



Validity expires on 03.01.2023

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 stone quarry project in
Survey Nos. 13/1, Erumely South Village, Erumely Panchayat, Kanjirappally
Taluk, Kottayam District, Kerala by Sri. Jacob Thomas, M/s PGI
Enterprises - Granted – Orders issued.**

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1109/EC/SEIAA/KL/2017

Dated, Thiruvananthapuram 04.01.2018

- Ref:
1. Application received on 02.03.2017 from Sri. Jacob Thomas, M/s PGI Enterprises, Kudukkavally Propose P.O., Erumely, Kottayam, Kerala-686509
 2. Minutes of the 72nd meeting of SEAC held on 08th & 09th May 2017
 3. Minutes of the 76th meeting of SEAC held on 25th & 26th July 2017
 4. Minutes of the 80th meeting of SEAC held on 11th October 2017.
 5. Minutes of the 75th meeting of SEIAA held on 28th October 2017.
 6. Affidavit received on 20.11.2017 from Sri. Jacob Thomas
 7. Letter No.11/DOY/ML/2016 dt.07.12.2017 from the Geologist, Kottayam

ENVIRONMENTAL CLEARANCE NO.04/2018

Sri. Jacob Thomas, M/s PGI Enterprises, Kudukkavally Propose P.O., Erumely, Kottayam, Kerala-686509. vide his application received on 02.03.2017 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Survey Nos. 13/1, Village Erumely South, Erumely Panchayat, Kanjirappally Taluk, Kottayam District, Kerala for an area of 9.7660 Ha. . The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II(M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per Notification No.S.O.141 (E) dt.15.01.2016 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

Details of the project as furnished by the applicant are as follows;

BASIC INFORMATION OF QUARRY

(To be filled in by the Project Proponent)

PART A

PROJECT DETAILS	
File No.	1109 / EC / SEIAA / KL / 2017
Name /Title of the project	Masonry Stone Mine (Quarry) project of Mr. Jacob Thomas, PGI Enterprises
Name and address of project proponent.	Mr. JACOB THOMAS, PGI Enterprises, Kudukkavally Propose P.O., Erumely, Kottayam, Kerala-686509. Mobile No. 09447765421, 9447760556 Email: plakkattugranitekonni@gmail.com & thomasjchalackal@gmail.com
Owner of the land	Private Own Land
Survey No. District/Taluk/ Village etc.	Survey Nos. 13/1, Village Erumely South, Erumely Panchayat, Kanjirappally Taluk, Kottayam District, Kerala in area 9.7660 hectares.
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. The quarry proposal is for a new quarry project.
Present Status of the project	New Quarry Proposal
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	10/11/2016
Brief description of the project.	<p>The proposed Building Stone Quarry (Minor Mineral) project of Mr. Jacob Thomas PGI Enterprises is situated at Survey Nos. 13/1, Village Erumely South, Erumely Panchayat, Kanjirappally Taluk, Kottayam District, Kerala in area 9.7660 hectares.</p> <p>The land for the proposed quarry is a private owned land and the land is possessed in the name of Mr. Jacob Thomas PGI Enterprises. The targeted production of mine will be 3,00,000 MTA. The estimated project cost will be about Rs. 3 Crores. The expected life of mine estimated will be about 19 years. The mining operation will be carried out by opencast</p>

	semi-mechanized method as per the approved Mining Plan.		
GPS Co-ordinate	Latitude (N) = 09° 28'36.20" to 09° 28'51.92" N		
	Longitude(E) = 76° 51'47.06" to 76° 52'02.09" E		
Details of Authorized Signatory and address for correspondence	Mr. JACOB THOMAS PGI Enterprises, Kudukkavally Propose P.O., Erumely, Kottayam, Kerala-686509. Mobile No. 09447765421, 9447760556 Email: plakkattugranitekonni@gmail.com & thomasjchalackal@gmail.com		
LAND DETAILS			
Extent of area in hectares	9.7660 hectares		
Is the property forest land/Govt. land/own land/patta land	Private own land		
Quantity of top soil/over burden produced and managed	Top Soil =44,389 cu. m.; Over Burden = 16,141 cu. m		
Latitude and Longitude	Latitude (N)	09° 28'36.20" to 09° 28'51.92" N	
	Longitude (E)	76° 51'47.06" to 76° 52'02.09" E	
Topography of land and elevation	Part of the proposed land is rocky area and there is no vegetation in that area. The remaining 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 110 m MSL and lowest is 55 m MSL. As the proposed area is hill rock, the drainage of lease area is towards NE. No habitants are located in the lease area.		
Slope analysis	Slope is towards NE 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 hill to collect run off and also to avoid soil erosion. There is no danger of flood or inundation as the proposed working is above the normal ground level. The area is not susceptible to flood.		
Access road to the site width and condition	7m wide tarred road.		
Will there be any adverse impact on the aesthetics of the proposal site	No, the land used will be fully reclaimed and rehabilitated by backfilling the pits with plantation and pond. Plantation and afforestation will add to the improvement in environment and aesthetic beauty of the area.		
MINING DETAILS			
Minimum and Maximum height of excavation.	The exploitation of mineral is being done from 110 m to 50m MSL in conceptual phase.		
Life of mine proposed.	About 19 years		
Underground mining if any proposed	No underground mining proposed.		
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 of the proposed project.		
Cluster condition if	No cluster condition		

any	
Has "No cluster certificate" submitted?	Cluster Certificate issued by Department of Mining and Geology, Govt. of Kerala is already submitted with E.C. application.
Distance from nearby habitation	The nearest habitation is at about 101m towards SE side.
Distance from nearby forest, if applicable	Sabarimala Forest at about 5 km, East
Distance from protected area, Wildlife Sanctuary, National Park etc.	The project site is located about 6 km away to the Periyar WLS & National Park and application for WLC has been submitted online at MoEF Portal and acknowledge received in this regard is already submitted at SEIAA, Kerala.
Distance from nearby streams/rivers/National Highway and Roads	Manimala River, 3 km, NW Parathodu, 500m E
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 along with E.C. Application.
Capacity of production in TPA	3,00,000 MTA
Details of mining process	The mining will be done by open cast semi-mechanized method of mining. The bench height and width will be maintained 5 m. Excavated material is transported to the crusher unit existing within the complex for further processing. The exploitation of mineral will be done from 110 m to 50m MSL in conceptual phase.
DETAILS OF PROJECT COST	
Land cost	Rs. 3 Crores (All inclusive)
Plant and Machinery	Rs. 3 Crores (All inclusive)
Total Cost	Rs. 3 Crores (All inclusive)
Financial Statement including funding source and details of insurance etc.	Rs. 3 Crores (All inclusive) Insurance = Insurance to the quarry workers would provide through insurance company. Funding = Own source & bank loan
Environment Management Plan	<p>Air Pollution</p> <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

		<p>intervals.</p> <ul style="list-style-type: none"> • 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 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	<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. 	
	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>	

		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.	
	Eco-restoration	The year wise programme of eco-restoration for the life of mine will be made and about 6,000 trees will be planted in an area of 6.0308 ha.	
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes.		
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:- ➤ Consents from Kerala State Pollution Control Board. ➤ Permission from Mining & Geology Department. ➤ Permission from Explosive Department ➤ Permission from Panchayat Office.		
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 15 KLD in which 1 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 purposes and will be sourced from storm water pond.		
Water source / sources.	1 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 purposes and will be sourced from storm water pond.		
Expected water use per day in KLD.	15 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 purposes and 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	Nil		

water requirement can be met from the recycling of 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 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?	<ul style="list-style-type: none"> ➤ Storm water drains with silt traps will be suitably constructed all along the periphery of the pit area to collect the run-off from the lease area and divert into the storm water pond/tanks proposed within the complex. ➤ All measures will be taken not to disturb the existing drainage pattern adjacent to the other property. ➤ De-siltation traps and storm water collection pond proposed for silt removal. ➤ The storm water collected from the lease area will be utilized for dust suppression on haul roads, plantation within the premises etc. 						
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)	<p>The year wise programme of eco-restoration for the life of mine will be made and 6,000 trees will be planted in an area of 6.0308 ha.</p> <p>Ecological restoration for the mined area by plantation of the species as per the time schedule suggested below: -</p> <table border="0"> <tr> <td>First Six months</td> <td>-- Herbs & grass</td> </tr> <tr> <td>Next Six months</td> <td>-- Shrubs</td> </tr> <tr> <td>Next Six months onwards</td> <td>-- Trees</td> </tr> </table> <p>Selection of species is based on High Dust Capturing, Soil Holding Capacity, ground water recharge capacity etc. More focus is given for medicinal plants.</p>	First Six months	-- Herbs & grass	Next Six months	-- Shrubs	Next Six months onwards	-- Trees
First Six months	-- Herbs & grass						
Next Six months	-- Shrubs						
Next Six months onwards	-- Trees						
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)	<p>Not applicable</p> <p>No endangered species found at site</p>						
IMPACT ON AIR ENVIRONMENT							
What are the mitigation measures on generation of dust,	Details already provided at EMP section above.						

smoke and air quality	
Details of internal traffic management of the site.	Designated space will be provided for parking of truck / tipper within the site. For the purposes of mining activities, existing roads are sufficient. However, haul road will be suitably developed within the proposed area. Speed of the vehicles will be maintained within the prescribed limits (Speed Governor fitted).
Details of noise from traffic, machines and vibrator and mitigation measures	Details already provided at EMP section above.
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Details provided at EMP section above and air, noise and water sampling reports were already submitted with EC Application.
Air quality monitoring in detail	Details provided at EMP section above and air, noise and water sampling reports were already submitted with EC 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.	We will promote renewable energy resources.
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? Storage of explosives / hazardous substance in detail Facility for solid waste management	<p>Barbed wire fencing will be done all around the quarry site.</p> <p>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.</p> <p>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.</p>
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?	No
Will the proposal	The mining project will directly / indirectly develop the area by providing

result in any changes to the demographic structure of local population. If so, provide details.	employment opportunities. With the proposed development in and around the area there will be many supporting facilities/ infrastructure eventually leading to the development of the area.
Details of CSR commitment	Yes. A detailed study on social status of the project site surroundings & need base study on proposed CSR activities were carried out and the copy of report was submitted with EC Application. The project proponent will set apart about Rs. 15 Lakhs (non-recurring) and about Rs. 15 Lakhs (recurring) for CSR activities for the welfare of the local community in consultation with the local body.
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 23 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 72nd meeting of SEAC held on 08th & 09th May 2017. Further to the intimation of SEAC, the Proponent and the RQP attended the meeting and RQP made a power point presentation about the salient features of the project. The Committee appraised the proposal based on the Mining Plan, Pre-feasibility Report and all other documents submitted along with Form1. The Committee decided to defer the item for

field inspection and for submission of the proof for having applied for Wild Life Clearance and enhanced commitments for CSR activities.

Accordingly field visit to the quarry project site of Sri. Jacob Thomas, Erumeli South Village, Kanjirappally Taluk, Kottayam district, was carried out on 08.07.2017 by the sub-committee of SEAC, Kerala, comprising Dr. Keshav Mohan and Sri. John Mathai and reported as follows;

Based on an overall evaluation of the site it can be recommended after considering the following:-

- *Notarised copy of the agreement between the proponent and the Church authorities permitting quarrying for the period of 15 years (now an attested copy of the letter from the procurator is given).*
- *The main access road should be widened to more than 7 m.*
- *Fencing to be provided all around.*
- *The OB and top soil is to be stored in a dedicated place at lower elevation and provided with retaining walls.*
- *Considering the presence of the main road used by pilgrims to Sabarimala, the southern boundary of the lease area should be provided with a 15 m wide green belt to arrest wind laden dust particles and to muffle the noise from the quarry.*
- *Catch water drains to be provided to channelize storm water. Proper clarification mechanisms need to be provided before it is let out into the valley.*
- *RWH structure should be in place during the operation stage to enhance water availability.*
- *A separate plot may be set apart to relocate and protect shrubs and plants in the area that are rare to the locality.*

3. The proposal was placed in the 76th meeting of SEAC held on 25th & 26th July 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 defer the item for submission of enhanced CSR commitment. The proponent has submitted the documents sought by SEAC.

4. The proposal was again considered in the 80th meeting of SEAC held on 11th October 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, Mining Plan, field inspection report of the Sub Committee and all other documents submitted with the proposal. The Committee decided to Recommend for issuance of EC subject to general conditions in addition to the following specific condition for mining.

- 1) *The main access road should be widened to more than 7 m.*
- 2) *Fencing to be provided all around.*
- 3) *The OB and top soil is to be stored in a dedicated place at lower elevation and provided with retaining walls.*
- 4) *Considering the presence of the main road used by pilgrims to Sabarimala, the southern*

boundary of the lease area should be provided with a 15 m wide green belt to arrest wind laden dust particles and to muffle the noise from the quarry.

- 5) Catch water drains to be provided to channelize storm water. Proper clarification mechanisms need to be provided before it is let out into the valley.*
- 6) RWH structure should be in place during the operation stage to enhance water availability.*
- 7) 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 had committed only 15 lakh for recurring and 15 lakh non-recurring per annum for CSR activities. For similar projects in earlier cases, having similar capacity, the proponents had committed an amount of Rs. 25 lakh per annum. Hence SEIAA may insist on a similar commitment from the proponent.

5. The proposal was considered in the 75th meeting of SEIAA held on 28th October 2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to general condition in addition to the following specific conditions, suggested by SEAC as above in para 4.

The proponent should spent 25 lakh per annum for CSR activities in consultation with the local panchayath. EC will be issued only after fulfilling all the pre-mining conditions in the project site and a certificate to this effect from a competent authority (RDO/Tahsildhar/District Geologist) should be submitted. A notarised affidavit for the commitment of enhanced CSR activities as suggested by SEAC and also agreeing all the general and specific conditions should also be submitted before the issuance of EC. The Proponent has submitted the Affidavit vide reference 6th cited satisfying all the conditions and also the Letter from the Geologist, Kottayam vide reference 7th cited.

6. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the proposed quarry project of Sri. Jacob Thomas, M/s PGI Enterprises, Kudukkavally Propose P.O., Erumely, Kottayam, Kerala-686509 in Survey Nos. 13/1, Erumely South Village, Erumely Panchayat, Kanjirappally Taluk, Kottayam District, Kerala for an area of 9.7660 Ha, subject to the specific conditions as in para 4 & 5 above, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining (items 1 to 61), appended hereto will be applicable and have to be strictly adhered to.

7. The Clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The 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.

8. Validity of the Environmental Clearance will be five years from the date of this clearance, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of conditions or genuine complaints from residents within the security area of the quarry.

9. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices and also by the regional office of the Ministry of Environment & Forests, Govt. of India, 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, Kottayam.
- iii. The given address for correspondence with the authorised signatory of the project is Sri. Jacob Thomas, M/s PGI Enterprises, Kudukkavally Propose P.O., Erumely, Kottayam, Kerala-686509.

Sd/-

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

To,

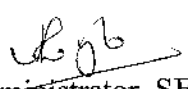
Sri. Jacob Thomas,
M/s PGI Enterprises,
Kudukkavally Propose P.O.,
Erumely, Kottayam,
Kerala-686509

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

