



सत्यमेव जयते

***Proceedings of the State Environment Impact Assessment  
Authority Kerala***

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

Sub: Environmental Clearance -Application for environmental clearance for the quarry project in Sy. Nos. 1853/1, 1854, 1855, 1856, 1857, 1858 and 1860/1 of Pazhayannur Village, Thalappilly Taluk, Thrissur District, Kerala. Application by Sri. A. G. Madhavan for M/s Nila Metals Pvt. Ltd. - E.C- Granted-Orders issued.

**STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY**

No. 900/SEIAA/EC1/3461/2015

dated, Thiruvananthapuram 16-12-2016

- Read: - 1. Application dated 20-08-2015 from Sri. A. G. Madhavan, Managing Director, M/s Nila Metals Pvt. Ltd., Vellappara P.O., Pazhayannur Village, Thalappilly Taluk, Trichur District, Kerala-680587.*
- 2. Minutes of the 55<sup>th</sup> meeting of SEAC held on 10, 11 & 20-05-2016.*
- 3. Minutes 54<sup>th</sup> meeting of SEIAA held on 21-06-2016*
- 4. Minutes of 60<sup>th</sup> meeting of SEIAA held on 27<sup>th</sup> October 2016*

**ENVIRONMENTAL CLEARANCE NO. 167/Q/2016**

Sri. A. G. Madhavan, Managing Director, M/s Nila Metals Pvt. Ltd., Vellappara P.O., Pazhayannur Village, Thalappilly Taluk, Trichur District, Kerala-680587. vide his application dated 20-08-2015, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Survey No. 1853/1, 1854, 1855, 1856, 1857, 1858 and 1860/1 of Pazhayannur Village, Thalappilly Taluk, Thrissur District, Kerala in an area of 2.8936 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 25 hectares) and as per O.M. No. L-11011/47/2011-IA.II(M) dated 18<sup>th</sup> May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dtd. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. Other details are as follows:

<b>Basic Details</b>	
Name of the Project	M/s Nila Metals Pvt. Ltd.
Survey Numbers	1853/1, 1854, 1855, 1856, 1857, 1858 & 1860/1
Village	Pazhayannur
Tehsil	Thalappilly
District	Thrissur
Is the property forest land/Govt. land/ own land	Private own land
Latitude (N)	10°40'30.90" to 10°40'38.42"
Longitude (E)	76°24'29.89" to 76°24'38.90"
Extent of area (in hectares)	2.8936 hectares
Minimum and maximum height of excavation (MSL)	95 m MSL to 150 m MSL
Distance of mining area from nearest human settlement	About 189m in east side from the site.
Ultimate depth of mining (in MSL)	85m MSL.
Distance from the adjacent quarry	There is no quarry in operation within 500m.
Cluster condition (if any)	There is no quarry in operation within 500m
Proposed production capacity	1,20,000 MTA
Expected life of mine	About 9 years
Expected cost of the project	Rs. 9.77 Crores
Interlinked project (if any)	Stone Crusher proposed within the site
Whether CRZ is applicable	NA
Status of litigation/complaint/cases	Nil as stated by the proponent
Permanent or temporary change on land use, land cover or topography	The project site is private owned land. There is expected to be change in the land use as mining area in the core zone. The highest elevation of the lease area is 150 m MSL and lowest is 95 m MSL. As the proposed area is hilly, the drainage is towards south-east.
Topography of land and elevation	Part of the proposed land is covered with native trees, shrubs, herbs, grass, climbers, bushes etc. The highest elevation of the lease area is 150 m MSL and lowest is 95 m MSL. As the proposed area is low height hillocks, the drainage of the lease area is towards south-east side. No habitants are located in the lease area. Old pits lies in the lease area are marked on surface plan
Vegetation	Some area of proposed quarry has native trees, climbers, grass, shrubs, herbs etc.
Nearest water body	Mangalam River, 7 km, N
Change in water bodies due to mining activities	Nil as stated by the proponent
Proneness to natural hazards	Nil as stated by the proponent
<b>Environmental parameters considered</b>	
<b>WATER</b>	
Water (expected use and sources in KLD)	The total water requirement is about 15 KLD in which 1 KLD is for domestic which would be sourced from open

		well, 12 KLD for dust suppression system in mine as well as ancillary unit (Crusher/M sand Unit) and 2 KLD for plantation purposes and will be sourced from storm water pond.
Sources of generation and facilities for liquid waste treatment		There will be no industrial waste generation due to proposed project.
Facilities for liquid waste treatment		There will be no industrial waste generation due to proposed project.
Water quality meeting requirements		Water quality requirements to be as per rules after treatment (filtration, disinfection & sedimentation).
Water Regime		Open Well, Storm water pond.
<b>LAND</b>		
Access road to the site –Width & Condition		7m wide tarred road
Proximity to forest lands		Machad Forest, about 1km, N
Storage of explosives /hazardous substances		Considering low consumption, a 100 kg magazine is for storing the explosive. The magazines are to be constructing within the complex.
Hazardous waste management		<b>Industrial Waste Management</b> There will be no industrial waste generation due to proposed project. <b>Solid Waste Management</b> About 5,787 cu. m. of top soil is estimated from the pit of the proposed mine. Other than top soil, about 20,255 cu. m. of overburden will be generated throughout the mine life.
Facility for solid waste management		It is estimated that around 5,787 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 around 20,255 cu. m. of OB is generated throughout the mine life.
Top soil, overburden etc		Top soil : 5,787 cu. m Overburden : 20,255 cu. m
<b>MANAGEMENT PLAN:</b>		
Envt Mgmt plan/ Eco restoration plan	<b>Air pollution</b>	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"> <li>Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust.</li> <li>To avoid the dust generation from the drilling operations, wet drilling method will be adopted.</li> <li>Drill machines will be equipped with dust collectors.</li> <li>Use of appropriate explosives for blasting and avoiding overcharging of blast holes.</li> <li>Controlled blasting techniques will be adopted.</li> <li>Watering of haul road and other road at regular intervals.</li> <li>Provision of dust filters/ mask to workers working at highly dust prone and affected areas.</li> <li>Provision of green belt all along the periphery of the lease area.</li> <li>Periodical monitoring of ambient air quality in and around the</li> </ul>

		<p>lease area.</p> <ul style="list-style-type: none"> <li>• The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions.</li> <li>• In case of long transportation the trucks after loading will be covered with tarpaulin sheets.</li> <li>• Speed of the vehicles will be maintained within the prescribed limits.</li> <li>• Trucks will not be over loaded and will be maintained to the body level.</li> <li>• Provision of storm water collection pond of total capacity about 8,000 KL. The water requirement for sprinkling on sources of dust emission, on roads, landscaping etc. Can be met from the stored rainwater in the pond.</li> </ul>
	<b>Water pollution</b>	
	<b>Noise</b>	<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"> <li>• Proper maintenance of machinery, equipments and improvement on design of machines.</li> <li>• Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas.</li> <li>• Creation of wide green belt of dense foliage between mine areas and residential colonies.</li> <li>• related health problems</li> <li>• Proper training to personnel to create awareness about adverse noise level effects.</li> <li>• Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.</li> </ul>
	<b>Solid Waste Management</b>	<p><b>Topsoil Management</b></p> <p>A total quantity of 5,787 cu. m. of topsoil is proposed to be removed during the mining operations. 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. Precaution 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.</p> <p><b>Overburden Management</b></p> <p>About 20,255 cu. m of overburden 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.</p>
	<b>Eco restoration</b>	<p>The year wise programme of eco-restoration for the life of mine, about 2,000 trees will be planted in an area of 2.0082 ha.</p>
<b>NOISE</b>		
Sources of noise pollution control measures		Noise generated from various mining operation like drilling / blasting/ vehicular.
Noise level monitoring		Noise levels should be maintained within the permissible standard limits.
<b>AIR</b>		
Likely emissions affecting environment		Emissions from the vehicles only.

By deposition of pollutants emitted to air into the land or into water	There is no emission except vehicles.		
Air quality monitoring	Ambient air quality should be maintained within the permissible standard limit		
ENERGY			
Energy requirement	The total power requirement will be 75 kW for compressors which will be operated by Diesel Engine.		
BIODIVERSITY			
Presence of any endangered species or red listed category	No.		
Loss of native species and genetic diversity	The some area of proposed quarry has native trees, climbers, grass, shrubs, herbs etc		
Eco restoration programmes	The year wise programme of eco-restoration for the life of mine, about 2,000 trees will be planted in an area of 2.0082 ha.		
SOCIAL ASPECTS			
Proximity to nearest densely populated or build-up area	Nearest Town Pazhayannur 5Km. NE		
CSR related to the project	Proposed common CSR Budget		
	Sl.No.	Particulars	Amount Rs. In lakhs
	1	Development of schools	Recurring : Rs. 7.9 Lakhs Non Recurring : Nil
	2	Help the hapless	Recurring : Rs. 0.50 Lakhs Non Recurring : Rs. 9.80 Lakhs
	3	Environmental sustainability	Recurring : Rs. 0.50 Lakhs Non Recurring : Rs. 2.20 Lakhs
	4	Reduction in carbon footprint & CO <sub>2</sub> emission	Recurring :Nil Non Recurring: Rs. 0.90 Lakhs.
	A details study on social status of the project site surroundings & need base study on proposed CSR activities were carried out. The summary of the report is given above.		
GENERAL			
Details of Authorised Signatory & Address for correspondence)	Mr. A. G. Madhavan, Managing Director, M/s Nila Metals Pvt. Ltd., Vellappara P.O., Pazhayannur Village, Thalappilly Taluk, Trichur District, Kerala-680587.		
Details of NABET approved EIA consultant Organisation	M/s Environmental Engineers & Consultants Pvt. Ltd. ( Sr. No. 58 as per MoEF&CC list of Accredited Consultant Organization) Head Office :-A1-198, Janak Puri, New Delhi. Branch Office:- C-306, Kanchanjunga Apartments, Palarivattom P.O., Kochi, Kerala		

3. The proposal was first considered in the 55<sup>th</sup> meeting of SEAC held on 10/11/20-05-2016. The proponent and RQP attended the meeting and the RQP made a power point presentation about the salient features of the project briefly. The Committee appraised the proposal based on Form 1 and mining plan. The CSR activities proposed are not realistic.

The Committee Recommended to issue EC on production realistic CSR suitable for the locality before the SEIAA. All normal general conditions shall apply.

4. On production of more realistic CSR by the proponent before SEIAA, the proposal was considered in the 54<sup>th</sup> meeting of SEIAA held on 21-06-2016. Authority decided to conduct a site inspection by Chairman and Member SEIAA before deciding on accepting the recommendations of SEAC, as SEAC has not been conducted the same.

5. As per the decision of the 54<sup>th</sup> meeting of SEIAA on 21-6-2016, the Chairman and Member SEIAA along with the Administrator visited the quarry site of M/s Nila Metals (Pvt) Ltd, at Vellappara, Pazhayannoor, Thalappally Taluk on 31-08-2016. The site inspection report is as follows:

*"The quarry is working on short term permit on extended period. It was started in 12/2014. It was working on the status quo order of the Hon'ble Supreme Court in the SLP filed by permit quarry owners. They had valid permit as on 9.1.2015, for 190 cents. It is being continued in 100 cents now. But extent of land applied for Environmental Clearance is 2.8936 ha. The proponents informed that no litigations are pending against the quarry. The nearest dwelling unit 350 meters away. No Government land is involved. They have 6.070 ha of land at site, out of which 2.8936 ha only is proposed for mining. The land belongs to two companies Nila aggregates (14 acres) and Nila quarry (13.2 acres). Quarrying is not started in these lands. It is reserved for mining later. Road to the quarry from the PWD road (about 2km) is a private road. The 9 meter road is maintained by the proponents. The firm is a private limited company of four persons. Quarrying is now stopped as the permit has expired, and they have applied for short term permit for 2 months.*

*It was found that a new concrete building is under construction within 100 meters of the mining area, which was explained as workers shed. No other issues which impede grant of Environmental Clearance was noted.*

*E.C as recommended by SEAC may be granted subject to the following specific conditions:*

- 1. The Survey Number 1860/1 in which the construction of the workers shed is going on shall be fully excluded from the mining area and minimum distance of 100 meters from the periphery of the mining area shall always be kept to the building. Quantity of rock to be quarried shall be reduced to the above extent.*
- 2. The watercourse on the boundary of the quarry shall be maintained as such and depth of mining at that side shall be restricted to the level of maximum water flow during monsoon.*
- 3. Green belt shall be developed around the area and native trees shall be planted in the unutilised land available.*
- 4. The temporary sheds nearer to the quarry, where workers are housed should be demolished.*

5. *An affidavit to the effect that the above conditions shall be fulfilled should be executed*".

6. The proposal was again considered by SEIAA in its 60<sup>th</sup> meeting held on 27-10-2016. The Authority resolved to approve the proposal and issue Environmental Clearance on condition that the specified condition No 1 and 4 has been fulfilled before starting mining and an affidavit to the effect that the above conditions shall be fulfilled, should be executed.

7. The proponent has submitted the affidavits specified in condition No 1 and 4 of specific conditions of SEIAA. Environmental Clearance under the EIA notification 2006 is therefore granted to the quarry project of M/s Nila Metals in 2.8936 hectares comprised in Sy. Nos. 1853/1, 1854, 1855, 1856, 1857, 1858, 1860/1 of Pazhayannur Village, Thalappilly Taluk, Thrissur District, Kerala, subject to the specific conditions in para 5 above and the general conditions stipulated for mining projects. However if any genuine complaints about the quarry is received, E. C issued shall be reviewed.

8. 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 are relied on for grant of this clearance. The above undertakings and the conditions and undertakings in chapter 3.5.8 of Mining plan (Conceptual Mining Plan), Chapter 3.5.7 of pre-feasibility report (Blasting), Chapter 4.3.4 of pre-feasibility report (EMP), the Chapter 4.3.9 of pre-feasibility report (Disaster Management), and the entire Progressive Mine Closure Plan as submitted will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.

9. Validity shall be five years from the date of issuance of E.C, 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. Environmental Clearance is therefore granted to the quarry project of Sri. A. G. Madhavan, Managing Director, M/s Nila Metals Pvt. Ltd., in 2.8396 hectares comprised in Sy. Nos. 1853/1, 1854, 1855, 1856, 1857, 1858, 1860/1 of Pazhayannur Village, Thalappilly Taluk, Thrissur District, Kerala subject to the specific conditions in para 5 above and the general conditions annexed hereto.

10. Compliance of the conditions herein will be monitored by the Authority or its agencies 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, Palakkad to take legal action under the Environment (Protection) Act, 1986.

11. The given address for correspondence with the authorised signatory of the project is Sri. A. G. Madhavan, Managing Director, M/s Nila Metals Pvt. Ltd., Vellappara P.O., Pazhayannur Village, Thalappilly Taluk, Trichur District, Kerala-680587.

Sd/-

V.S. SENTHIL, I.A.S.,  
Member Secretary, SEIAA

To,

Sri. A. G. Madhavan,  
Managing Director, M/s Nila Metals Pvt. Ltd.,  
Vellappara P.O., Pazhayannur Village,  
Thalappilly Taluk, Trichur,  
Kerala-680587.

Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wing, H Block, Koramangala, Bangalore-560034
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala
3. The District Collector, Thrissur
4. The Director, Mining and Geology Department, Kesavadasapuram, Thiruvananthapuram-4
5. Panchayath Secretary, Pazhayannur Grama Panchayath, Pazhayannur P.O., Thalappilly, Thrissur-680587
6. Chairman, SEIAA, Kerala
7. Website
8. E.C File
9. S/f
10. O/c



Forwarded/ By order

*Rajendran*

C. Rajendran Chettiar,  
Administrator, SEIAA



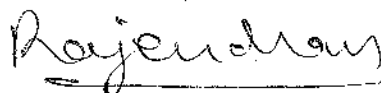
## Annexure

### 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 100 m 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 proponent 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](http://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 PM<sub>10</sub> and PM<sub>2.5</sub> 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

C. RAJENDRAN CHETTIAR  
Administrator  
State Environment Impact Assessment Agency  
Pallimurkku, Pottan  
Thiruvananthapuram-4  
Phone No: 0471-2742262