparambil House, Vazhithala P.O., Thodupuzha, Idukki, Kerala-685583. E-mail :- unitedgranitesandmetals@gmail.com	
LAND DETAILS		
Extent of area in hectares	12.2987 hectare	
Is the property forest land/ Govt. land/own land/patta land	Private own land	
Quantity of top soil/over burden produced and managed	A total quantity of 34,976 cu. m. of topsoil is proposed to be removed during the mining operations. 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. About 15,302 cu. m of overburden (OB) will be generated throughout the mine life. This waste will be utilized within the pit for lying of haul roads. At the end use, OB can be reutilized as soil base for plantation.	
Latitude and Longitude	Latitude (N)	09°53'32.72"N to 09°53'48.09"N
	Longitude (E)	76°38'21.51"E to 76°38'36.07"E
Topography of land and elevation	Part of the 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 145 m MSL and lowest is 35 m MSL. As the proposed area is hill rock, the drainage of the lease area is towards North. No habitants are located in the lease area.	
Slope analysis	The slope is towards North	
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	7m wide road	
Will there be any adverse impact on the aesthetics of the proposal	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.	

site	
MINING DETAILS	
Minimum and Maximum height of excavation.	The exploitation of mineral is being done from 145 m to 30m MSL in conceptual phase.
Life of mine proposed.	About 16 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 are two working quarries of M/s KKI Groups International (India) Pvt. Ltd. (1.8531 ha + 1.97 ha) with cumulative area of 3.8231 ha are located within 500m radius of the proposed quarry site
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	About 103 m towards East
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	Marika Muzhikkal Kavu thodu, 1.50 km, West Thodupuzha River, 3.50 km, North MVIP Canal, 2 km, North
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	4,00,000 MTA
Details of mining	The mining will be done by open cast semi-mechanized method of

process	mining. 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 30m MSL.	
DETAILS OF PROJECT COST		
Land cost	Rs. 12 Crore (All inclusive)	
Plant and Machinery	Rs. 12 Crore (All inclusive)	
Total Cost	Rs. 12 Crore (All inclusive)	
Financial Statement including funding source and details of insurance etc.	<p style="text-align: center;">Project Cost = Rs. 12 Crores Insurance = Insurance to the quarry workers would provide through insurance company. Funding = Own source & bank loan</p>	
Environment Management Plan	Air Pollution	<p>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.</p> <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. <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
	Water	Provision of storm water collection pond with an

	Pollution	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 activity is working machinery, drilling, blasting and plying of vehicles. The following control measures are to be undertaken to bring down the noise levels:- <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	The year wise programme of eco-restoration for life of mine will be made and about 7,900 trees will be planted in an area of 7.9039 ha.
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	Detailed Environment Management Plan is already submitted with E.C. Application.	

each activity	
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:- <ul style="list-style-type: none"> ➤ 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.
If 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 16 KLD in which 2 KLD is for domestic purpose which would be sourced from open well, 12 KLD for dust suppression in mine as well as ancillary unit and 2 KLD for plantation will be sourced from storm water pond.
Water source/sources.	2 KLD is for domestic purpose which would be sourced from open well, 12 KLD for dust suppression in mine as well as ancillary unit and 2 KLD for plantation will be sourced from storm water pond.
Expected water use per day in KLD.	16 KLD
Details of water requirements met from water harvesting.	12 KLD for dust suppression in mine as well as ancillary unit and 2 KLD for plantation will be sourced from storm water pond.
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	No STP proposed for treatment of waste water.

treated waste water? (Facilities for liquid waste treatment)	
What is the incremental pollution load from waste water generated from the proposed activities?	The sewage to a tune of 1.60 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 7,900 trees will be planted in an area of 7.9039 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	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

<p>generation of dust, smoke and air quality</p>	<p>operations.</p> <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.
<p>Details of internal traffic management of the site.</p>	<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
<p>Details of noise from traffic, machines and vibrator and mitigation measures</p>	<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.
<p>Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation</p>	<p>No DG Set proposed</p>

measures	
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 renewable energy (non conventional) used.	The total power requirement will be 75 kW, which will be drawn from 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	Part of the land is existing quarry area and there is no vegetation in that area. The remaining land in the proposed land is mostly covered with

demographic structure of local population. If so, provide details.	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 145 m MSL and lowest is 35 m MSL. As the proposed area is hill rock, the drainage of the lease area is towards North. No habitants are located in the lease area.
Details of CSR commitment	The project proponent set apart an amount of Rs. 25 Lakhs as recurring expenses and Rs. 25 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 30 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 placed in the 79th meeting of SEAC held on 25th & 26th September 2017 and the Committee decided to defer the item for field inspection. Accordingly field visit to the proposed project site was conducted by the Sub Committee consisting of

Dr.K.G.Padmakumar & Sri.P.Sreekumaran Nair on 02nd October 2017. The report is as follows;

The proposed project is for a Building Stone quarry, in own land of 12.2987 hectares. The nearest habitation is about 103 m towards east. The nearest water body is MarikaMuzhikkal Kavuthodu , 1.50 km. Two working quarries of M/s KKJ Groups International (India) Pvt. Ltd. (1.8531 ha + 1.97 ha) with cumulative area of 3.8231 ha are located within 500m radius of the site.

The quarry is presently in operation based on valid lease issued vide 36/SEEIA/KL/6091/2012 dtd 14.11.12, lease valid up to 2013. The operating quarry is well maintained. All suggestions have been adhered to. Sedimentation ponds at different levels neatly maintained. Solar lights fixed up for external lighting. The company MS/ United Granites and metals is reportedly fixing up an imported new crushing and screening unit for rock and mineral processing crusher unit, which is reportedly more environment friendly and more quiet in operation. We were deeply impressed by the way they maintain registers on quarry operations, especially appreciation goes to the mines Manager who is organizing trainings periodically to workers on Do's and Don'ts in mining. A separate training register is maintained.

The proponent has meticulously planted over 12,700 plants(as stated) , to form a green belt. Trees are seen closely planted, well established all along the pavement sides. The top soil removed is stacked separately, clarification ponds available, water harvesting structures are well maintained. Very effective mobile water sprinkling system is found to be in operation. Vibration test is done periodically, monitoring reports from CSIR Mining and Fuel Research institute Nagpur, reports produced. Sign/display boards have been displayed at every location.

We may recommend the case as proponent is apparently following all the set norms and guidelines.

3. The proposal was placed in the 80th meeting of SEAC held on 11th October 2017. The Committee decided to defer the item for considering in the next meeting. A mass petition from Pallavi Nagar Residents' Association against the proposed project is received on 19.10.2017.

4. The proposal was again considered in the 81st meeting of SEAC held on 30th & 31st meeting. The Committee appraised the proposal based on the Mining plan, Form.1, Pre-feasibility Report, all other documents submitted with the proposal and the field visit report condition. The members of the Sub Committee who inspected the site informed that they did not notice any of the structures mentioned in the petition of Pallavi Nagar Residents' Association in 100 m periphery where quarrying operations are proposed. After deliberations the Committee decided to **Recommend for issuance of EC** subject to general conditions in addition to the following specific condition.

1. *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.30 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

5. The proposal was considered in the 76th SEIAA meeting held on 16th November 2017. Authority noticed that there are complaints from 'Pallavi Nagar Residents' Association against the quarry. Hence Authority decided to hear the complainants and the proponent in the next SEIAA meeting.

6. The proposal was placed in the 79th meeting of SEIAA held on 09th January 2018. The proponent and the complainant were heard during the meeting. Authority noticed the grievances of both the petitioner and the proponent. After discussion Authority directed the proponent to keep a minimum buffer distance of 100 m and an additional 20 m where habitation is high and also complete plantation within 6 months. A revised Mining Plan should be submitted to this effect before the issuance of EC.

The proponent has submitted a revised Mining Plan reducing the minable area from 10.3578 ha to 9.8766 ha.

7. The proposal was finally placed in the 82nd meeting of SEIAA held on 15th March 2018. Authority accepted the recommendation of SEAC and decided to issue EC subject to general conditions in addition to the specific conditions as recommended by SEAC. The proponent should set apart Rs.30 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat. The CSR amount should be included in the annual account of the company and the expenditure statement should be submitted to SEIAA along with the compliance report after getting certified by a

Chartered Accountant. A notarised affidavit for the commitment of CSR activities and also agreeing all the general and specific conditions should be submitted before the issuance of EC. The proponent has submitted the affidavit vide reference 8th cited.

8. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the quarry project of Sri.George Kochuparambil, Kochuparambil House, Vazhithala. P.O., Thodupuzha, Idukki, Kerala – 685583 in Re Survey Nos. 354/4, 354/5, 355/1 pt, 351/1 pt, 350, 352/1pt at Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala for an area of 12.2987 Ha., subject to the specific conditions as in para 4 & 7 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 7 (Blasting), Chapter 10 (EMP) Chapter 14 (Progressive 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, Idukki.
 - iii. The given address for correspondence with the authorised signatory of the project is Sri.George Kochuparambil, Kochuparambil House, Vazhithala. P.O., Thodupuzha, Idukki, Kerala – 685583.

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


To,

Sri.George Kochuparambil,
Kochuparambil House, Vazhithala. P.O.,
Thodupuzha, Idukki, Kerala - 685583

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

