



सत्यमेव जयते

File No.: 11494
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), TAMIL NADU)



Dated 02/02/2025



To,

Thiru.Karthikeyan
M/s.Dwarkamai Mines, Mr.Karthikeyan, Partner of the Company, Plot No. S1 No.85, 4th Street,
Astalakshmi Nagar, Varatharajapuram, Mudichur, Kancheepuram District., Kancheepuram,
KANCHIPURAM, TAMIL NADU, 600048
dwarkamaim@gmail.com

Subject: Grant of prior Environmental Clearance (EC) to the proposed Mining Project under the provisions of EIA Notification 2006- as amended regarding.

Sir/Madam,

Sub: SEIAA-TN - Proposed Rough Stone and Gravel Quarry lease over an extent of 2.30.97ha at S.F.No's: 942/4A, 973/2, 973/7A, 973/9, 973/10A, 973/10B and 975/1, Maruthadu Village, Vandavasi Taluk, Tiruvannamalai District, Tamil Nadu by M/s.Dwarkamai Mines- under project category - "B2" and Schedule S.No. 1(a) 'Mining of Mineral Projects' of EIA Notification, 2006, as amended – Issue of Environmental Clearance – Regarding.

Ref: 1. Online Proposal No. SIA/TN/MIN/507637/2024, dated: 24/11/2024.
2. Application seeking Environmental Clearance Submitted at SEIAA-TN on: 25.11.2024.
3. Minutes of the 526th meeting of SEAC held on 23.01.2025.
4. Minutes of the 791st Meeting of SEIAA held on 29.01.2025.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24C0108TN5942480N
(ii) File No.	11494
(iii) Clearance Type	Mining EC Under 5 Ha
(iv) Category	B2
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Maruthadu Village Rough Stone and Gravel Quarry Lease
(ix) Location of Project (District, State)	TIRUVANNAMALAI, TAMIL NADU
(x) Issuing Authority	SEIAA

1. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-2(Part A & B)/EMP Reports were submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.

2. The above-mentioned proposal has been considered by SEIAA in the meeting held on 29.01.2025. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.

3. The SEAC, based on information submitted viz: Form2 (Part A, B)EMP report etc., & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and compliance thereto furnished by the Project Proponent, recommended the proposal for grant of Environment Clearance under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of Specific and Standard EC conditions as detailed in the point below.

4. The SEIAA has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the SEAC hereby accords Environment Clearance for the instant proposal to by M/s.Dwarkamai Mines under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of the Specific and Standard EC conditions as given in Annexure (2)

5. The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.

6. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

7. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

8. Salient features of the proposal are as follows:

Sl. No	Details of the Proposal	Data Furnished
1	Name of the Owner/Firm	M/s.Dwarkamai Mines, Mr.Karthikeyan, Partner of the Company, Plot No. S1 No.85, 4th Street, Astalakshmi Nagar, Varatharajapuram, Mudichur, Kancheepuram District.
2	Type of quarrying	Rough Stone and Gravel Quarry
3	S.F No. of the quarry site	942/4A, 973/2, 973/7A, 973/9, 973/10A, 973/10B and 975/1
4	Village in which situated	Marudhadu
5	Taluk in which situated	Vandavasi
6	District in which situated	Tiruvannamalai
7	Extent of quarry (in ha.)	2.30.97 Ha
8	Latitude & Longitude of all corners of the quarry site	12°28'25.62"N to 12°28'36.20"N 79°40'07.26"E to 79°40'12.48"E
9	Topo Sheet No.	57-P/11
10	Type of mining	Opencast- Mechanized Mining
11	Details of Environmental settings	Water Bodies · Srirangarajapuram Tank- 867m- SW · Subam River- 3.54 Reserve Forests · Badur R.F- 5.41km- SE Wildlife Sanctuaries · Vedanthangal Bird Sanctuary- 21.30km- NE
12	Details of previous history	Not applicable
13	Period of current mine plan	5 Years

14	Production (Quantity in m ³)	2,07,863 m³ of rough stone & 31,422 m³ of gravel
15	Depth of mining	35m below ground level
16	Depth of water table	50m- 55m
17	Man Power requirement	20 Nos
18	Water requirement: 1. Domestic & Flushing 2. Dust suppression & Green Belt	3.5KLD 1.0KLD 2.5KLD
19	Power requirement	166288 Liters of HSD
20	Precise area communication approved by the Assistant Director, Department of Geology and Mining with date	Roc.No.253/Mines/2024, Dated: 18.11.2024.
21	Mining Plan approved by the Joint Director(A/C), O/o. Assistant Director, Geology and Mining with date	Roc.No.253/ Kanimam/2024, Dated: 21.11.2024.
22	500m cluster letter issued by the Joint Director(A/C), O/o. Assistant Director, Geology and Mining with date	Roc.No.253/ Kanimam/2024, Dated: 21.11.2024.
23	VAO certificate regarding habitations in 300m radius	Letter Dated:23.11.2024
24	Project Cost (excluding EMP)	Rs. 50,12,000/-
25	EMP cost	Capital Cost – Rs. 22.18 Lakhs per annum Recurring Cost – Rs. 32.16 Lakhs per annum
26	CER Cost	Rs. 5,00,000/-
27	Validity: This Environmental Clearance is accorded for the quantity of 2,07,863 m³ of rough stone & 31,422 m³ of gravel up to depth of 35m below ground level. The Environmental Clearance issued is valid as per the approved mine plan period and as per MoEF&CC's notification S.O.1533 (E) dated 14.09.2006 and S.O. 1807(E) dated 12.04.2022.	

9.General Instructions:

- (i)The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of SEIAA website where it is displayed.
- (ii)The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn must display the same for 30 days from the date of receipt.
- (iii)The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.
- (iv)Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.
- (v)Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- The Regional Office of this SEIAA 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.
- (vi)Any appeal against this EC 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.

10. This issue with an approval of the Competent Authority. For information on deliberations, refer to the minutes of SEAC and SEIAA available in the PARIVESH Portal.

Copy To

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Principal Secretary to Government, Environment, Climate Change and Forests Department, Tamil Nadu.
3. The Additional Chief Secretary to Government, Natural Resources Department, Tamil Nadu.
4. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
5. The Chairperson, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
6. The District Collector, Tiruvannamalai District.
7. The Commissioner of Geology and Mines, Guindy, Chennai-32
8. Assistant Director, Department of Geology & Mining, Tiruvannamalai District.
9. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
10. Integrated Regional office of MoEF&CC, Sasthri Bhawan, Nungambakkam, Chennai.
11. File Copy.

Annexure 1**Specific EC Conditions for (Mining Of Minerals)****1. Seiaa Specific Conditions:**

S. No	EC Conditions
1.1	<ol style="list-style-type: none">1. Keeping in view of MoEF&CC's notification S.O.1533(E) dated.14.09.2006 and S.O. 1807(E) dated 12.04.2022, this Environmental Clearance is valid as per the approved mine plan period.2. The EC granted is subject to review by District Collector, Mines Dept. and TNPCB on completion of every 5 years and also during the mine plan period, till the project life so as to review the EC conditions and to ensure that they have all been adhered to and implemented.3. The project proponent shall submit a Certified Compliance Report obtained from IRO of MoEF&CC to the monitoring, regulatory and other concerned authorities including SEIAA, while seeking a renewal of the mining plan to cover the project life.4. There should be regular monitoring of air quality, water quality, ground water level and noise quality and reports regarding the same should be submitted to TNPCB, SEIAA & IRO of MoEF&CC once in every 6 months.5. The proponent shall strictly adhere to the mining plan and half yearly and annual returns shall be submitted to the Director of Geology and Mining Department with copy marked to TNPCB, SEIAA & IRO of MoEF&CC.6. Biodiversity in and around the project area should be monitored frequently and detailed biodiversity report should be submitted every year to SEIAA & IRO of MoEF&CC.7. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP and as per the amount committed and approved in EC for EMP. Status of progressive mine closure and green belt implementation should be included in the half yearly compliance report submitted to TNPCB, SEIAA & IRO of MoEF&CC.8. As per the OM vide F. No. IA3-22/1/2022-IA-III [E- 172624] Dated: 14.06.2022, the Project Proponents are directed to submit the six-monthly compliance on the environmental conditions prescribed in the prior environmental clearance letter(s) through newly developed compliance module in the PARIVESH Portal from the respective login.9. The amount allocated for EMP should be kept in a separate account and both the capital and recurring expenditures should be done year wise for the works identified, approved and as committed. The work & expenditure made under EMP should be elaborated in the bi-annual compliance report submitted and also should be brought to the notice of concerned authorities during inspections.10. The plantation of saplings shall be carried out in the earmarked greenbelt area as a part of the

S. No	EC Conditions
	tree plantation campaign “Ek Ped Ma Ke Naam” and the details of the same shall be uploaded in the MeriLiFE Portal (https://merilife.nic.in).

2. Seac Conditions - Site Specific

S. No	EC Conditions
2.1	<p>1) The PP shall mark the DGPS reference pillars painted with blue & white colour indicating the safety barrier of 7.5 m to be left under the Rule 13 (1) of MCDR, 1988 within the lease boundary and protective bunds, before obtaining the CTO from the TNPCB.</p> <p>2) Tree plantation & fencing and installation of garland drainage with siltation tank around the mine lease area shall be completed before execution of the mine lease.</p> <p>3) The PP shall register promptly through online in the Shram Suvidha Portal which is the official portal of Ministry of Labour & Employment, Govt of India to obtain Labour Identification Number (LIN) before obtaining the CTO from the TNPCB.</p> <p>4) The project proponent shall maintain 7.5m greenbelt in safety zone and such plantation should not be disturbed.</p> <p>5) As accepted by the Project Proponent the CER cost is Rs. 5 Lakhs and the amount shall be spent towards Government Higher Secondary School, Marudadu Village.</p> <p>6) The PP shall ensure that the loaded trucks are covered with a tarpaulin cover to avoid the spillage & dust pollution while transportation.</p> <p>7) The PP shall abide by all the conditions as stipulated in accordance with the provisions of MMR 1961 and DGMS Circular No.7 of 1997 while carrying out the controlled blasting operations through a statutorily competent persons appointed by him.</p> <p>8) The PP shall not carry out the deep hole larger diameter blasting and the secondary blasting of oversize fragments /boulders during the life of the lease period.</p> <p>9) However, the PP shall carry out the scientific studies within a period of six months from the commencement of quarrying operations after obtaining the prior permission from the Director of Mines Safety/Chennai Region, to design the controlled blast parameters including the type of explosive, maximum charge per delay & maximum total charge (kg) per round, maximum number of holes per round, etc along with indicating the statutory competent person responsible for the blasting operation, for reducing the blast-induced ground/air- vibrations and eliminating the fly rock from the blasting operations carried out in the quarry, by involving anyone of these reputed Research and Academic Institution such as CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Dept of Mining Engg - Anna University Chennai-CEG Campus. 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.</p> <p>10) As it has been observed that no adequate benches are formed in the existing quarry, for ensuring the safety of the persons employed in the quarry, the PP shall carry out the scientific studies after obtaining the prior permission from the Director of Mines Safety/Chennai Region, to assess the slope stability of the existing quarry walls in a hilly terrain by determining the angle of safety for the entire quarry but ‘zone-wise’ to decide whether the existing slope is safer to work or otherwise enumerate the achievable mitigation measures if any, within a period of six months from the date of lease execution which will also helpful in designing the proposed benches, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. 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.</p>

S. No	EC Conditions
	<p>11) The proponent shall make necessary arrangements to suppress the dust pollution caused during the quarrying & truck transportation by continuous mode of water spraying.</p> <p>12) The PP shall fulfil the requirements of the provisions of Mines Act 1952, the regulations of MMR 1961 and the DGMS Circulars, the Environment Act & Rules, 1986, Explosives Act 1884, Explosive rules 1983 and other laws, orders pertaining to the geometry of quarry and its operation without any deviation.</p>

3. Seac Standard Conditions

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3.1	<table border="1"> <thead> <tr> <th>Category</th> <th>Conditions</th> </tr> </thead> <tbody> <tr> <td rowspan="8">1. General</td> <td>1.1. Prior approval shall be secured from the SEIAA for any modification / change in the Project mentioned in the Environmental Clearance (EC).</td> </tr> <tr> <td>The Environmental Clearance (EC) shall be renewed in accordance with EIA Notification, 2006 vide S.O.2944 (E) dated: 14.09.2016, as amended from time to time.</td> </tr> <tr> <td>The EC does not exempt the Proponent and/or his appointed contractors and operator from securing other government approvals or preclude other agencies/departments from enforcing their rules and regulations.</td> </tr> <tr> <td>CTO from TNPCB shall be obtained and complied with.</td> </tr> <tr> <td>A copy of the EC shall be kept at the Project site at all times. 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The incident report shall describe the likely cause, the time of occurrence, and the conditions under which an incident occurred, the extent of impact, and the remedial actions undertaken.</td> </tr> <tr> <td>A Half-Yearly Compliance Report (HYCR), including environmental protection measures implementation and monitoring, and a brief description with photo documentation shall be submitted to SEIAA and IRO, MoEF&CC.</td> </tr> <tr> <td>The EC Holder shall send 'Notice of Opening', to the Director of Mine Safety, Chennai Region, as required under the section 16 of the Mines Act 1952 before commencement of mining operations.</td> </tr> <tr> <td></td> <td>While transporting the mined material, the ECH shall ensure that there is no over loading of trucks/trippers/tractors. Every load transported should be weighed in an approved weighing station and the details should be maintained by the ECH.</td> </tr> <tr> <td></td> <td>2.1 Topsoil shall be segregated, stockpiled, and protected from wind and water erosion, or contaminants. The segregated top soil shall not be disturbed by surface operations, such as roads and areas upon which support facilities are to be sited.</td> </tr> <tr> <td></td> <td>2.2 As per the directions contained in the OM F.No.22-34/2018-IA.III dated 16th January 2020 issued by MoEF & CC, the ECH shall, undertake re-</td> </tr> </tbody> </table>	Category	Conditions	1. General	1.1. Prior approval shall be secured from the SEIAA for any modification / change in the Project mentioned in the Environmental Clearance (EC).	The Environmental Clearance (EC) shall be renewed in accordance with EIA Notification, 2006 vide S.O.2944 (E) dated: 14.09.2016, as amended from time to time.	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S. No	EC Conditions	
		grassing the mining area and any other area which may have been disturbed due to his mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The compliance of this direction shall be included in the Half Yearly Compliance Report.
	2.3	The ECH must not carry out any activity: <ul style="list-style-type: none"> · Within 60 m from the Reserve Forest. · Within the notified environmentally sensitive area of notified protected areas. · Within 1 km of protected areas where the environmentally sensitive area has not been notified.
	2.4	The ECH must design, install and maintain adequate erosion and sediment control structures wherever necessary to prevent or minimise erosion of disturbed areas and the sedimentation and/or blockage of any watercourse, waterway, or water body.
	2.5	The ECH shall undertake in a phased manner restoration, reclamation and rehabilitation of lands affected by the quarrying operations and shall complete this work before the conclusion of such operations as per the Environmental Management Plan & the approved Mine Closure Plan.
	2.6	The ECH must not carry out any activity within 300m of an identified historical and archaeological site.
	3.1	Monitoring of drainage water should be carried out at different seasons by an NABL accredited lab and any discharged water into the natural stream should meet CPCB standards.
	3.2	Ground water quality monitoring should be conducted once in every six months and the report should be submitted to TNPCB. As a part of Ground Water Management, the ECH shall carry out the scientific studies to assess the existing hydrogeological conditions (water table in the core & buffer zones) and impacts of the quarrying operation on the ground water level present in the core zone , during the 2 nd year of the mining operation, by involving any one of the reputed Research and Academic Institutions. A copy the report shall be submitted to the SEIAA, MoEF&CC, TNPCB, WRD and DMS, Chennai.
	3.3	The ECH shall construct a garland drain of appropriate size, gradient and length around the proposed quarry incorporating garland canal, silt traps, siltation pond and outflow channel connecting to a natural drain prior to the commencement of mining. Garland drain, silt-traps, siltation ponds and outflow channel should be de-silted periodically and geo-tagged photographs of the process should be included in the HYCR.
	3.4	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.
	4.1	The ECH must not cause any release of dust that is not in conformity with the National Ambient Air Quality Standards.
	4.2	The following measures along with any other measures shall be implemented by the ECH to control dust pollution. <ul style="list-style-type: none"> · Installing pollution control equipment (e.g. fitting bag filters or a cyclone to dust generating equipment). · Altering work practices to avoid or minimise the generation of dust. · Scheduling activities during times when they will have least impact. · Spraying water on roads and tracks.

S. No	EC Conditions	
		<p>· Re-vegetating disturbed areas as soon as possible.</p> <p>4.3 The ECH shall ensure that the loaded trucks are covered to avoid the spillage & dust pollution while transportation.</p> <p>4.4 The ECH shall use the jack hammer drill machine fitted with the dust extractor for the drilling operations such that the fugitive dust is controlled effectively at the source.</p>
5. Noise & Vibration	5.1	Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. (i) Workers engaged in operations of HEMM, etc. should be provided with Ear plugs/muffs, (ii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone.
	5.2	The ECH must ensure that the ground vibration (peak particle velocity) shall not exceed the threshold limits prescribed by DGMS vide the DGMS Circular No. 7, of 1997.
	5.3	The ECH shall monitor the whole-body vibration level of all the machineries deployed and shall undertake adequate measures to reduce whole-body vibration (WBV) exposure to eliminate the adverse occupational health hazards/impacts caused to the operators. The report on the periodic monitoring shall be included in the HYCR.
	5.4	The ECH shall carry out blasting in such a manner that the blast-induced ground vibration level (Peak Particle Velocity) measured in the houses/structures located at a distance of 300 m shall not exceed 2.0 mm/s and no fly rock shall travel beyond 20 m from the site of blasting.
	5.5	Proper barriers to reduce noise level and dust pollution should be established by providing greenbelt along the boundary of the quarrying site.
	5.6	The ECH shall ensure that the blasting operations shall be carried out with a prior notice to the habitations situated around the proposed quarry. The ECH also should post sentries/guards adequately to ensure safety to the public.
	5.7	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 . The plant species of native origin with dense/moderate canopy should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
	5.8	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/botanists/horticulturists with regard to site specific choices.
	5.9	The ECH shall maintain a register of all the trees planted and the survival rate.
	5.10	Adequate water sprinkling arrangements 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.
	5.11	If a credible, supported complaint is made that noise or vibration is adversely impacting human noise receptors, then the ECH shall consult with affected stakeholders to develop mitigation strategies to resolve the complaint.

S. No	EC Conditions	
	6. Social & OHS	6.1 The ECH 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.
		The PP shall mark the DGPS reference pillars painted with blue & white colour indicating the safety barrier of 7.5 m to be left under the Rule 13 (1) of MCDR, 1988 within the lease boundary and protective bunds, before obtaining the CTO from the TNPCB.
		6.2 The proponent shall install the 'S3 (or) G2' type of fencing with reflectors 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 and shall furnish the photographs showing the same before obtaining the CTO from TNPCB.
		6.3 The ECH shall ensure that the persons employed in the quarry whether permanent, temporary or contractual are provided with adequate PPEs before engaged in mining operations.
		6.4 The ECH shall use only the road indicated in the mining plan for transportation purposes. ECH shall monitor the condition of the road at all times and if the roads are damaged, ECH shall approach the District Collector for the maintenance of haulage road/village / Panchayat Road under DMF.
		6.5 During the operation of mine, the ECH shall take adequate safety precautionary measures while the vehicles pass through schools / hospitals.
		6.6 The ECH shall ensure that the blasting operations are carried out by the blaster/Mine Mate/Mine Foreman duly employed by him/her in accordance with the provisions of MMR 1961.
		6.7 The ECH shall register promptly through online in the Shram Suvidha Portal which is the official portal of Ministry of Labour & Employment, Govt of India to obtain Labour Identification Number (LIN) before obtaining the CTO from the TNPCB.
		6.8 The ECH shall annually carry out an Occupational Health Survey (OHS) in accordance with the guidelines & period of examination laid in the DGMS (Tech.) (S&T) Circular No. 01 of 2011 , on OHS of the persons working in mines prone to generate the airborne dust, under Section 9A of Mines Act, 1952 and a copy of the annual compliance certificate shall be submitted to the SEIAA, IRO, MoEF&CC, TNPCB, AD/Mines-DGM and DMS, Chennai.
	6.9 The ECH shall install a 'Bio-toilet' and Rest shelter facility for the persons employed in the mine before obtaining the CTO from the TNPCB.	
	7. Financial	7.1 The ECH shall ensure that the funds earmarked for environmental protection measures are kept in a separate bank account and such funds should not be diverted for other purposes. Year-wise expenditure should be included in the HYCR.
		7.2 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 to the EMP as committed.
	8. Others	8.1 The ECH shall ensure that the provisions of the MMDR Act, 1957 & Tamil Nadu Minor Mineral Concession Rules 1959 are complied by carrying out the quarrying operations in a skillful, scientific and systematic manner keeping in view proper safety of the labour, structure, the public and public works located in that vicinity of the quarrying area and in a manner to

S. No	EC Conditions	
		preserve the environment and ecology of the area.
	8.2	The ECH shall abide by the production schedule specified in the approved mining plan and if any deviation is observed, it will render the ECH liable for legal action in accordance with Environment and Mining Laws.
	8.3	The PP to erect Display board as Appendix-II
Abbreviations:		
ECH	=	Environment Clearance Holder
HYCR	=	Half Yearly Compliance Report.
CTO	=	Consent to Operate
DMF	=	District Mining Fund
IRO	=	Integrated Regional Office of MoEF&CC
CPCB	=	Central Pollution Control Board
WRD	=	Water Resources Department
DMS	=	Director of Mine Safety
OHS	=	Occupational Health and Safety
NABL	=	National Accreditation board for Testing and Calibration Laboratories

4. Special Mitigation Measures For The Quarries Located In Close Proximity To The Windmills

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4.1	Sl. No	Existing (or) Virgin Quarry																
		<table border="1"> <thead> <tr> <th>Wind Mills located at a distance of 150 m to 300 m</th> <th>Wind Mills located beyond 300 m Up to 500 m</th> </tr> </thead> <tbody> <tr> <td>1. Appointment of I/II Class Mines Manager Certificate of Competency under MMR 1961.</td> <td>Appointment of I/II Class Mines Manager Certificate of Competency under MMR 1961.</td> </tr> <tr> <td>2. Special precautions are to be taken during blasting within danger zone such as posting guards, etc.</td> <td>Blast design parameters should be mentioned in mining plan/scheme. and may be reviewed by a competent mining engineer.</td> </tr> <tr> <td>3. Blast design parameters should be mentioned in mining plan/scheme.</td> <td>MCPD and total charge should be fixed such that it should not exceed 1.3 kg and 26.50 kg respectively.</td> </tr> <tr> <td>4. The recommendations of scientific organisation need to be incorporated in the mining plan/scheme before its approval.</td> <td>Fresh scientific study may be conducted if mine management wants to increase the MCPD and total explosive charge above the quantity of 1.30 kg and 26.50 kg respectively. Continuous monitoring using seismograph should also be done in such cases by the mine management.</td> </tr> <tr> <td>5. Engagement of blasting in-charge having Diploma/Degree in mining engineering for day-to-day blasting.</td> <td>Engagement of blasting in-charge having Diploma/Degree in mining engineering for day-to-day blasting.</td> </tr> <tr> <td>6. Training of the blasting crew on controlled blasting practices before engaged in operation.</td> <td>Training of the blasting crew on controlled blasting practices before engaged in operation.</td> </tr> <tr> <td>7. Submission of monthly report on blast design pattern and detailed explosive</td> <td>Submission of monthly report on blast design pattern and detailed explosive consumption as well as volume</td> </tr> </tbody> </table>	Wind Mills located at a distance of 150 m to 300 m	Wind Mills located beyond 300 m Up to 500 m	1. Appointment of I/II Class Mines Manager Certificate of Competency under MMR 1961.	Appointment of I/II Class Mines Manager Certificate of Competency under MMR 1961.	2. Special precautions are to be taken during blasting within danger zone such as posting guards, etc.	Blast design parameters should be mentioned in mining plan/scheme. and may be reviewed by a competent mining engineer.	3. Blast design parameters should be mentioned in mining plan/scheme.	MCPD and total charge should be fixed such that it should not exceed 1.3 kg and 26.50 kg respectively.	4. The recommendations of scientific organisation need to be incorporated in the mining plan/scheme before its approval.	Fresh scientific study may be conducted if mine management wants to increase the MCPD and total explosive charge above the quantity of 1.30 kg and 26.50 kg respectively. Continuous monitoring using seismograph should also be done in such cases by the mine management.	5. Engagement of blasting in-charge having Diploma/Degree in mining engineering for day-to-day blasting.	Engagement of blasting in-charge having Diploma/Degree in mining engineering for day-to-day blasting.	6. Training of the blasting crew on controlled blasting practices before engaged in operation.	Training of the blasting crew on controlled blasting practices before engaged in operation.	7. Submission of monthly report on blast design pattern and detailed explosive	Submission of monthly report on blast design pattern and detailed explosive consumption as well as volume
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S. No	EC Conditions	
	consumption as well as volume of rock excavation to a statutory body viz. DGMS, DMG, PESO or SPCB.	of rock excavation to a statutory body viz. DGMS, DMG, SPCB. Report of recorded ground vibration need to be added in monthly report.
8.	Report of recorded ground vibration need to be added in monthly report which shall be sent to all the statutory body viz. DGMS, DMG, SPCB.	Report of recorded ground vibration need to be added in monthly report which shall be sent to all the statutory body viz. DGMS, DMG, SPCB.
9.	Small diameter emulsion cartridge of 25 mm diameter (125 gm weight per cartridge) shall be used. However, ANFO explosives may also be used as main explosive charge.	Small diameter emulsion cartridge of 25 mm diameter (125 gm weight per cartridge) shall be used. However, ANFO explosives may also be used as main explosive charge.
10.	Electronic (or) Non-electric detonators (Nonel) shall be used in all the blasts for in-hole explosive initiation and surface hole-to-hole firing.	Non-electric detonators (Nonel) shall be used in all the blasts for in-hole explosive initiation and surface hole-to-hole firing.
11.	Max. number of holes in a round: 30.	Max. number of holes in a round: 40 to 60.

5. Special Mitigation Measures For The Quarries Located Within 1 Km From The Reserve Forests

S. No	EC Conditions	
5.1	<p>1. Since the R.F is located very close to the proposed quarry site, the PP shall develop Green Belt (Thick Tree plantation in two to three rows) along the boundary of the mine lease area before obtaining the CTO from the TNPCB.</p> <p>2. The proponent shall construct and maintain proper fencing all around the boundary of the proposed working quarry adjacent to the direction of the location of the Reserved Forest before the commencement of the operation and shall furnish the photographs showing the same before obtaining the CTO from TNPCB.</p> <p>3. The PP shall take steps so that the overburden, waste rock, rejects and fines generated during the mining operations shall be stored in separate dumps positioned in opposite direction to the location of the reserved forest.</p> <p>4. The PP shall ensure that such waste/reject dumps shall be properly secured to prevent escape of material there from in harmful quantities which may cause degradation of environment and to prevent causation of floods.</p> <p>5. The PP shall select the site for dumps on impervious ground to ensure minimum leaching effects due to precipitations.</p> <p>6. The PP shall take necessary steps that wherever possible, the waste rock, overburden etc. shall be back-filled into the mine excavations with a view to restoring the land to its original use as far as possible.</p> <p>7. Wherever back-filling of waste rock in the area excavated during mining operations is not feasible, the PP shall take adequate steps in discussion with the concerned DFO to suitably terrace the waste dumps ensuring the stability through vegetation to consolidate the green belt development in the areas adjacent to the reserved forest location.</p> <p>8. The PP shall carry out the scientific investigations in order to keep the ground and noise vibrations caused by blasting operations and movement of HEMM such as Excavators, Trucks within safe limit.</p> <p>9. The PP shall not perform secondary breakage involving the drilling & blasting in the quarrying operations and it can be replaced with non-conventional methods such as noise-controlled rock breakers, usage of non-explosive expansive materials/chemicals, Hydraulic Splitting based on the</p>	

S. No	EC Conditions
	<p>suitable scientific studies carried out by any reputed scientific and academic institutions.</p> <p>10. The PP shall take adequate steps to control the air pollution due to fines, dust, smoke or gaseous emissions during the quarrying operations within 'Permissible Limits' specified under the environmental laws.</p> <p>11. The Quarrying and Mining activities shall be restricted in the Eco-sensitive Zone of 60 m from the boundary of the Reserved area and hence the PP shall not even indulge in constructing the haul roads in these areas.</p> <p>12. No development on existing steep hill slopes or slopes with a high degree of erosion shall be permitted. Hence, the PP shall not carry out the quarrying on steep hill slopes with a gradient of 20⁰ or more or areas with a high degree of erosion on forestland.</p> <p>13. The PP shall give an affidavit at the time of lease execution that there will be no felling of trees (or) any encroachment will not be made on these Reserved Forest lands and also within the Eco- sensitive Zone of 60 m without the prior permission of the State Government in case of reserve forest land as per the procedures laid down by the State Government.</p> <p>14. The PP shall not use plastic carry bags within the quarry area.</p> <p>15. The PP shall ensure that all the haul roads within the quarry lease shall be provided with adequate number of road side drains and these drains shall be kept free from blockage for runoff disposals. This run off from the road side drainage shall relate to the natural drainage system in the area.</p> <p>16. The PP shall adhere to the provisions of the MoEF had issued Notification No. S.O. 1545 dated 25th June 2009 regulating certain activities in the eco-sensitive zone to conserve and protect the reserved forest area from ecological and environmental point of view.</p>

6. Seiaa Standard Conditions:

S. No	EC Conditions
6.1	<p>a) EC Compliance:</p> <p>1. The Environmental Clearance is accorded based on the assurance from the project proponent that there will be full and effective implementation of all the undertakings given in the Application Form, Pre-feasibility Report, mitigation measures as assured in the Environmental Impact Assessment/ Environment Management Plan and the mining features including Progressive Mine Closure Plan as submitted with the application.</p> <p>2. All the conditions as presented by the proponent in the PPT during SEAC appraisal should be addressed in Full.</p> <p>3. The proponent shall submit Compliance Reports on the status of compliance of the stipulated EC conditions including results of monitored data. It shall be sent to the respective Regional Office of Ministry of Environment, Forests and Climate Change, Govt. of India and also to the Office of State Environment Impact Assessment Authority (SEIAA).</p> <p>4. 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.</p> <p>b) Applicable Regulatory Frameworks:</p> <p>5. The project proponent shall strictly adhere to the provisions of 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,</p>

S. No	EC Conditions
	<p>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, Biological diversity Rules, 2004 & TN Forest Act, 1882 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.</p> <p>c) Safe mining Practices:</p> <p>6. The AD/DD, Dept. of Geology & Mining shall ensure operation of the proposed quarry after the submission of slope stability study conducted through the reputed research & Academic Institutions such as NIRM, IITs, NITS Anna University, and any CSIR Laboratories etc and ensure strict compliance and implementation of bench wise recommendations/action plans as recommended in the scientific slope stability study.</p> <p>7. A minimum buffer distance specified as per existing rules and statutory orders shall be maintained from the boundary of the quarry to the nearest dwelling unit or other structures, and from forest boundaries or any other ecologically sensitive and archeologically important areas or the specific distance specified by SEIAA in EC as per the recommendations of SEAC depending on specific local conditions.</p> <p>d) Water Environment – Protection and mitigation measures:</p> <p>8. The proponent shall ensure that the activity does not disturb the water bodies, neighboring open wells, bore wells and natural flow of surface and groundwater, nor cause any pollution, to water sources in the area nor effect the water quality and water quantity in the water sources.</p> <p>9. Water level in the nearest dug well in the downstream side of the quarry should be monitored regularly and included in the Compliance Report.</p> <p>10. Quality of water discharged from the quarry should be monitored regularly as per the norms of State Pollution Control Board and included in the Compliance Report.</p> <p>11. Rain Water Harvesting facility should be installed as per the prevailing provisions of TNMBR/TNCDBR, unless otherwise specified. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.</p> <p>12. 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 compliance reports to SEIAA. At any stage, if it is observed that ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.</p> <p>13. Garland drains and silt traps are to be provided in the slopes around the core area to channelize storm water. De-silting of Garland canal and silt traps have to be attended on a daily basis. A labour has to be specifically assigned for the purpose. The proponent shall ensure the quality of the discharging storm water as per the General Effluent Discharge Standards of CPCB.</p> <p>e) Air Environment – Protection and mitigation measures:</p> <p>14. The activity should not result in CO₂ release and temperature rise and add to micro climate alternations.</p> <p>15. 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.</p> <p>f) Soil Environment – Protection and mitigation measures:</p> <p>16. The proponent shall ensure that the operations neither result in loss of soil biological properties and nutrients nor deplete the indigenous soil seed bank and disturb the mycorrhizal fungi, soil organism, soil community and result in eutrophication of soil and water. Further, the activities should not disturb the soil properties and seed and plant growth. Soil amendments as required to be carried out, to improve soil health.</p> <p>17. Bio remediation using microorganisms should be carried out to restore the soil environment to enable carbon sequestration.</p> <p>18. The proponent shall ensure that the mine restoration is done using mycorrhizal VAM, vermincomposting, Biofertilizers and the topsoil is protected and used in planting activities, site</p>

S. No	EC Conditions
	<p>restoration and establishment of green belt in the area to ensure soil health and biodiversity conservation.</p> <p>19. The top soil shall be temporarily stored at earmarked place (s) and 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 OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. At critical points, use of geotextile shall be undertaken for stabilization of the dump. Protective wall or gabions should be made around the dump to prevent erosion / flow of sediments during rains. The entire excavated area shall be backfilled.</p> <p>20. Activities should not result in invasion of site by exotic and alien plant and animal species and disturb the native biodiversity and soil micro flora and fauna.</p> <p>g) Noise Environment – Protection and mitigation measures:</p> <p>21. The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines. The activity of the proponent should not effect the biological clock of the villages resulting in stress, sleeping disorders affecting health.</p> <p>h) Biodiversity - Protection and mitigation measures:</p> <p>22. 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.</p> <p>23. 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 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 adjoining reserve forests and areas around. Also, the activities should not disturb the agro biodiversity, agro farms, green lands and grazing fields of all types. Actions to be taken to promote agroforestry, mixed plants to support biodiversity conservation in the mine restoration effort.</p> <p>24. 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.</p> <p>i) Climate Change:</p> <p>25. There should be least disturbance to landscape resulting in land use change, contamination and alteration of soil profiles leading to Climate Change.</p> <p>26. Operations should not result in GHG releases and extra power consumption leading to Climate Change.</p> <p>27. Mining through operational efficiency, better electrification, energy use, solar usage, use of renewable energy should try to decarbonize the operations.</p> <p>28. Mining should not result in water loss from evaporation, leaks and wastage and should support to improve the ground water.</p> <p>29. Mining activity should be flood proof with designs and the drainage, pumping techniques shall ensure climate-proofing and socio-economic wellbeing in the area and vicinity.</p> <p>j) Reserve Forests & Protected Areas:</p> <p>30. The activities should provide nature based support and solutions for forest protection and wildlife conservation.</p> <p>31. The project activities should neither result in forest fires, encroachments nor create forest fragmentation and disruption of forest corridors and alter the geodiversity and geological heritage of the area.</p> <p>32. There should be no disturbance to the freshwater flow from the forest impacting the water table</p>

S. No	EC Conditions
	<p>and wetlands.</p> <p>33. The project proponent should support all activities of the forest department in creating awareness to local communities on forest conservation.</p> <p>34. The activities should not result in temperature rise due to increased fossil fuels usage disrupting the behaviour of wildlife and flora.</p> <p>35. The activities should support and recognise the rights and roles of indigenous people and local communities and also support sustainable development.</p> <p>36. The project activities should support the use of renewables for carbon capture and carbon storage in the project site and forest surrounds.</p> <p>37. The project activities should not result in changes in forest structure, habitats and genetic diversity within forests.</p> <p>k) Green Belt Development:</p> <p>38. The proponent shall ensure that in the green belt development more indigenous trees species as suggested in Appendix of SEAC Minutes are planted and that the area is restored and rehabilitated with native trees .</p> <p>l) Workers and their protection:</p> <p>39. The project proponent is responsible for implementing all the provisions of labour laws applicable from time to time to quarrying /Mining operations. The workers on the site should be provided with on-site accommodation or facilities at a suitable boarding place, protective equipment such as ear muffs, helmet, etc.</p> <p>40. The proponent has to provide insurance protection to the workers and the working hours and wages shall be implemented/enforced as per the Mines Act, 1952 in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.</p> <p>m) Transportation:</p> <p>41. No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a bypass road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centres.</p> <p>42. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.</p> <p>n) Storage of wastes</p> <p>43. 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.</p> <p>o) CER/EMP:</p> <p>44. The CER should be fully Implemented and fact reflected in the Half-yearly compliance report.</p> <p>45. The EMP shall also be implemented in consultation with local self-government institutions & Govt. departments as indicated in SEAC meeting.</p> <p>p) Directions for Reclamation of mine sites:</p>

S. No	EC Conditions
	<p>46. 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. 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.</p> <p>47. 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.</p> <p>48. 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. Soil and moisture conservation and water harvesting structures to be used where ever possible for early amelioration and restoration of site. 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.</p> <p>49. 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.</p> <p>50. Reclamation involves planned topographical reconstruction of site. Care to be taken to minimize erosion and runoff. Topsoil 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 indigenious and local species may be broad casted after topsoil and treated overburden are spread. 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 for re-establishing 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. Efforts should to taken to aesthetically improve the mine site. Action taken for restoration of the site should be specifically mentioned in the EC compliances.</p>

Standard EC Conditions for (Mining of minerals)

1. Statutory Compliance

S. No	EC Conditions
1.1	The Project proponent complies with all the statutory requirements and judgment of Hon'ble

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	Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
1.2	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred. PP needs to apply for transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.
1.3	This Environmental Clearance (EC) is subject to orders/ judgment of Honble Supreme Court of India, Honble High Court, Honble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
1.4	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
1.5	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
1.6	The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area."
1.7	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
1.8	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.9	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).
1.10	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
1.11	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
1.12	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
1.13	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter

S. No	EC Conditions
	mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
1.14	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
1.15	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2.2	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986. 9) The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120 each). covering upwind and downwind directions.
2.3	The project proponent use leak proof trucks/dumpers carrying mineral and cover them with tarpaulin.
2.4	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry and State Groundwater Department / State Pollution Control Board.
3.2	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
3.3	Adhere to Zero Liquid Discharge
3.4	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
3.5	The project proponent shall practice rainwater harvesting to maximum possible extent.
3.6	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3.7	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from SGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from SGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
3.8	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
3.9	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.
3.10	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

S. No	EC Conditions
3.11	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Regional Director, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
3.12	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.

4. Noise And Vibration Monitoring And Prevention

S. No	EC Conditions
4.1	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.
4.2	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
4.3	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

5. Noise Monitoring And Prevention

S. No	EC Conditions
5.1	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
5.2	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

6. Mining Plan

S. No	EC Conditions
6.1	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.
6.2	The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working (method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).

7. Energy Conservation Measures

S. No	EC Conditions
7.1	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
7.2	Provide LED lights in their offices and residential areas.

8. Waste Management

S. No	EC Conditions
8.1	Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)
8.2	The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

9. Land Reclamation

S. No	EC Conditions
9.1	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
9.2	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the

S. No	EC Conditions
	mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
9.3	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
9.4	The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.

10. Green Belt And Emp

S. No	EC Conditions
10.1	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
10.2	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

11. Transportation

S. No	EC Conditions
11.1	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport].
11.2	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with

S. No	EC Conditions
	tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

12. Public Hearing And Human Health Issues

S. No	EC Conditions
12.1	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
12.2	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
12.3	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
12.4	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
12.5	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated in order to avoid contamination of underground water.

13. Green Belt

S. No	EC Conditions
13.1	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

14. Corporate Environment Responsibility

S. No	EC Conditions
14.1	The company shall have a well laid down environmental policy duly approve by the Board of

S. No	EC Conditions
	Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest I wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
14.2	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
14.3	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
14.4	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

15. Miscellaneous

S. No	EC Conditions
15.1	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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
15.2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
15.3	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
15.4	The project proponent shall monitor the criteria pollutants level namely; PM10, S02, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
15.5	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC)/SEIAA-TN.
15.6	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language

S. No	EC Conditions
	within seven days and in addition this shall also be displayed in the project proponents website permanently.
15.7	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
15.8	44) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
15.9	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
15.10	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.
15.11	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
15.12	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
15.13	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
15.14	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.
15.15	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
15.16	Concealing factual data failure to comply with any or submission of false/ fabricated data and of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
15.17	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
15.18	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

S. No	EC Conditions
15.19	In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Honble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
15.20	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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
15.21	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.



AFFIDAVIT FURNISHED BY THE PROPONENT

I **M. Karthikeyan**, Managing Partner of **M/s. Dwarkamai Mines**, registered Office at Plot No. S1 No.85, 4th Street, Astalakshmi Nagar, Varatharajapuram, Mudichur, Kancheepuram District, Tamilnadu State. Solemnly declare and sincerely affirm that, I had applied for getting an Environment Clearance to SEIAA-Tamil Nadu for rough stone and gravel mining lease in Patta land at S.F.No's: 942/4A, 973/2, 973/7A, 973/9, 973/10A, 973/10B and 975/1, Over an extent of 2.30.97 hectares of Maruthadu Village, Vandavasi Taluk, Tiruvannamalai District, Tamil Nadu State.

- 1) I solemnly declare and sincerely affirm that the project doesn't attract general conditions as per EIA notification, 2006.
 - a) There are no protected areas notified under the wild life (Protection) Act, 1972 around 10km radius.
 - b) No critically polluted areas as notified by the central pollution control board constituted under water (Prevention and Control of Pollution) Act 1974.
 - c) No Eco-Sensitive areas as notified around 10km radius.
 - d) There is no interstate within 10km radius from the boundary of the proposed site.
 - e) There is no coastal zone found around 10km radius and this project site doesn't attract CRZ Notification, 2019.
- 2) I will complete the following Corporate Environment Responsibility (CER) activities before commencement of the quarrying activities.

Government Higher Secondary School, Marudadu Village, Vandavasi Taluk, Tiruvannamalai District.	
CER Activity	CER Cost
RO Water Facility	1,00,000/-
Toilet facility and Maintenance	3,00,000/-
Plantation in School ground	40,000/-
Environmental related books	40,000/-
Incinerator	20,000/-
Total Cost Allocation	Rs. 5,00,000/-

a) EMP BUDGET (5 Years)

Activities	Mitigation measure	Provision for Implementation	Capital in Rs	Recurring in Rs
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	24,000	24,000

	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	8,00,000	50,000
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	50,000
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance - 6Units	50,000	5,000
	No overloading of trucks/tippers/tractors	Monitoring through weighing machines	0	11,84,000
	Stone carrying trucks will be covered	Monitoring if trucks will be covered by tarpaulin	0	10,000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed - 4Units	40,000	4,000
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5,000
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	50,000
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	50,000	20,000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Line Drilling all along the boundary to reduce the PPV from blasting activity and	Provision made in Operating Cost	0	0

	implementing controlled blasting.			
	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Competent Person (Provision made in Operating Cost)	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50,000	2,000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Bulk density of rock = 2.6 for Rough Stone/Granite; = 2.5 for Limestone; 6 tons of production requires 1 kg pf explosives; Cost of NONEL = Rs. 30 per kg.	0	8,11,720
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	25,000	20,000
		Installation of dust bins	5,000	2,000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Mine Closure	1. Progressive Closure Activity - Surface Runoff management	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	24,000	12,000
	2. Progressive Closure Activity Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	4,00,000	24,000
	3. Progressive Closure Activity Green belt development - 500 trees per one hectare - 200 trees inside lease area & 300 trees outside the lease area	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	1,20,000	18,000
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	1,80,000	18,000
	4. Implementation of Final Mine Closure Activity as per Approved Mining Plan on Last Year	Few activities already covered as progressive closure activities as greenbelt development, wire fencing, garland drain. *For Final Closure Activities 15%	0	0

		of the proposed closure cost will be spent during the final mine closure stage - Last Year		
	5. Contribution towards Green Fund. As per TNMMCR 1959, Rule 35 A	The Contribution towards Green Funds @ 10% of Seigniorage fee are indicated as part of EMP Budget and not necessarily implemented in the Project Site	0	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	10,000	1,000
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	Submission of 2 Half Yearly Compliance - Lab Monitoring Report as per CPCB norms	0	50,000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee) - 34 Employees	80,000	20,000
	Health checkup for workers will be provisioned	IME & PME Health checkup @ Rs. 1000/- per employee	0	20,000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/- for 2 kits	0	5,000
	Slope stability action plan	Slope stability action plan in the end of fourth year plan period	2,00,000	0
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10,000	2,000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	1,20,000	24,000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	30,000	5,000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR, 1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	7,80,000

Total	Rs. 22.18 Lakhs	Rs. 32.16 Lakhs
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Recurring cost in Year 1	Recurring cost @ 5% inflation Rs in Lakhs				Total Recurring cost for 5 years in Lakhs	Total Cost (Capital + Recurring) in Lakhs
	Year 2	Year 3	Year 4	Year 5		
32.16	33.76	35.44	37.21	39.07	Rs. 177.64 Lakhs	(Rs. 22.18 L + Rs. 177.64 L) = Rs. 199.82 Lakhs

3) Details of quarry located within 500m radius from the periphery our lease area.

i) Details of Existing and abandoned Quarries:

Sl. No	Name of the Owner	Village & S.F. No	Extent (in Hect.)	Lease period	Remarks
---Nil---					

ii) Details of Present Proposed Quarries:

Sl. No	Name of the Owner	Village & S.F. No	Extent (in Hect.)
1.	M/s. Dwarkamai Mines, Partner of M. Karthikeyan, Plot No. S1 No.85, 4 th Street, Astalakshmi Nagar, Varatharajapuram, Mudichur, Kancheepuram District	Maruthadu 942/4A, 973/2, 973/7A, 973/9, 973/10A, 973/10B & 975/1	2.30.97

- 4) There will not be hindrance or disturbance to the people living no enrooted / nearby our quarry site while transporting the mineral our material and due to quarrying activities.
- 5) I swear that afforestation will be carried out during the course of quarrying operation and maintained.
- 6) The required insurance will be taken in the name of the laborers working in our quarry lease area.
- 7) The existing road from the main road to quarry is in good condition and the same will be maintained and utilized for transportation of rough stone and gravel.
- 8) I will not engage any child labor in our quarry site and I aware that engaging child labor is punishable under the law.
- 9) All types of safety/ protective equipment will be provided to all the laborers working in our quarry lease area.

I ensure to do all the social and Environment commitment as mentioned in the Mining plan to the best of our knowledge.

DETAILS OF QUARRIES LOCATED WITHIN 500M RADIUS FROM THE PROPOSED QUARRY:

The Project Proponent has submitted a copy of the letter obtained from Joint Director(A/C), O/o. Assistant Director, Geology and Mining, Tiruvannamalai District. In his/her letter Roc.No.253/Kanimam/2024,Dated: 21.11.2024, he/she has stated the details of other quarries within a radius 500m from the boundary of the proposed quarry site as follows:

I. Existing Quarries:

Sl. No	Name of the Owner	Village & S.F. No	Extent (in Hect.)	Lease period	Remarks
---Nil---					

II. abandoned Quarries:

Sl. No	Name of the Owner	Village & S.F. No	Extent (in Hect.)	Lease period	Remarks
---Nil---					

III. Details of Present Proposed Quarries:

Sl. No	Name of the Owner	Village & S.F. No	Extent (in Hect.)
1.	M/s. Dwarkamai Mines, Partner of M. Karthikeyan, Plot No. S1 No.85, 4 th Street, Astalakshmi Nagar, Varatharajapuram, Mudichur, Kancheepuram District	Maruthadu 942/4A, 973/2, 973/7A, 973/9, 973/10A, 973/10B & 975/1	2.30.97

STANDARD CONDITIONS

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

<p>1. 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</p> <p>I. The project has been accorded Environmental Clearance.</p> <p>II. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.</p> <p>III. Environmental Clearance may also be seen on the website of the SEIAA.</p>

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.

2. 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.
4. 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.**
6. 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.
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
 - i. Proper and regular maintenance of vehicles and other equipment
 - ii. Limiting time exposure of workers to excessive noise.
 - iii. The workers employed shall be provided with protection equipment and earmuffs etc.
 - iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 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, GoI 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.
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.
37. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
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 the Environmental Clearance.
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.