Pro-Active and Responsive Facilitation by Interactive,

and Virtuous Environmental Single-Window Hub,



Government of India Ministry of Environment, Forest and Climate Change (Issued by the State Environment Impact Assessment Authority(SEIAA), Tamil Nadu)

To.

The Managing Director M/S. TAMIL NADU MINERALS LIMITED

M/s. Tamil Nadu Minerals Limited (Government of Tamil Nadu undertaking) 31 Kamarajar Salai, Chepauk, Chennai, Tamil Nadu - 600005 -600005

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/TN/MIN/81802/2021 dated 03 Dec 2022. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No. EC22B001TN194901

2. File No. 8778 New

3. **Project Type**

B1

4. Category

5. Project/Activity including Schedule No.

1(a) Mining of minerals

6. Name of Project

7. Name of Company/Organization

M/S. TAMIL NADU MINERALS LIMITED

8. **Location of Project** Tamil Nadu

TOR Date

04 Jan 2022

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 15/12/2022

(e-signed) Thiru.Deepak S.Bilgi Member Secretary SEIAA - (Tamil Nadu)



Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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THIRU. DEEPAK S. BILGI, I.F.S. MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY-TAMILNADU

3rd Floor, Panagal Maaligai. No.1, Jeenis Road, Saidapet, Chennai - 600 015. Phone No. 044-24359973 Fax No. 044-24359975

ENVIRONMENTAL CLEARANCE Lr.No.SEIAA-TN/F.No.8778/1(a)/EC.No:5432/2022 dated: 29.11.2022

Sub: SEIAA, TN - Proposed Fireclay & Laterite quarry lease over an extent of 1.21.5 Ha at S.F.No. 195/1 (Part) of Thalampattu Village, Panruti Taluk, Cuddalore District, Tamil Nadu by M/s. Tamil Nadu Minerals Limited under Category "B1" of Item 1(a) "Mining of Mineral Projects" of the Schedule to the EIA Notification, 2006 - issue of Environmental Clearance - Regarding.

Ref:

- 1. ToR issued by SEIAA-TN vide Lr No.SEIAA-TN/F.No.8778/SEAC/ ToR-1059/2022 Dated: 04.01.2022.
- 2. Public Hearing conducted on 28.06.2022.
- 3. Online Proposal No. SIA/TN/MIN/81802/2021 Dt. 05.08.2022.
- 4. Project proponent submitted EIA Report to SEIAA-TN on 08.08.2022.
- 5. Minutes of the 329th SEAC meeting held on 16.11.2022.
- 6. Minutes of the 574th SEIAA meeting held on 29.11.2022.

Details of Minor Mineral Activity:-

This has reference to your application 3rd & 4th cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor minerals based on the particulars furnished in your application as shown below.

Sl. No.	Details of the proposal	Data furnished	
1.	Name of the Owner/Firm	M/s. Tamil Nadu Minerals Limited	

		No.31, Kamarajar Salai,	
		TWAD House,	
1		Chepauk, Post Box No.2961,	
The state of the s	-	Chennai - 600 005.	
2.	Type of quarrying (Savudu/Rough Stone/Sand/Granite)	Fireclay & Laterite	
3.	S.F No. of the quarry site with area break-up	195/1 (Part)	
4.	Village in which situated	Thalampattu	
5.	Taluk in which situated	Panruti	
6.	District in which situated	Cuddalore	
7.	Extent of quarry (in ha.)	1.21.5 Ha	
8.	Period of quarrying proposed	5 years	
9.	Type of mining	Opencast Semi Mechanized Mining Method	
10.	Production (Quantity in Tonnes)	89,021 Tonnes of Fireclay and 74,407 Tonnes of Laterite	
11.	Latitude & Longitude of all corners of the quarry site	f 11°43'21.18"N to 11°43'25.26"N 79°31'29.46"E to 79°31'34.84"E	
12.	Topo Sheet No.	58- M/10 & 14	
13.	Man Power requirement per day:	26 Nos	
14.	Precise Area Communication	Letter No. 7497/MMC.2/2020-1 dt:26.02.2021	
15.	Mining Plan	Rc.No.7557/MM7/2019, dt: 27.07.202	
16.	Water requirement:	1.00 KLD	
	1. Drinking & domestic purposes (in KLD)	0.50 KLD	
	2. Dust suppression (in KLD)	0.25 KLD	
	3. Green Belt (in KLD)	0.25 KLD	
17.	Power requirement: a) Domestic Purpose	TNEB	

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18.	Depth of quarrying	17m bgl		
19.	Depth of water table	40m		
20.	Whether any habitation within 300m distance	No		
21.	Project Cost (excluding EMP cost)	Rs. 67,25,000/-		
22.	EMP cost	Rs. 1,55,000/-		
23.	CER cost (Govt School)	Rs. 1,37,600/-		
24.	AD mines 500m cluster letter	Rc.No.453/Mines/2017, dt: 20.05.2021		
25.	VAO certificate regarding 300m radius cluster	Letter dated: 09.03.2021		
26.	ToR issued Lr No.SEIAA-TN/F.No.8778/5 ToR-1059/2022 Dated: 04.01.2			
27.	Public Hearing Details	28.06.2022		
28.	EIA Report Received	08.08.2022		
29.	Validity: This Environmental Clearance is granted for the production 89,021 Tonnes of Fireclay and 74,407 Tonnes of Laterite for the period of 5 Years from the date of execution of the mining lease and ultimate depth of mining 17m bgl.			

The Proponent has furnished affidavit Fifty Rupees stamp paper attested by the Notary stating that

I, Thiru. E.Ganesan, represents M/s. Tamil Nadu Minerals Limited, as Deputy Manager (ML) and authorized signatory of the project solemnly declare and sincerely affirm that:

TAMIN has applied for getting Environment Clearance to SEIAA, Tamil Nadu for Thalamapttu Laterite and Fire Clay mine over an extent of 1.21.50Ha of Govt. poramboke land in SF No.195/1(Part) of Thalampattu Village, Panruti Taluk, Cuddalore District, Tamil Nadu.

We swear to state and confirm that within 10Km area of the mine site. TAMIN has applied for environmental clearance none of the following is situated.

- a. Protected areas notified under the Wildlife (Protection) Act, 1972
- b. Critically polluted areas as identified by CPCB constituted under Water (Prevention and Control of Pollution) Act, 1974.
- c. Eco Sensitive areas as notified

- d. Interstate boundaries and international boundaries within 5Km radius from the boundary of the proposed site.
- 1. TAMIN will complete the following Corporate Environment Responsibility (CER) activities as per MoEF & CC OM dated 30.09.2020 and 20.10.2020 after commencement of the mining activities.

SI No	Beneficiary village and location		CER activities	Amount allocated	
1.	Govt. Thalam	School at pattu Village.	Sanitation facilities to a Govt. School	Rs.1,37,600/-	

- 2. There is one mine located within 500 m radius from periphery of my mine.
- 3. There will not be any hindrance or disturbance to the people living on enroute /nearby my mine site while transporting the mined out material and due to mining / mining activities.
- 4. No approved habitations as per Rules 36(1) of Tamil Nadu Minor Mineral Concession Rules, 1959 located within 500 meters radius from the periphery of my mine.
- 5. TAMIN swear that afforestation will be carried out during the course of mining operation and maintained.
- 6. The required insurance will be taken in the name of the labourers working in my mine site.
- 7. TAMIN will not engage any child labour in my mine site.
- 8. All type of Safety / protective equipments will be provided to all the labourers working in my mine.
- 9. No approved permanent structures, temples etc are located within 500m radius from the periphery of my mine.
- 10. The mining activity will be carried out only after obtaining environmental clearance.

We ensure to do all the Social and Environmental commitment as mentioned in the Mining Plan to the best of my knowledge.

Details of Quarries located within 500M radius from the proposed quarry:

The Project Proponent has submitted a copy of the letter obtained from the Assistant Director, Department of Geology & Mining, Cuddalore District in his letter Rc.No.453/Mines/2017, dt: 20.05.2021 has stated that the details of other quarries within a radius 500m from the boundary of the proposed quarry site as follows:

1. Existing Other Quarries:-

Period Extent (Hects) S.F.Nos SI.No. Name of the Owner

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1.	K.Ramalingam,	183/IA2	0.62.5	17.03.2006 to 16.03.2026
	S/o. Krishanmoorthy, 3/48, 4 th cross Police Line,	183/1B	1.10.5	
	Panruti Taluk.	900000 American		
2.	V.Vaithiyalingam,	180/5A	0.55.0	21.05.2009 to 20.05.2029
	S/o. Varadharamanujam,	180/5B	0.55.0	
	No.8, Indhiragandhi street,			
	East shanmugapuram,			
	Villuppuram.			

2. Proposed area:-

Sl.No.	Name of the Owner	S.F.Nos	Extent (Hects)
1.	P.Ramakrishnan,	191/3B2	0.57.0
	S/o. Pachakannu,	191/4B2	0.37.50
	Thazhampattu Village,	191/1C2	0.48.58
	Keeliruppu Post,	4	
	Panruti Taluk,		
	Cuddalore District.		
2.	Tvl. TAMIN	195/1(p)	1.21.5
	No.31, Kamarajar Salai,	4,	
	TWAD House,		
	Chepauk, Chennai		
3.	Tamilselvan	179/2∧	0.40.90
	S/o Vaithiyanathan	179/2B	0.51.60
	Keeliruppu Village	179/3A	0.23.50
	Panruti Taluk		

3. Lease expired and abandoned area:-

Sl.No.	Name of the Owner	S.F.Nos	Extent (Hects)	Period
1.	K.Ramalingam, S/o. Krishanmoorthy, 3/48, 4 th cross Police Line, Panruti Taluk.	183/4	0.89.5	05.04.2018 to 04.04.2020
2.	Sri Venkadeswara and Company. 59A, Kumbakonam Road. Panruti	192/1	3.24.0	06.08.1984 to 05.08.1987

Appraisal by SEAC:-

Proposed Fireclay & Laterite quarry lease area over an extent of 1.21.5 Ha at S.F.Nos. 195/1(Part) of Thalampattu Village, Panruti Taluk, Cuddallore District, Tamil Nadu by M/s. Tamil Nadu Minerals Limited - TAMIN - For Environmental Clearance.

The proposal was placed in this 329th Meeting of SEAC held on 16.11.2022. The details of the project furnished by the proponent are available in the website (parivesh.nic.in).

The SEAC noted the following:

- The project proponent, M/s. Tamil Nadu Minerals Limited TAMIN, has applied for Environmental clearance for the proposed Fireclay & Laterite quarry lease area over an extent of 1.21.5 Ha at S.F.Nos. 195/1(Part) of Thalampattu Village, Panruti Taluk, Cuddallore District, Tamil Nadu.
- 2. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Minerals Projects" of the Schedule to the EIA Notification, 2006.
- 3. The production for the five years states that the total quantity of recoverable as 74,047 Tonnes of Laterite & 89,021 Tonnes of Fire clay and the ultimate depth of mining is 17m below ground level.
- 4. The PP has obtained ToR vide Lr No.SEIAA-TN/F.No.8778/SEAC/ToR-1059/2022 Dated:04.01.2022.
- 5. The Public hearing conducted on 28.06.2022

Based on the presentation and document furnished by the project proponent, SEAC decided to recommend the proposal for the grant of Environmental Clearance for total production capacity of the ROM – 163428 T which includes 74407 T of laterite & 89021 T of Fire Clay and 24,147 T of overburden for first five year plan as approved by the competent authority but however not exceeding the annual peak production ROM of 53006 T which includes 35157 T of laterite & 17976 T of Fire Clay and 9,296 T of overburden with an ultimate depth of 17 m, subject to the standard conditions as per the Annexure - I of this minutes and normal conditions stipulated by MOEF&CC, in addition to the following specific conditions

S. No	Year	OB (in Tonnes)	Laterite (in Tonnes)	Fireclay (in Tonnes)	Total production [Laterite + Fireclay] (in Tonnes)	Ore to OB Ratio
1	First	9,296	16,275	17,976	34,251	1:0.27
2	Second	6,627	22,975	17,760	40,735	1:0.16
3	Third	8,224	35,157	17,849	53,006	1:0.15
4	Fourth		==	17,858	17,858	
5	Fifth	-		17,578	17,858	
H	Total	24,147	74,407	89,021	1,63,428	1:0.15

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- The prior Environmental Clearance granted for this mining project shall be valid for the
 project life including production value as laid down in the mining plan approved and
 renewed by competent authority, from time to time, subject to a maximum of thirty years,
 whichever is earlier vide MoEF&CC Notification S.O. 1807(E) dated 12.04.2022.
- 2. The mine manager and other statutory competent persons such as Mine Foreman (or) Mine Mate shall be appointed before the commencement of mining operation as per the provisions of Mines Act 1952 and Metalliferous Mines Regulations, 1961.
- 3. The project proponent shall duly appoint the qualified Mine Manager possessing the First Class Mines Manager's certificate of competency issued by DGMS under MMR 1961 only before obtaining the CTO from the TNPCB.
- 4. The PP shall inform the notice of opening of the quarry to the Director of Mines Safety (DMS)/Chennai Region and get the necessary statutory permission under the MMR 1961 pertaining to the mine working operations in the proposed quarry from the DMS, Chennai before obtaining the CTO.
- 5. The proponent shall construct the 'S3 (or) G2' type of fencing all around the boundary of the proposed working quarry with gates for entry/exit before the commencement of the operation as recommended in the DGMS Circular, 11/1959 before obtaining the CTO from TNPCB.
- 6. Further, the PP shall construct the garland drain with proper size, gradient and length around the proposed quarry along the boundary of the pit leaving behind the mandatory safety zone of 7.5 m before obtaining the CTO, as it is designed to take care of run-off water to the surface siltation points of sufficient size are maintained for the collection of silt.
- 7. The PP shall install the Environmental Management Cell headed by the statutory Mines Manager of the concerned mine and the cell shall include a dedicated full-time Environmental Engineer exclusively to look into the effective implementation of Environmental Management Plan besides the reviewing the compliance reports with the regulatory authorities like IBM, MoEF & CC, DMG, etc.
- 8. The PP shall carry out the Initial and Periodical Medical Examinations by the approved Medical Practitioner to all the persons employed in the mine including the contractual labours, as per the provisions of Mines Rules, 1955.
- The PP shall ensure that all the persons employed directly in the mines as well as the contractual labours undergo the vocational training on "Occupational Exposure to Noise and Vibration in

- Mines," in the Group Vocational Training Centre, Salem before obtaining the CTO from TNPCB.
- 10. The PP shall conduct the Occupational health survey for all the persons employed in the mine including contractual labours and maintain the record indicating the status of their health condition once in six months and a copy of report of the same shall be submitted to the DEE/TNPCB, IRO/MoEF Chennai, SEIAA and DMS, Chennai.
- 11. The PP shall carryout the studies pertaining to the Airborne Respirable Dust, Noise for the proposed mining operations and the Whole-Body Vibration (WBV) of the HEMMs used including Rock Breakers annually by involving a reputed Research and Academic Institution such as CSIR-Central Institute of Mining & Fuel Research (CIMFR) / Dhanbad, National Institute of Miners' Health KGF, NIT Surathkal Dept of Mining Engg, Anna University Chennai-CEG Campus, and any CSIR Laboratories etc. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance.
- 12. The PP must ensure that the width of the working benches in the fire clayey formation is maintained at the value equivalent to three times the width of largest size truck (or) two times the width of the widest HEMM used in the bench plus 5 m, whichever is higher, for the avoidance of slope failure.
- 13. However, the PP shall carry out the scientific studies to assess the slope stability of the highwall benches formed in laterite & fire clay formations when the depth of the quarry touches 20 m (or) after the completion of 5 years of operation whichever is earlier, by involving a reputed Research and Academic Institution such as CSIR-Central Institute of Mining & Fuel Research (CIMFR) / Dhanbad, NIRM, IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus, etc. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.
- 14. The PP shall also provide a dedicated safe foot-path in the haul roads maintained in the fire clayey formation for the persons employed in the mine.
- 15. Perennial maintenance of haulage road/village / Panchayat Road shall be done by the project proponent as required in connection with the concerned Govt. Authority.
- 16. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total

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- excavation. No change in basic mining proposal shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
- 17. Proper barriers to reduce noise level and dust pollution should be established by providing greenbelt along the boundary of the quarrying site and suitable working methodology to be adopted by considering the wind direction.
- 18. The purpose of green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics.
- 19. Taller/one year old saplings raised in appropriate size of bags (preferably eco-friendly bags) should be planted in proper spacing as per the advice of local forest authorities/botanist/horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.
- 20. Noise and Vibration Related: (i) Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs, (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone.
- 21. The operation of the quarry should not affect the agricultural activities & water bodies near the project site and a 50 m safety distance from water body should be maintained without carrying any activity. The proponent shall take appropriate measures for "Silt Management" and prepare a SOP for periodical de-siltation indicating the possible silt content and size in case of any agricultural land exists around the quarry.
- 22. To ensure safety measures along the boundary of the quarry site, security guards are to be posted during the entire period of the mining operation.
- 23. The Project Proponent shall take all possible precautions for the protection of environment and control of pollution while carrying out the mining or processing of granite in the area for which such license or lease is granted, as per
- 24. The project proponent shall ensure that the provisions of the MMDR Act, 1957, the MCDR 2018 and Tamilnadu Minor Mineral Concession Rules 1959 are compiled by carrying out the quarrying operations in a skillful, scientific and systematic manner keeping in view proper

- safety of the labour, structure and the public and public works located in that vicinity of the quarrying area and in a manner to preserve the environment and ecology of the area.
- 25. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be informed to the District AD/DD (Geology and Mining) District Environmental Engineer (TNPCB) by the proponent without fail.
- 26. The Project Proponent shall abide by the annual production scheduled specified in the approved mining plan and if any deviation is observed, it will render the Project Proponent liable for legal action in accordance with Environment and Mining Laws.
- 27. Prior clearance from Forestry & Wild Life including clearance from committee of the National Board for Wildlife as applicable shall be obtained before starting the quarrying operation, if the project site attracts the NBWL clearance, as per the existing law from time to time.
- 28. All the conditions imposed by the Assistant/Deputy Director, Geology & Mining, concerned District in the mining plan approval letter and the Precise area communication letter issued by concerned District Collector should be strictly followed.
- 29. That the grant of this E.C. is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time-being in force, rests with the project proponent.
- 30. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- 31. The PP shall ensure that the quarry is converted into a suitable water reservoir with proper fencing as a part of fulfilling the requirements of Mine Closure Plan as approved by the competent authority.
- 32. The Project Proponent shall ensure that the funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Yearwise expenditure should be reported to the MoEF & CC Ministry and its Integrated Regional Office (IRO) located in Chennai.
- 33. The Project Proponent shall send a copy of the clearance letter marked to concerned Panchayat from whom any suggestion/representation has been received while processing the proposal.

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- 34. As per the MoEF& CC Office Memorandum F.No. 22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall adhere EMP furnished.
- 35. As accepted by the Project proponent the CER cost is Rs. 1,37.600 and the amount shall be spent for the Thalampattu Government school as committed, before obtaining CTO from TNPCB.

ANNEXURE-I

- The proponent shall mandatorily appoint the required number of statutory officials and the competent persons in relevant to the proposed quarry size as per the provisions of Mines Act 1952 and Metalliferrous Mines Regulations, 1961.
- The proponent shall erect fencing all around the boundary of the proposed area with gates for entry/exit before the commencement of the operation and shall furnish the photographs/map showing the same before obtaining the CTO from TNPCB.
- Perennial maintenance of haulage road/village / Panchayat Road shall be done by the project proponent as required in connection with the concerned Govt. Authority.
- 4. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
- 5. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
- 6. The proponent shall ensure that the slope of dumps is suitably vegetated in scientific manner with the native species to maintain the slope stability, prevent erosion and surface run off. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps.

- 7. Perennial sprinkling arrangement shall be in place on the haulage road for fugitive dust suppression. Fugitive emission measurements should be carried out during the mining operation at regular intervals and submit the consolidated report to TNPCB once in six months.
- 8. The Project Proponent shall carry out slope stability study by a reputed academic/research institution such as NIRM, IIT, Anna University for evaluating the safe slope angle if the proposed dump height is more than 30 meters. The slope stability report shall be submitted to concerned Regional office of MoEF&CC, Govt. of India, Chennai as well as SEIAA, Tamilnadu.
- 9. The Proponent shall ensure that the Noise level is monitored during mining operation at the project site for all the machineries deployed and adequate noise level reduction measures undertaken accordingly. The report on the periodic monitoring shall be submitted to TNPCB once in 6 months.
- 10. Proper barriers to reduce noise level and dust pollution should be established by providing greenbelt along the boundary of the quarrying site and suitable working methodology to be adopted by considering the wind direction.
- 11. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
- 12. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted in proper escapements as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.
- 13. Noise and Vibration Related: (i) The Proponent shall carry out only the Controlled Blasting operation using NONEL shock tube initiation system during daytime. Usage of other initiation systems such as detonating cord/fuse, safety fuse, ordinary detonators, cord relays, should be avoided in the blasting operation. The mitigation measures for control of ground vibrations and to arrest fly rocks should be implemented meticulously under the supervision of statutory competent persons possessing the I / II Class Mines Manager / Foreman / Blaster certificate issued by the DGMS under MMR 1961, appointed in the quarry. No secondary blasting of

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boulders shall be carried out in any occasions and only the Rock Breakers (or) other suitable non-explosive techniques shall be adopted if such secondary breakage is required. The Project Proponent shall provide required number of the security sentries for guarding the danger zone of 500 m radius from the site of blasting to ensure that no human/animal is present within this danger zone and also no person is allowed to enter into (or) stay in the danger zone during the blasting. (ii) Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs, (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone.

- 14. Ground water quality monitoring should be conducted once in every six months and the report should be submitted to TNPCB.
- 15. The operation of the quarry should not affect the agricultural activities & water bodies near the project site and a 50 m safety distance from water body should be maintained without carrying any activity. The proponent shall take appropriate measures for "Silt Management" and prepare a SOP for periodical de-siltation indicating the possible silt content and size in case of any agricultural land exists around the quarry.
- 16. The proponent shall provide sedimentation tank / settling tank with adequate capacity for runoff management.
- 17. The proponent shall ensure that the transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village Road and shall take adequate safety precautionary measures while the vehicles are passing through the schools / hospital. The Project Proponent shall ensure that the road may not be damaged due to transportation of the quarried rough stones; and transport of rough stones will be as per IRC Guidelines with respect to complying with traffic congestion and density.
- 18. To ensure safety measures along the boundary of the quarry site, security guards are to be posted during the entire period of the mining operation.
- 19. After mining operations are completed, the mine closure activities as indicated in the mine closure plan shall be strictly carried out by the Proponent fulfilling the necessary actions as assured in the Environmental Management Plan.
- 20. The Project proponent shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition that is fit for the growth of fodder, flora, fauna etc.

- 21. The Project Proponent shall comply with the provisions of the Mines Act, 1952, MMR 1961 and Mines Rules 1955 for ensuring safety, health and welfare of the people working in the mines and the surrounding habitants.
- 22. The project proponent shall ensure that the provisions of the MMRD, 1956, the MCDR 2017 and Tamilnadu Minor Mineral Concession Rules 1959 are compiled by carrying out the quarrying operations in a skillful, scientific and systematic manner keeping in view proper safety of the labour, structure and the public and public works located in that vicinity of the quarrying area and in a manner to preserve the environment and ecology of the area.
- 23. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be informed to the District AD/DD (Geology and Mining) District Environmental Engineer (TNPCB) and the Director of Mines Safety (DMS), Chennai Region by the proponent without fail.
- 24. The Project Proponent shall abide by the annual production scheduled specified in the approved mining plan and if any deviation is observed, it will render the Project Proponent liable for legal action in accordance with Environment and Mining Laws.
- 25. Prior clearance from Forestry & Wild Life including clearance from committee of the National Board for Wildlife as applicable shall be obtained before starting the quarrying operation, if the project site attracts the NBWL clearance, as per the existing law from time to time.
- 26. All the conditions imposed by the Assistant/Deputy Director, Geology & Mining, concerned District in the mining plan approval letter and the Precise area communication letter issued by concerned District Collector should be strictly followed.
- 27. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- 28. The Project proponent shall install a Display Board at the entrance of the mining lease area/abutting the public Road, about the project information as shown in the Appendix -II of this minute.

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Appendix

List of Native Trees Suggested for Planting

- 1. Aegle marmelos Vilvam
- 2. Adenaanthera pavonina Manjadi
- 3. Albizia lebbeck Vaagai
- 4. Albizia amara Usil
- 5. Bauhinia purpurea Mantharai
- 6. Bauhinia racemosa Aathi
- 7. Bauhinia tomentosa Iruvathi
- 8. Buchanania axillaris Kattuma
- 9. Borassus flabellifer Panai
- 10. Butea monosperma Murukka maram
- 11. Bobax ceiba Ilavu, Sevvilavu
- 12. Catophyllum inophyllum Punnai
- 13. Cassia fistula Sarakondrai
- 14. Cassia roxburghii- Sengondrai
- 15. Chloroxylon sweitenia Purasa maram
- 16. Cochlospermum religiosum Kongu, Manjal Ilavu
- 17. Cordia dichotoma Mookuchali maram
- 18. Creteva adansonii Mavalingum
- 19. Dillenia indica Uva, Uzha
- 20. Dillenia pentagyna Siru Uva, Sitruzha
- 21. Diospyros ebenum Karungali
- 22. Diospyros chloroxylon Vaganai
- 23. Ficus amplissima Kal Itchi
- 24. Hibiscus tiliaceus Aatru poovarasu
- 25. Hardwickia binata Aacha
- 26. Holoptelia integrifolia Aayili
- 27. Lannea coromandelica Odhiam
- 28. Lagerstroemia speciosa Poo Marudhu
- 29. Lepisanthus tetraphylla Neikottai maram
- 30. Limonia acidissima Vila maram

- 31. Litsea glutinosa -Pisin pattai
- 32. Madhuca longifolia Illuppai
- 33. Manilkara hexandra Ulakkai Paalai
- 34. Mimusops elengi Magizha maram
- 35. Mitragyna parvifolia Kadambu
- 36. Morinda pubescens Nuna
- 37. Morinda citrifolia Vellai Nuna
- 38. Phoenix sylvestre Eachai
- 39. Pongamia pinnata Pungam
- 40. Premna mollissima Munnai
- 41. Premna serratifolia Narumunnai
- 42. Premna tomentosa Purangai Naari, Pudanga Naari
- 43. Prosopis einerea Vanni maram
- 44. Pterocarpus marsupium Vengai
- 45. Pterospermum canescens Vennangu, Tada
- 46. Pterospermum xylocarpum Polavu
- 47. Puthranjiva roxburghii Puthranjivi
- 48. Salvadora persica Ugaa Maram
- 49. Sapindus emarginatus Manipungan, Soapu kai
- 50. Saraca asoca Asoca
- 51. Streblus asper Piraya maram
- 52. Strychnos nuxvomica Yetti
- 53. Strychnos potatorum Therthang Kottai
- 54. Syzygium cumini Naval
- 55. Terminalia bellerica Thandri
- 56. Terminalia arjuna Ven marudhu
- 57. Toona ciliate Sandhana vembu
- 58. Thespesia populnea Puvarasu
- 59. Walsuratrifoliata valsura
- 60. Wrightia tinctoria Veppalai
- 61. Pithecellobium dulce Kodukkapuli

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Appendix-II

Display Board

(Size 6' x5' with Blue Background and White Letters)

கையி செய்யூர்க மிருந்திரில் மாகக்கும்பெல்யால் சிரமத் பிரகக்கள்ள GAB COME OFFICE AREAS LINES வறங்கப்பட்டுள்ளது ஊடி....... தேறக்கு கட்டு சற்று துழல் அறும்பு

ஒவரிலின் சக்கலையச் சுற்றி வேலி அமைக்க வேண்டும் militaren annag Hills arbeiterregiler gyrk penneti hörligig. Kildig illanesi Doba İresischi சாற்றில் மாக ஏற்படாதவாறு கரங்க பணிகளை மேற்கொள்க பேண்டும் water Conjunction was a series and conjunction and the series துள்ளவி வாரிகளின் முலமாக அவ்வப்போது தெளிக்க வேண்டும் இனர்ச்சல் தடிச்சுவமும் ஜூசி மாக்கட்டிய மக் குறைக்குற்றாக எ e alle milità de cas கற்றி அடர்த்தியான பகமை பகுதியை ஏற்படுத்த வேண்டும் படுக்குக்கும் அம்பு விடுத்துள்ள ாழுது நிலகதிர்வுகள் ஏற்படாதனாறும் மற்றும் வற்கள் பறக்காதம த்தில் இருந்து எற்படும் இளரச்சல் அமை 85 பெரியல்சை (dea) அமைந்து நேல ஏறப்ப உருவாறு அருத்த இடன்படிய இதிகள் சான்ன் இது காக்காற்றும். கதாரமுள்ள கழிப்பறை வசதிகளை செய்து அச வேண்டும். காகக் கட்டியு நடித்த கடியாக வாக்கள்கள் செய்தும் சாக்காய தொடர்ந்த நடித் கட்டிய காகில் உள்ள வியாகம் பணிகள் மற்றும் நிற்றினைபன் பசதிக்கப ாணன் கீழ் காங்கத்தில் உண்ள பணியரைகளுக்கு நகரக பாறுகாபபு ் மூடுக்கப்படமை இருப்பாற உறுகி செட்கும் எனையில் திலத்தது தீரின் நாகதினை தொடி விருந்து கணிக பொருட்களை எடுத்துச் செல்வது கிராம மக்களுக்கு எந்தத் கிரமத்தி மில் நிறைத்து நீரின் நாந்தியை நொடர்ந்து என்னவரிக்க வே ாபோடும் மற்றும் சற்றுத்தல் பாதி கதை வண்ணம் வாணாகளை இடை டேயாடும். ப்பணிகள் முடிக்கப்பட்டமுடக் கண்கழுடல் நிட்டத்தில் உள்ளவறு கள்கத்திகள் முட்டதே **காவை முடித்த**ின்னர் நடித்துகேண் வரங்கப் பகுதி மற்றும் வரங்க நடவடிகளைகள் இடையுறு ஏற்பட மறுகட்டுமானம் செய்து நாவரங்கள் விலங்குகள் ஆகியமற்றின் வளழ்சிகிரு ஏற்ற வல neura di diporarearen segio, unificació denello-medine in ciadale garrero igazonego en monte de de recipso contraction Contractión a este acceptação coloció des secuelos de constituidades de 1944 - 2022-255 (secues) adicionil una acciptació confusiçãos conduir de contraction de confusiones accepta கடை அடும் மாடுவேற்ற Transministration formations against mineral ask Court again

Discussion by SEIAA and the Remarks:-

The proposal was placed in the 574th Authority meeting held on 29.11.2022. SEAC has furnished its recommendations to the Authority for granting Environmental Clearance to the Project subject to the conditions stated therein. After detailed discussion, SEIAA decided to grant Environmental Clearance for the total production quantity of 89021 T of Fireclay & 74407 T of Laterite with depth of 17m BGL subject to the conditions as recommended by SEAC in addition to the following condition & conditions stated vide Annexure A.

Annexure-'A'

- 1. The AD/DD, Dept. of Geology & Mining shall ensure operation of the proposed quarry after the submission slope stability study conducted through the reputed research & Academic Institutions such as NIRM, IITs, NITS Anna University, and any CSIR Laboratories etc.
- 2. The AD/DD, Dept. of Geology & Mining & Director General of Mine safety shall ensure strict compliance and implementation of bench wise recommendations/action plans as recommended in the scientific slope stability study of the reputed research & Academic Institutions as a safety precautionary measure to avoid untoward accidents during mining operation.
- 3. No trees in the area should be removed and all the trees numbered and protected. In case trees fall within the proposed quarry site the trees may be transplanted in the Greenbelt zone. The proponent

shall ensure that the activities in no way result in disturbance to forest and trees in vicinity. The proponent shall ensure that the activity does not disturb the movement of grazing animals and free ranging wildlife. The proponent shall ensure that the activity does not disturb the biodiversity, the flora & fauna in the ecosystem. The proponent shall ensure that the activity does not result in invasion by invasive alien species. The proponent shall ensure that the activities do not disturb the resident and migratory birds. The proponent shall ensure that the activities do not disturb the vegetation and wildlife in the adjoing reserve forests and areas around.

- 4. The proponent shall ensure that the operations do not result in loss of soil biological properties and nutrients.
- 5. The activity should not result in CO₂ release and temperature rise and add to micro climate alternations.
- 6. The proponent shall ensure that the activity does not disturb the water bodies and natural flow of surface and ground water, nor cause any pollution, to water sources in the area.
- 7. The proponent shall ensure that the activities undertaken do not result in carbon emission, and temperature rise, in the area.
- 8. The proponent shall ensure that Monitoring is carried out with reference to the quantum of particulate matter during excavation; blasting; material transport and also from cutting waste dumps and haul roads.
- 9. The proponent shall ensure that the activities do not disturb the agro biodiversity and agro farms. Actions to be taken to promote agro forestry, mixed plants to support biodiversity conservation in the mine restoration effort.
- 10. The proponent shall ensure that activity does not deplete the indigenous soil seed bank and disturb the mycorrizal fungi, soil organism, soil community nor result in eutrophication of soil and water.
- 11. The activities should not disturb the soil properties and seed and plant growth. Soil amendments as required to be carried out, to improve soil heath
- 12. Bio remediation using microorganisms should be carried out to restore the soil environment to enable carbon sequestration.
- 13. The proponent shall ensure that all mitigation measures listed in the EIA/EMP are taken to protect the biodiversity and natural resources in the area.
- 14. The proponent shall ensure that the activities do not impact the water bodies/wells in the neighboring open wells and bore wells. The proponent shall ensure that the activities do not in any way affect the water quantity and quality in the open wells and bore wells in the vicinity or impact

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- the water table and levels. The proponent shall ensure that the activities do not disturb the river flow, nor affect the Odai, Water bodies, Dams in the vicinity.
- 15. The proponent shall ensure that in the green belt development more indigenous trees species (Appendix as per the SEAC Minutes) to be planted.
- 16. The proponent shall ensure the area is restored and rehabilitated with native trees as recommended in SEAC Minutes (in Appendix).
- 17. The proponent shall ensure that the mine restoration is done using mycorrizal VAM, vermincomposting, Biofertilizers to ensure soil health and biodiversity conservation.
- 18. The proponent shall ensure that the topsoil is protected and used in planting activities in the area.
- 19. The proponent should ensure that there is no disturbance to the agriculture plantations, social forestry plantations, waste lands, forests, sanctuary or national parks. There should be no impact on the land, water, soil and biological environment and other natural resources due to the mining activities.
- 20. The proponent shall ensure that topsoil to be utilized for site restoration and Green belt alone within the proposed area.
- 21. The proponent shall ensure that the activities do not impact green lands/grazing fields of all types surrounding the mine lease area which are food source for the grazing cattle.
- 22. The project proponent shall store/dump the waste generated within the earmarked area of the project site for mine closure as per the approved mining plan.

Directions for Reclamation of mine sites

- The mining closure plan should strictly adhere to appropriate soil rehabilitation measures to
 ensure ecological stability of the area. Reclamation/Restoration of the mine site should ensure
 that the Geotechnical, physical, chemical properties are sustainable that the soil structure
 composition is buildup, during the process of restoration.
- 2. The proponent shall ensure that the mine closure plan is followed as per the mining plan and the mine restoration should be done with native species, and site restored to near original status.
 The proponent shall ensure that the area is ecologically restored to conserve the ecosystems and ensure flow of goods and services.
- 3. A crucial factor for success of reclamation site is to select sustainable species to enable develop a self-sustaining eco system. Species selected should easily establish, grow rapidly, and possess good crown and preferably be native species. Species to be planted in the boundary of project site should be un palatable for cattle's/ goats and should have proven capacity to add leaf-litter

to soil and decompose. The species planted should be adaptable to the site conditions. Should be preferably pioneer species, deciduous in nature to allow maximum leaf-litter, have deep root system, fix atmospheric nitrogen and improve soil productivity. Species selected should have the ability to tolerate altered pit and toxicity of and site. They should be capable of meeting requirement of local people in regard to fuel fodder and should be able to attract bird, bees and butterflies. The species should be planted in mixed association.

- For mining area reclamation plot culture experiments to be done to identify/ determine suitable species for the site.
- 5. Top soil with a mix of beneficial microbes (Bacteria/Fungi) to be used for reclamation of mine spoils. AM Fungi (Arbuscular mycorrhizal fungi), plant growth promoting Rhizo Bacteria and nitrogen fixing bacteria to be utilized.
- 6. Soil and moisture conservation and water harvesting structures to be used where ever possible for early amelioration and restoration of site.
- 7. Top soil is most important for successful rehabilitation of mined sites. Topsoil contains majority of seeds and plant propagation, soil microorganism, Organic matter and plant nutrients. Wherever possible the topsoil should be immediately used in the area of the for land form reconstruction, to pre mining conditions.
- 8. Over burdens may be analyzed and tested for soil characteristics and used in the site for revegetation. Wherever possible seeds, rhizome, bulbs, etc of pioneering spices should be collected, preserved and used in restoring the site.
- Native grasses seeds may be used as colonizers and soil binders, to prevent erosion and allow diverse self- sustaining plant communities to establish. Grasses may offer superior tolerance to drought, and climatic stresses.
- 10. Reclamation involves planned topographical reconstruction of site. Care to be taken to minimize erosion and runoff. Topsoils should have necessary physical, chemicals, ecological, properties and therefore should be stored with precautions and utilized for reclamation process. Stocked topsoil should be stabilized using grasses to protect from wind. Seeds of various indigenous and local species may be broad casted after topsoil and treated overburden are spread.
- 11. Alkaline soils, acidic soils, Saline soils should be suitably treated/amended using green manure, mulches, farmyard manure to increase organic carbon. The efforts should be taken to landscape and use the land post mining. The EMP and mine closure plan should provide adequate budget

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for reestablishing the site to pre-mining conditions. Effective steps should be taken for utilization of over burden. Mine waste to be used for backfilling, reclamation, restoration, and rehabilitation of the terrain without affecting the drainage and water regimes. The rate of rehabilitation should be similar to rate of mining. The land disturbed should be reshaped for long term use. Mining should be as far as possible be ecofriendly. Integration of rehabilitation strategies with mining plan will enable speedy restoration.

- 12. Efforts should to taken to aesthetically improve the mine site. Generally there are two approaches to restoration i.e Ecological approach which allows tolerant species to establish following succession process allowing pioneer species to establish. The other approach i.e plantation approach is with selected native species are planted. A blend of both methods may be resorted to restore the site by adding soil humas and mycorrhiza.
- 13. Action taken for restoration of the site should be specifically mentioned in the EC compliances.

Part-A: Conditions to be Complied before commencing mining operations:-

- The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that
 - 1. The project has been accorded Environmental Clearance.
 - II. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
 - ill. Environmental Clearance may also be seen on the website of the SEIAA.
 - IV. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.
- Mining activity should be reviewed by the District Collector after three years and decide for further extension.
- 3. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.
- The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.
- 5. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations,

if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

- Quarry lease area should be demarcated on the ground with wire fencing to show the boundary
 of the lease area on all sides with red flags on every pillar shall be erected before
 commencement of quarrying.
- 7. The proponent shall ensure that First Aid Box is available at site.
- 8. The excavation activity shall not alter the natural drainage pattern of the area.
- 9. The excavated pit shall be restored by the project proponent for useful purposes.
- 10. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
- 11. The quarrying operation shall be restricted between 7AM and 5 PM.
- 12. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.
- 13. A minimum distance of 50mts, from any civil structure shall be kept from the periphery of any excavation area.
 - 14. Depth of quarrying should be as per approved mining plan.
- 15. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.
 - 16. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
 - 17. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
 - 18. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.
 - 19. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
 - 20. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF& CC, GoI on 16.11.2009.

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- 21. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
 - i. Roads shall be graded to mitigate the dust emission.
 - ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust
- 22. The following measures are to be implemented to reduce Noise Pollution
 - Proper and regular maintenance of vehicles and other equipment
 - Limiting time exposure of workers to excessive noise. ii.
 - The workers employed shall be provided with protection equipment and earmuffs etc. iii.
 - Speed of trucks entering or leaving the mine is to be limited to moderate speed of IV. kmph to prevent undue noise from empty trucks.
 - v. All noise generating machinery the compressor, generator to be enclosed in acoustic enclosure so as to reduce noise in working area.
- 23. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoEF& CC, Gol to control noise to the prescribed levels.
- 24. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Regional Director, CGWB. Suitable measures should be taken for rainwater harvesting.
- 25. Permission from the competent authority should be obtained for drawl of ground water, if any. required for this project.
- 26. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
- 27. The following measures are to be adopted to control erosion of dumps:
 - i. Retention/ toe walls shall be provided at the foot of the dumps.
 - ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
- 28. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous& other wastes (Management, and Trans Boundary Movement) Rules, 2016 and its amendments thereof to the recyclers authorized by TNPCB.

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- 29. Concealing the factual data or 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.
- 30. Rain water harvesting to collect and utilize the entire water falling in land area should be provided.
- 31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season.
- 32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. District Collector/mining officer shall ensure this.
- 33. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
- 34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution.
- 35. It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 5 hectares within the mining lease period of this application.
- 36. It shall be ensured that there is no habitation is located within 300 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 300m radius from the periphery of the quarry site.
- Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.

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- 38. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
- 39. Bunds to be provided at the boundary of the project site.
- 40. The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.
- 41. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
- 42. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
- 43. The Project Proponent shall provide solar lighting system to the nearby villages.
- 44. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
- 45. Safety equipments to be provided to all the employees.
- 46. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai
- 47. The Assistant/Deputy Director, Department of Geology & mining shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.
- 48. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
- 49. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.
- 50. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.
- 51. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.
- 52. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
- 53. The Proponent shall ensure that the project activity including blasting, mining transportation etc should in no way have adverse impact to the other forests, such as reserve forests and social forests, tree plantation and bio diversity, surrounding water bodies etc.

- 54. The proponent shall provide Green Belt development at the rate of not less than 400 trees/Hectare. The tree saplings shall be not less than 3m height.
- 55. The fugitive emissions should be monitored during the mining activity and should be reported to TNPCB once in a month and the operation of the quarry should no way impact the agriculture activity & water bodies near the project site.
- 56. All the commitment made by the project proponent in the proposal shall be strictly followed.
- 57. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

Part B: General Conditions:

- 1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
- 2. The Proponent shall obtain the Consent from the TNPC Board before commencing the activity.
- 3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.
- 4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
- 5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- 6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
- 7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
- 8. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.

- 10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
- 11. All Personnel shall be provided with protective respiratory devices including safety shoes, masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- 12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
- 13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
- 14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
- 15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.
- 16. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
- 17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance
- 18. The SEIAA, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
- 19. The SEIAA, Tamil Nadu may cancel the Environmental Clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this Environmental Clearance, if it is found or if it comes to the knowledge of this SEIAA, TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining tphe Environmental Clearance.

MEATBER SECRETARY SELAA-TN

- 20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
- 21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006, Wildlife Protection Act, 1972, Forest Conservation Act, 1980, Biodiversity Conservation Act, 2016, the Biological Diversity Act, 2002 and Biological diversity Rules, 2004 and Rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
- 22. Any other conditions stipulated by other Statutory/Government authorities shall be complied.
- 23. Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- 24. The Environmental Clearance is issued based on the documents furnished by the project proponent. In case any documents found to be incorrect/not in order at a later date the Environmental Clearance issued to the project will be deemed to be revoked/ cancelled.

MEMBER SECRETARY SEIAA-TN

Copy to:

- 1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- 2. The Additional Chief Secretary to Government, Environment and Forests Department, Tamil Nadu.
- 3. The Additional Chief Secretary to Government, Industries Department, Tamil Nadu.
- 4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai 34.
- The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
- 6. The Chairman, TNPC Board, 76, Mount Salai, Guindy, Chennai 32.

- 7. The District Collector, Cuddalore District.
- 8. The Commissioner of Geology and Mines, Guindy, Chennai 32.
- 9. El Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
- 10. Spare.