# **MINUTES**

# 688th MEETING

# STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY-TAMIL NADU

Date: 10.01.2024

# MINUTES OF THE 688th MEETING OF THE STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HELD ON 10.01.2024.

Agenda No	Description	File No.	Minutes
a)	Confirmation of the minutes of the 687 <sup>th</sup> meeting of the Authority held on 09.01.2024.		The minutes of the 687 <sup>th</sup> meeting of the Authority held on 09.01.2024 was confirmed.
b)	The Action taken on the decisions of the 687 <sup>th</sup> meeting of the Authority held on 09.01.2024.		The Member Secretary informed that 686 <sup>th</sup> Minutes uploaded in Parivesh website and action taken report will be putup ensuing meeting.
1.	Proposed Multi Colour Granite quarry lease over an extent of 0.08.0 Ha at S.F.No. 253/1B (P) of Korakottai Village, Vandavasi Taluk, Tiruvannamalai District, Tamil Nadu by Tvl. SKN Temple Architects and Sculptors – For Environmental Clearance. (SIA/TN/MIN/451915/2023)		The authority noted that the subject was appraised in the 431st SEAC meeting held on 15.12.2023. SEAC has furnished its recommendations for granting Environmental Clearance subject to the conditions stated therein.  After detailed discussions, the Authority taking into account the recommendations of SEAC and also the safety aspects and to ensure sustainable, scientific and systematic mining, decided to grant Environmental Clearance for the quantity of 547.5 m³ ROM which includes 547.5 m³ of Multi Colour Granite Recovery (@100%) up to the ultimate depth of 6.5m for a period of 6 months only from the date of issue of EC. This is also subject to the conditions imposed by SEAC, normal conditions stipulated by MOEF&CC in addition to the following conditions and the conditions in Annexure 'A' of this minutes.  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

MEMBER SECRETARY

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- 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.
- 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.
- 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.
- The progressive and final mine closure plan including the green belt implementation and







2. Proposed Rough Stone and Gravel quarry lease over an extent of 1.43.0	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.  The authority noted that the subject was appraised in the 431st SEAC meeting held on 15 12 2023.
Ha at S.F.Nos. 100/1A & 100/1B (Part) of Nachipalayam Village,	During the meeting, the Committee noted that the
quarry lease over an extent of 1.43.0	in the 431st SEAC meeting held on 15.12.2023.

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	Madukkarai Taluk, Coimbatore		project proponent was absent for the meeting. Hence,
	District, Tamil Nadu by Thiru. S.		the Committee decided to defer the proposal.
	Karthick - For Environmental		In view of the above, the Authority accepted the
	Clearance.		decision of SEAC and decided to request Member
	(SIA/TN/MIN/447636/2023)		Secretary, SEIAA to communicate the minutes of
			431st SEAC meeting to the project proponent
3.	Existing Grey Granite over an extent	10547	The authority noted that the subject was appraised in
	of 34.35.5Ha in S.F.No.289(Part) in		the 431th SEAC meeting held on 12.12.2023. SEAC
	Sulamalai Village, Bargur Taluk,		has furnished its recommendations to the authority
	Krishnagiri District by M/S. Tamil		for granting CRZ Clearance under CRZ
	Nadu Minerals Limited- For Terms		Notification,2011 subject to the conditions stated
	of Reference (under Violation).	i	therein.
	(SIA/TN/MIN/453082/2023)		After detailed discussions, the Authority accepts the
			recommendation of SEAC and decided to grant CRZ
			Clearance under CRZ Notification,2011 subject to
			the conditions as recommended by SEAC &
			normal/standard conditions stipulated by
			MoEF&CC.
4.	Proposed Rough Stone and Gravel	10484	The authority noted that the subject was appraised in
	Quarry over an extent of 2.98.0 Ha		the 431th SEAC meeting held on 12.12.2023 and
	S.F.Nos.485/2 (P) & 486 (P) of		SEAC had observed the following:
	Nedungulam Village, Sathankulam		a) The Solar Panel Power units are
	Taluk, Thoothukudi District by M/s.		situated at a distance of 90 m from the
	Krishna blue Metals - For		boundary of proposed quarry, i.e., in
	Environmental Clearance.		the Extremely Sensitive Zone
	(SIA/TN/MIN/448552/2023)		considering the risk from the flyrock
			due to indiscriminate blasting
			operations in the proposed quarry.
			b) The proposed quarry is freshly planned
			in the current location where no other
			such quarries are in operation and the
			Solar Panel structure has been installed
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- before the arrival of this quarry proposal.
- c) The proposed quarrying operation involving vibration induced blasting operations and dust pollution due to huge excavation & hauling operations may damage the existing solar panel & its structures.
- d) Besides, this proposal attracts the following legal implications:
- (i). Under the provisions of Tamil Nadu Minor Mineral Concession Rules, 1959, Rule 36 (1-A) (a) says

"....No lease shall be granted for quarrying stone within 300 meters (three hundred meters) from any inhabited site: Provided that the exiting quarries which are subsisting under current leases shall be entitled for continuance till the expiry of the lease period. The lessees whose quarries lie within a radius of 300 metres from the inhabited site shall undertake blasting operations only after getting permission of the Director of Mines Safety, Chennai".

"....No new layout, building plans falling within 300 metres from any quarry should be given approval by any agency unless prior clearance of the Director of Geology and Mining is obtained. On receipt of proposals for according clearance, the Director of Geology and Mining (DGM) shall decide upon the continuance or closure, as the case

Similarly, Rule 36 (1-A) (c) also indicates

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may be of any quarry which is situated within 300 metres from the now layout, building sought for such, clearance...".

In view of the above reasons, the SEAC decided that not to recommend the proposal for the grant of Environmental Clearance.

- Subsequently, this subject was placed in 612<sup>th</sup> authority meeting held on 17.04.2023 & 18.04.2023. The Authority accepts the decision of SEAC and decided to request the Member Secretary, SEIAA-TN to giant rejection letter to the project proponent as per the 365'h Meeting of SEAC held on 24.03.2023
- 2. Now, the Project Proponent, M/s. Krishna Blue Metals has again applied for Environmental Clearance for the the proposed Rough Stone and Gravel Quarry over an extent of 2.98.0 Ha S.F.Nos.485/2 (P) & 486 (P) of Nedungulam Village, Sathankulam Taluk, Thoothukudi District.
- 3. The proposed quarry/activity is covered under Category "B2" of Item 1(a) "Mining Projects" of the Schedule to the EIA Notification, 2006.
- 4. As per the Precise area communication the lease period is 5 Years. The mining plan is for the period of five years & production should not exceed 2,49,020 m<sup>3</sup> of Rough Stone & 47,470 m<sup>3</sup> of Gravel. The annual peak production is 1,11,250 m<sup>3</sup> of Rough Stone & 19,836 m<sup>3</sup> of Gravel. The ultimate depth is

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47m BGL (2m Gravel + 45m Rough Stone).

Based on the presentation and documents furnished by the project proponent, SEAC observed the following that

a) As per revised precise area communication and revised Mining plan it was noted that the proximity of the Solar Panels at the solar power plant are situated at 160 m (Northern & North Eastern Direction) from the boundary of proposed quarry area which attracts as per provisions of TamilNadu Minor Mineral Concession Rules, 1959, Rule 36 (1-A) (a) which states that

"....No lease shall be granted for quarrying stone within 300 meters (three hundred meters) from any inhabited site: Provided that the exiting quarries which are subsisting under current leases shall be entitled for continuance till the expiry of the lease period. The lessees whose quarries lie within a radius of 300 metres from the inhabited site shall undertake blasting operations only after getting permission of the Director of Mines Safety, Chennai".

(c) No new layout, building plans falling within 300 metres from any quarry should be given approval by any agency unless prior clearance of the Director of Geology and Mining is obtained. On receipt of proposals for according clearance, the Director of Geology and

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Mining shall decide upon the continuance or closure, as the case may be of any quarry which is situated within 300 metres from the now layout, building sought for such "clearance".

3 [(ii-a) 'stone' shall mean rough stones including khandas, boulders, size reduced (broken or crushed) materials including metal jelly, ballasts, mill stones, hand chakais and building and road construction stones other than black, red, pink, grey, green, white or other coloured or multi coloured granites or any other rocks suitable for use as ornamental and decorative stones.]<sup>3</sup>

(iii) <sup>2</sup> ['inhabited site' shall mean a village site or town site or a house site as referred to in the revenue records or a house site or layout approved by a Local Body or Town or Country or Metropolitan Planning Authority, where the said Body or Authority is created under a statute and empowered to approve such an area as a house site or layout area.]<sup>2</sup>

Here, the SEAC have observed following points during the long deliberation:

i. The SEAC feels that this affirmation of safety distance of 160m from the solar panels may not be suffice as it falls again within the High Sensitive Zone considering the risk from the flyrock and the higher magnitude of Air-Over

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			Pressure (Noise) due to indiscriminate
			blasting operations in the proposed
			quarry.
		1	ii. The proposed quarry is freshly planned
		;	in the current location which is virgin
			area where no other such quarries are
			either in 'operation' (or) in 'abandoned'
			stage
		<u> </u>	iii. Vide Rule 36 (1-A) (c) of Tamil Nadu
			Minor Mineral Concession Rules, 1959,
			the Solar Panel structure has been
			installed before the application for the
			proposed quarry was made and it is
			presently operating.
			iv. The proposed quarrying operation
			involving drilling, excavation and
			transportation operations handling large
			volume of excavation, poses enormous
			dust pollution (airborne dust) which may
			damage the existing solar panel and the
			ground vibration caused due to blasting
			& the operation/movement of heavy
			earth equipments affects the integrity of
			its structures.
			In view of the above, the Authority, after discussions,
			accepted the decision of SEAC, rejected the proposal
			and decided to request Member Secretary, SEIAA-
			TN to grant rejection letter to proponent as per the
			431th SEAC meeting held on 12.12.2023. Further,
			Authority decided to close and record this proposal.
5.	Proposed Rough Stone Quarry over	10485	The Authority noted that the subject was appraised in
	an extent of 1.95.5 Ha at		the 431st SEAC meeting held on 15.12.2023. During
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	S.F.Nos.93/1, 93/3 & 93/4 of Erragudahalli Village, Palacode Taluk, Dharmapuri District, Tamil Nadu by Tmt.R.Oviyam -For Environmental Clearance. (SIA/TN/MIN/435558/2023)		the meeting the Committee noted that the project proponent is absent during the meeting. Hence the subject was not taken up for discussion and the project proponent shall furnish the reason for his absence. In view of the above, the Authority decided to request the Member Secretary, SEIAA to communicate the SEAC minutes to the project proponent held on 15.12.2023.
6.	Proposed Rough stone and Gravel lease over an extent of 0.77.5 Ha of Patta Land at S.F.No.17/2B & 17/3A in Kidaram Village, Thottiam Taluk, Tiruchirappalli District, Tamil Nadu by Thiru. R. Kabila – For Environment Clearance. (SIA/TN/MIN/449025/2023)	10486	Authority noted that the subject was appraised in the 431st meeting of SEAC held on 15.12.2023 and the SEAC has decided not to recommend the proposal for the grant of Environmental Clearance citing the following reasons:  On perusal of the KML file furnished by the Project Proponent, the Committee noticed that a habitation is located at a distance of 94m from the boundary of the mine lease area. The SEAC further noted that,  As per the amendment to Tamil Nadu Minor Mineral Concession Rules, 1959 Issued vide G.O.Ms.No.88 Industries (MMC.1) Department dated 18.10.2002, sub-rule 1-A has been inserted to rule 36 which reads as follows:  "(a). No lease shall be granted for quarrying stone within 300 meters (three hundred meters) from any inhabited site."  The term 'stone is defined in sub-rule (ii-a) which is as follows:  "(ii-a) 'stone" shall mean rough stones including khandas, boulders, size-reduced (broken or crushed) materials including metal jelly. ballasts, mill stones, hand chakais and building and road construction stones

MEMBER

other than black, red, pink, grey, green, white or other coloured or multi coloured granites or any other rocks suitable for use as ornamental and decorative stones" In view of the above, the SEAC decided not to recommend Environmental Clearance for the project. The Authority, after discussions, accepted the decision of SEAC to not to recommend the project for grant of Environment Clearance and rejected the proposal. The Authority further decided to request Member Secretary. SEIAA-TN to issue rejection letter to proponent as per the minutes of 431st meeting of SEAC held on 15.12.2023. Further. Authority decided to close and record this proposal. 7. Proposed Rough Stone & Gravel 10480 The authority noted that the subject was appraised in quarry lease over an extent of 431st SEAC meeting held on 15.12.2023. 2.47.91 ha in S.F. No. 310/1A, Based on the presentation and documents 311/1, 312/1, 314/1A, 314/1B, furnished by the proponent, committee noted 315/1A(P), 315/1B, 316/1(P), the following 316/2(P), 317/1(P), 317/2(P) & 318/1(P) of Alangaraperi Village, 1. The proposed site is at a distance of 1.10 Tirunelveli Taluk, Tirunelveli Km from the Gangai Kondan Wildlife District, Tamil Nadu by Thiru. T. Sanctuary and Eco Sensitive zone of Balasubramanian For Gangai Kondan Wildlife Sanctuary is 0 Km Environmental Clearance, to 0.82 Km as per DFO letter vide C.No. (SIA/TN/MIN/ 448682 /2023) D/8163/2023 Dated: 15.09.2023. 2. Further, based on the village map submitted by the proponent in Parivesh Portal, there are two water bodies in the northern and southern direction of the

MEMBER SECRETARY

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proposed site and the site is abutting the water bodies. In the view of the above facts, the Committee felt that the proposed mining activity is close to the ecologically highly sensitive area and quarrying activity in a virgin land will have serious adverse impact on the wildlife and flora & fauna. Hence, the Committee decided to direct the PP/EIA coordinator to study and submit a detailed report on the implications of the proposed mining activity on the above aspects and the additional mitigation efforts proposed in the EMP. In the view of the above, SEIAA accepts the decision of SEAC and decided to request Member Secretary to communicate the minutes of 431st SEAC Meeting held on 15.12.2023 to the project proponent. 8. Existing Rough Stone Quarry Lease | 10481 The authority noted that the subject was appraised in the 431st SEAC meeting held on 13.12.2023. SEAC over an extent of 1.00.0 Ha (Govt. has furnished its recommendations for granting Land) at S.F.Nos. 402/1 (Part) of Environmental Clearance subject to the conditions Erumapalayam Village, Salem Taluk, Salem District, Tamil Nadu stated therein. by M/s. Vaas Ziegel Blocks - For After detailed discussions, the Authority taking into Environmental Clearance. account the recommendations of SEAC and also the (SIA/TN/MIN/431176/2023) safety aspects and to ensure sustainable, scientific and systematic mining, decided to grant Environmental Clearance for the quantity of 2,05,000m<sup>3</sup> of rough stone up to the depth of 41m above ground level and the annual peak production should not exceed 41,685m<sup>3</sup> of rough stone. This is also subject to the conditions imposed

MEMBER SECRETARY

MEMBER

by SEAC, normal conditions stipulated by MOEF&CC in addition to the following conditions and the conditions in Annexure 'A' of this minutes.

- 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.
- 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.

MEMBER SECRETARY

MEMBER

- 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 biannual compliance report submitted and also should be brought to the notice of concerned authorities during inspections.

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9. Proposed Ordinary Earth quarry 10482 lease over an extent of 1.80.0Ha at SF.No.58/7 & 58/8 Kondalankuppam Village, Vanur Taluk, Vilupuram District, Tamil Nadu by Thiru. R.Sivakumar - For Environmental Clearance. (SIA/TN/MIN/448766/2023)

The Authority noted that the subject was appraised in the 431st Meeting of SEAC held on 15.12.23. Based on the presentation and documents furnished by the project proponent, SEAC decided to recommend the proposal for the grant of Environmental Clearance subject to the conditions stated therein.

After detailed discussions, the Authority decided to request the Member Secretary, SEIAA-TN to obtain the following details and place before the Authority for further course of action.

- 1. The PP shall furnish details of vegetation inside the site.
- 2. The PP shall study the impact on underground.
- 3. The proponent shall furnish a NOC obtained from TN Agricultural Department regarding the productivity of the site and its non-fitness for agriculture for carrying out earth mining in the project site which is surrounded by agricultural lands.
- 4. The PP shall study the impact of soil after removal of Earth.
- 5. The PP shall the impact on soil substrata.
- 6. The PP shall study conservation effort of soil, water and its mitigation measures.

In view of the above, Authority decided to request the Member Secretary, SEIAA to communicate the minutes to the project proponent.

10. Proposed Black Granite quarry lease over an extent of 4.14.8Ha at SF.No. 104/1A(Part) of Udaiyanatham Village, Vikravandi Taluk, Villupuram District, Tamil Nadu by M/s. Tamil Nadu Minerals Limited For Environmental Clearance. (SIA/TN/MIN/434072/2023)

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The authority noted that this proposal was placed for appraisal in 431<sup>st</sup> meeting of SEAC held on 15.12.2023. SEAC has furnished its recommendations for granting Environmental Clearance subject to the conditions stated therein.

After detailed discussions, the Authority decided to grant Environmental Clearance for the quantity of 37,500m3 of RoM [3,750m3 of Multicolour Granite @ Recovery 10% + 33,750m<sup>3</sup> of Granite waste @ 90% | up to the depth of mining 21.5m from the Top of the hill and the annual peak production should not exceed the quantity of 15,000m<sup>3</sup> of RoM [1,500m<sup>3</sup> of Multi-colour Granite @ Recovery 10% + 13,500m<sup>3</sup> of Granite waste @ 90% | as per the mine plan approved by the Department of Geology & Mining. This is also subject to the standard conditions as per Annexure - (I) of SEAC minutes, other normal conditions stipulated by MOEF&CC & all other specific conditions as recommended by SEAC in addition to the following conditions and the conditions in Annexure 'A' of this minutes.

- 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.
- 11. The EC granted is subject to review by District Collector, Mines Dept. and TNPCB on completion of every 5 year and also during the mine plan period, till the project life so as to review the EC conditions and to ensure that

MEMBER SECRETARY

MEMBER

- they have all been adhered to and implemented.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. 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.

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			<ul> <li>17. 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.</li> <li>18. 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 &amp; expenditure made under EMP should be elaborated in the biannual compliance report submitted and also should be brought to the notice of concerned authorities during inspections.</li> <li>19. The project proponent shall store/ the granite waste generated within the earmarked area of the project site for mine closure as per the approved mining plan.</li> </ul>
11.	Proposed reconstruction of high-rise residential building with 792 tenements at West Cemetery Road, S.No.1756, Block No. 25, Tondiarpet, Chennai District, Tamil Nadu by M/s. Tamil Nadu Urban Habitat Development Board – For Environmental Clearance. (SIA/TN/INFRA2/451398/2023)	10532	The authority noted that the subject was appraised in the 431st SEAC meeting held on 15.12.2023. SEAC has furnished its recommendations for granting Environmental Clearance subject to the conditions stated therein.  After detailed discussion, SEIAA decided to obtain the following additional details from the PP.  1. The Project Proponent shall furnish inundation certificate obtained from the competent authority.

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			<ol> <li>The PP shall mark the Play area in the building plan and furnish the details of play area extent and revised building plan.</li> <li>The PP shall furnish the details for the following:         <ol> <li>How will the Construction &amp; Demolition (C&amp;D) waste handled during the demolition of existing structure?</li> <li>Where will the Construction &amp; Demolition waste disposed and what are the measures taken by the proponent to control the air pollution during transportation of C&amp;D waste?</li> <li>Whether any materials recovered during demolition of existing structures and how the recovered construction materials will be utilized for the beneficial purpose.</li> </ol> </li> </ol>
			4. The PP shall furnish the breakup details for the EMP details under construction phase, operation phase (Capital cost and Recurring
			<ul><li>cost).</li><li>5. What is the carbon footprints likely during pre-construction phase, construction phase and operation phase?</li></ul>
12.	Proposed Construction of Temporary Walkway Project at Elliots Beach, Beasant Nagar, Urur Olcottkuppam Village, Velachery Taluk, Chennai District, Tamil Nadu by the PP M/s. Greater Chennai	10505	The authority noted that the subject was appraised in the 431th SEAC meeting held on 12.12.2023. SEAC has furnished its recommendations to the authority for granting CRZ Clearance under CRZ Notification,2011 subject to the conditions stated therein.
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	Corporation - For CRZ Clearance		After detailed discussions, the Authority accepts the
	(Standalone).		recommendation of SEAC and decided to grant CRZ
	(SIA/TN/INFRA2/448826/2023)		Clearance under CRZ Notification,2011 subject to
			the conditions as recommended by SEAC &
	!		normal/standard conditions stipulated by MoEF &
			CC.
13.	Proposed Development of Special	9898	The Authority noted that the subject was appraised in
	Economic Zone (SEZ) at		the 431st SEAC meeting held on 15.12.2023. Based
	Kallakurichi District over an extent	1	on the presentation and documents furnished by the
	of 77.095 Ha (190.42 Acres) at		project proponent, SEAC decided to recommend the
	Survey No: 213/2, 213/3 & 213/4 of		proposal for the grant of Environmental Clearance
	A. Sathanur Village, Ulundurpet		subject to the conditions stated therein.
	Taluk, Kallakurichi District, Tamil		After detailed discussions, the Authority accepts the
	Nadu by M/s. State Industries		recommendation of SEAC and decided to grant
	Promotion Corporation of Tamil		Environmental Clearance subject to the conditions
	Nadu Limited - For Environmental		as recommended by SEAC & normal conditions and
	Clearance.	·	conditions in Annexure 'C' of this minutes in
	(SIA/TN/INFRA2/451103/2023)		addition to the following conditions.
			1. The PP shall obtain fresh water supply
			commitment letter from the Competent
		ļ	authority before obtaining CTE from
			TNPCB.
14.	Proposed Expansion of New Multi-	10541	The Authority noted that the subject was appraised in
	storeyed 'C' Type Quarters at		the 431st SEAC meeting held on 15.12.2023. Based
	S.F.No. Block No.27- T.S No: 6, 7,		on the presentation and documents furnished by the
	8 of Todhunter Nagar Village,		project proponent, SEAC decided to recommend the
	Saidapet Taluk, Chennai District,		proposal for the grant of Environmental Clearance
	Tamil Nadu by M/s. Public Works		subject to the conditions stated therein. After detailed
	Department for Environmental		discussions, the Authority decided to obtain the
!	Clearance.		following details from the PP.
	(SIA/TN/INFRA2/451838/2023)		
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	<ul><li>4. The project proponent shall provide a detailed plan indicating entry and exit points for the OSR area, play area as per the norms for the public usage.</li><li>5. The proponent shall furnish details of Gym,</li></ul>

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	Part III of Kodambakkam Village,		
	Mambalam – Guindy Taluk,		
	Chennai District, Tamil Nadu by		
	M/s. ESIC Medical College and		
	Hospital – For Environmental		
	Clearance.		
	(SIA/TN/INFRA2/451684/2023)		
16.	Proposed Construction of	9972	The authority noted that the subject was appraised
	Residential Building - Phase 2		in the 431st SEAC meeting held on 15.12.2023.
	(Daffodils) at Eden Park Township		SEAC has furnished its recommendations for
	at S.F.Nos. 134/2A, 135/1, 135/2,		granting Environmental Clearance subject to the
	136/1, 136/2, 136/3, 136/4, 136/5,		conditions stated therein.
	136/6A, 136/6B, 136/7, 138/1,		After detailed discussions, the Authority accepts the
	138/2B2 of Siruseri Village,		recommendation of SEAC and decided to grant
	Vandalur Taluk, Chengalpattu	l	Environmental Clearance to the proposal subject to
	District, Tamilnadu by M/s. Pragnya		the conditions as recommended by SEAC in addition
	South City Projects Private Limited		to the following conditions in Annexure 'C' of this
	- For Environmental Clearance.		minutes.
	(SIA/TN/INFRA2/425367/2023)		The Project Proponent shall furnish NOC from Local
			Panchayat before obtaining CTE for the disposal of
			excess treated sewage.
17.	Proposed Name Change in the	10583	Based on the document submitted by the project
•	earlier Environmental Clearance		proponent, the authority after detailed discussion
	issued for Limestone Quarry lease		decided to grant name change amendment from M/s.
	over extent of 21.92.5 Ha at S.F.No	'	Chettinad Cement Corporation Limited to M/s.
	110/1A located Sendurai village,		Chettinad Cement Corporation Private Limited
	Ariyalur Taluk & District by M/s.	,	subject to all the conditions stipulated vide EC Lr.
	Chettinad Cement Corporation		No. SEIAA-TN/F.No.605/EC/1(a)/1563/2012 dated
	Private Limited		27.10.2014 and validity remains unaltered.
18.	Transfer of EC from M/s. Faery	10587	The authority noted that the proponent has made
	Estates Private Limited to M/s.		request for transfer of EC from M/s.Faery Estates

MEMBER

	Airoli ITP Development Private		Private Limited to M/s A:1: ITD D1
	Limited		Private Limited to M/s.Airoli ITP Development
			Private Limited.
	(SIA/TN/MIS/302123/2023)		The Authority request the SEAC to look into whether
			all the EC conditions has been followed and also take
			a look into the compliance report and to offer opinion
			for name transfer as requested.
19.	Transfer of EC . M. Selvakumar to	6920	The Authority noted that the proposal seeks name
	M/s. Santhosh Blue Metals.		change in Environmental Clearance issued earlier
	(SIA/TN/MIN/307391/2023)		pertaining to the Mining of Rough stone and Gravel
			quarry from over an Extent of 1.16.5Ha in S.F.No.
			311/2 (P) at Kodangipalayam Village of Palladam
			Taluk, Tiruppur District, Tamil Nadu by Thiru. M.
			Selvakumar to M/s. Santhosh Blue Metals.
	-		The Authority after detailed deliberation decided to call for additional details  The proponent shall upload in the Parivesh portal and shall submit the same to the O/o SEIAA as follows  (a) No Objection from the transferor.
			(b) Undertaking by transferee regarding
			acceptance of the terms and conditions of the
			earlier EC was granted.
			(c) Copy of Transfer of the firm from competent
			authority/ transfer of lease from competent
			authority.
		i	(d) Copy of authorization duly signed by the
			project proponent in support of the person
			making this application on behalf of the User
			Agency.
			Details of Physical process made on the project /
			facilities / activities for which environmental
			clearance was granted like last transport permit and
			existing pit letter obtained from AD/Mines

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20. Transfer of EC from Tamil Nadu M/s. Chettinad Cement by Corporation Limited M/s. to Chettinad Cement Corporation Private Limited (SIA/TN/MIN/180979/2020)

10585

The Authority noted that the proposal seeks name change in Environmental Clearance issued earlier pertaining to the Mining of Limestone & Marl mine lease over an extent of 26.145 Ha in S.F.Nos. 1/2, 1/3C1, 1/3C2, 1/3C3, 1/3D2, 3/1, 3/2, 4/1(P), 4/2A, 4/2B of Karuppur Senapathy Village, S.F.Nos. 137/5A, 137/5D, 137/5E, 141/1, 141/2, 141/3, 143/1, 143/2, 143/3, 143/4, 146/1A, 146/1B, 146/2B, 146/2C, 146/3A, 146/3B, 146/3C, 153/1, 153/2, 153/3A, 153/3B, 153/3C, 153/3D, 153/3E, 153/3F, 153/3G, 153/4A, 153/4B, 153/5A, 153/5B, 154/3B, 154/4A, 144, 145, 152 of Keelapalur Village, Ariyalur Taluk, Ariyalur District, Tamil Nadu by M/s. Chettinad Cement Corporation Limited to M/s. Chettinad Cement Corporation Private Limited.

Environmental Clearance was accorded to M/s. Chettinad Cement Corporation Limited vide this office Lr. No. SEIAA-TN/F.No.3000/2013EC-40/1(a)/ARY/2016 dated: 27.04.2016 for the Existing Limestone & Marl mine lease over an extent of 26.145 Ha in S.F.Nos. 1/2, 1/3C1, 1/3C2, 1/3C3, 1/3D2, 3/1, 3/2, 4/1(P), 4/2A, 4/2B of Karuppur Senapathy Village, S.F.Nos. 137/5A, 137/5D, 137/5E, 141/1, 141/2, 141/3, 143/1, 143/2, 143/3, 143/4, 146/1A, 146/1B, 146/2B, 146/2C, 146/3A, 146/3B, 146/3C, 153/1, 153/2, 153/3A, 153/3B, 153/3C, 153/3D, 153/3E, 153/3F, 153/3G, 153/4A, 153/4B, 153/5A, 153/5B, 154/3B, 154/4A, 144, 145, 152 of Keelapalur Village, Ariyalur Taluk, Ariyalur District, Tamil Nadu under Category B1 and Schedule S. No. 1(a) under the Environment Impact Assessment Notification, 2006, as amended, with validity for Seven years from the date of issue and is

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Co-Terminus with the mining lease period or whichever is earlier.

Subsequently, M/s. Chettinad Cement Corporation Private Limited had applied on PARIVESH portal in Form 7 vide online proposal No. SIA/TN/MIN/180979/2020 dated: 29.10.2020 requesting for Transfer of EC.

Authority after detailed deliberation, noted that M/s. Chettinad Cement Corporation Private Limited has submitted following documents

- Covering letter duly signed by authorized person, R.A. Krishnakumar – Chief Operating Officer – requesting for name transfer of earlier EC granted.
- Details of Physical process made on the facilities for which environmental clearance was granted. The status of implementation of the earlier issued Environmental Clearance has been furnished.
- 3. Undertaking letter signed by authorized person regarding acceptance of the terms and conditions in Environmental Clearance granted.
- 4. The copy of change of firm from M/s. Chettinad Cement Corporation Limited to M/s. Chettinad Cement Corporation Private Limited through Certificate of Incorporation issued by Ministry of Corporate Affairs dated: 03.05.2017.

After detailed discussion, as per the Clause 11 of the EIA Notification dated 14th September 2006, the Authority decided to transfer the EC issued vide Lr.

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No. SEIAA-TN/F.No.3000/2013EC-40/1(a)/ARY/2016 dated: 27.04.2016 from M/s. Chettinad Cement Corporation Limited to M/s. Chettinad Cement Corporation Private Limited.

In case of any change in the proposal

In case of any change in the proposal the proponent must seek SEIAA-TN to obtain the necessary approval prior to the construction.

All other conditions and the validity issued vide EC dated 27.04.2016 remains unaltered and unchanged.

### Annexure 'A'

# a) EC Compliance

- 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-feasibilty 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.
- 2. All the conditions as presented by the proponent in the PPT during SEAC appraisal should be addressed in Full.
- 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).
- 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.

## b) Applicable Regulatory Frameworks

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, 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

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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

# c) Safe mining Practices

- 6. The AD/DD, Dept. of Geology & Mining shall ensure operation of the proposed quarry after the submission slope stability study conducted through the reputed research & Academic Institutions such as NIRM, IITs, NITS Anna University, and any CSIR Laboratories etc.
- 7. The AD/DD, Dept. of Geology & Mining & Director General of Mine safety shall ensure strict compliance and implementation of bench wise recommendations/action plans as recommended in the scientific slope stability study of the reputed research & Academic Institutions as a safety precautionary measure to avoid untoward accidents during mining operation.
- 8. 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.

# d) Water Environment - Protection and mitigation measures

- 9. The proponent shall ensure that the activity does not disturb the water bodies and natural flow of surface and groundwater, nor cause any pollution, to water sources in the area.
- 10. The proponent shall ensure that the activities do not impact the water bodies/wells in the neighboring open wells and bore wells. The proponent shall ensure that the activities do not in any way affect the water quantity and quality in the open wells and bore wells in the vicinity or impact the water table and levels. The proponent shall ensure that the activities do not disturb the river flow, nor affect the Odai, Water bodies, Dams in the vicinity.
- 11. Water level in the nearest dug well in the downstream side of the quarry should be monitored regularly and included in the Compliance Report.
- 12. 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.
- 13. 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.

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28

- 14. 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.
- 15. Regular monitoring of ground water level and water quality shall be carried out around the mine area during mining operation. 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.
- 16. 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.

# e) Air Environment - Protection and mitigation measures

- 17. The activity should not result in CO<sub>2</sub> release and temperature rise and add to micro climate alternations.
- 18. The proponent shall ensure that the activities undertaken do not result in carbon emission, and temperature rise, in the area.
- 19. 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.

# f) Soil Environment - Protection and mitigation measures

- 20. The proponent shall ensure that the operations do not result in loss of soil biological properties and nutrients.
- 21. The proponent shall ensure that activity does not deplete the indigenous soil seed bank and disturb the mycorrizal fungi, soil organism, soil community nor result in eutrophication of soil and water.
- 22. 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.
- 23. Bio remediation using microorganisms should be carried out to restore the soil environment to enable carbon sequestration.
- 24. The proponent shall ensure that the mine restoration is done using mycorrizal VAM, vermincomposting, Biofertilizers to ensure soil health and biodiversity conservation.
- 25. The proponent shall ensure that the topsoil is protected and used in planting activities in the area.

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- 26. The proponent shall ensure that topsoil to be utilized for site restoration and Green belt alone within the proposed area.
- 27. 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.
- 28. 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.

# g) Noise Environment - Protection and mitigation measures

- 29. The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- 30. The sound 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. Hence, the PP shall ensure that the biological clock of the villages are not disturbed because of the mining activity.

# h) Biodiversity - Protection and mitigation measures

- 31. 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.
- 32. No trees in the area should be removed and all the trees numbered and protected. In case trees fall within the proposed quarry site the trees may be transplanted in the Greenbelt zone. The proponent shall ensure that the activities in no way result in disturbance to forest and trees in vicinity. The proponent shall ensure that the activity does not disturb the movement of grazing animals and free ranging wildlife. The proponent shall ensure that the activity does not disturb the biodiversity, the flora & fauna in the ecosystem. The proponent shall ensure that the activity does not result in invasion by invasive alien species. The proponent shall ensure that the activities do not disturb the resident and migratory birds. The proponent shall ensure that the activities do not disturb the vegetation and wildlife in the adjoining reserve forests and areas around.

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- 33. The proponent shall ensure that the activities do not disturb the agro biodiversity and agro farms. Actions to be taken to promote agroforestry, mixed plants to support biodiversity conservation in the mine restoration effort.
- 34. 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.
- 35. The proponent shall ensure that the activities do not impact green lands/grazing fields of all types surrounding the mine lease area which are food source for the grazing cattle.

# i) Climate Change

- 36. The project activity should not in any way impact the climate and lead to a rise in temperature.
- 37. There should be least disturbance to landscape resulting in land use change, contamination and alteration of soil profiles leading to Climate Change.
- 38. Intensive mining activity should not add to temperature rise and global warming.
- 39. Operations should not result in GHG releases and extra power consumption leading to Climate Change.
- 40. Mining through operational efficiency, better electrification, energy use, solar usage, use of renewable energy should try to decarbonize the operations.
- 41. Mining Operation should not result in droughts, floods and water stress, and shortages, affecting water security both on site and in the vicinity.
- 42. Mining should not result in water loss from evaporation, leaks and wastage and should support to improve the ground water.
- 43. 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.

## i) Reserve Forests & Protected Areas

- 44. The activities should provide nature based support and solutions for forest protection and wildlife conservation.
- 45. The project activities should not result in forest fires, encroachments or create forest fragmentation and disruption of forest corridors.
- 46. There should be no disturbance to the freshwater flow from the forest impacting the water table and wetlands.
- 47. The project proponent should support all activities of the forest department in creating awareness to local communities on forest conservation.
- 48. The project activities should not alter the geodiversity and geological heritage of the area.

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- 49. The activities should not result in temperature rise due to increased fossil fuels usage disrupting the behaviour of wildlife and flora.
- 50. The activities should support and recognise the rights and roles of indigenous people and local communities and also support sustainable development.
- 51. The project activities should support the use of renewables for carbon capture and carbon storage in the project site and forest surrounds.
- 52. The project activities should not result in changes in forest structure, habitats and genetic diversity within forests.

# k) Green Belt Development

- 53. The proponent shall ensure that in the green belt development more indigenous trees species (Appendix as per the SEAC Minutes) are planted.
- 54. The proponent shall ensure the area is restored and rehabilitated with native trees as recommended in SEAC Minutes (in Appendix).

# l) Workers and their protection

- 55. 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.
- 56. 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.
- 57. The workers shall be employed for working in the mines and the working hours and the wages shall be implemented/enforced as per the Mines Act, 1952.

# m) Transportation

58. 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.

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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.

59. 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.

# n) Storage of wastes

60. 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.

### o) CER/EMP

- 61. The CER should be fully Implemented and fact reflected in the Half-yearly compliance report.
- 62. The EMP shall also be implemented in consultation with local self-government institutions & Govt. departments.
- 63. The follow-up action on the implementation of CER Shall be included in the compliance report.

# p) Directions for Reclamation of mine sites

- 64. 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.
- 65. 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.
- 66. 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

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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.

- 67. For mining area reclamation plot culture experiments to be done to identify/ determine suitable species for the site.
- 68. 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.
- 69. Soil and moisture conservation and water harvesting structures to be used where ever possible for early amelioration and restoration of site.
- 70. 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.
- 71. 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.
- 72. 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.
- 73. Reclamation involves planned topographical reconstruction of site. Care to be taken to minimize erosion and runoff. Topsoils should have necessary physical, chemicals, ecological, properties and therefore should be stored with precautions and utilized for reclamation process. Stocked topsoil should be stabilized using grasses to protect from wind. Seeds of various indigenous and local species may be broad casted after topsoil and treated overburden are spread.
- 74. 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

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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. The land disturbed should be reshaped for long term use. Mining should be as far as possible be eco-friendly. Integration of rehabilitation strategies with mining plan will enable speedy restoration.

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

### Annexure 'B'

## Cluster Management Committee

- Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
- 2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
- The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
- 4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
- 5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
- 6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.
- 7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
- 8. The committee shall furnish the Emergency Management plan within the cluster.

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- 9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.
- 10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.
- 11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.

## Impact study of mining

- 12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
  - a) Soil health & soil biological, physical land chemical features .
  - b) Climate change leading to Droughts, Floods etc.
  - c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
  - d) Possibilities of water contamination and impact on aquatic ecosystem health.
  - e) Agriculture, Forestry & Traditional practices.
  - f) Hydrothermal/Geothermal effect due to destruction in the Environment.
  - g) Bio-geochemical processes and its foot prints including environmental stress.
  - h) Sediment geochemistry in the surface streams.

# Agriculture & Agro-Biodiversity

- 13. Impact on surrounding agricultural fields around the proposed mining Area.
- 14. Impact on soil flora & vegetation around the project site.
- 15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.
- 16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
- 17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
- 18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

**Forests** 

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- 19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.
- 20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.
- 21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
- 22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

### Water Environment

- 23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
- 24. Erosion Control measures.
- 25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
- 26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
- 27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
- 28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
- 29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
- 30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

#### Energy

31. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.

Climate Change

- 32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.
- 33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

# Mine Closure Plan

34. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

#### **EMP**

- 35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.
- 36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

# Risk Assessment

37. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

# Disaster Management Plan

38. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

### **Others**

- 39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.
- 40. 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 address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.
- 41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics

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on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

#### Annexure 'C'

## Climate Change

- 1. The proponent shall adopt strategies to decarbonize the building.
- 2. The proponent shall adopt strategies to reduce emissions during operation (operational phase and building materials).
- 3. The proponent shall adopt strategies to reduce temperature including the Building Façade.
- The proponent shall adopt methodology to control thermal environment and other shocks in the building.
- 5. The proponent shall adopt detailed plan to reduce carbon footprints and also develop strategies for climate proofing and climate mitigation.
- 6. The proponent shall adopt strategies to ensure the buildings in blocks are not trapping heat to become local urban heat islands.
- 7. The proponent shall ensure that the building does not create artificial wind tunnels creating cold water and uncomfortable living conditions resulting in health issues.
- 8. The activities should in no way cause emission and build-up Green House Gases. All actions to be eco-friendly and support sustainable management of the natural resources within and outside the campus premises.
- 9. The proponent shall ensure that the buildings should not cause any damage to water environment, air quality and should be carbon neutral building.

#### Health

10. The proponent shall adopt strategies to maintain the health of the inhabitants.

#### Energy

- 11. The proponent shall adopt strategies to reduce electricity demand and consumption.
- 12. The proponent shall provide provisions for automated energy efficiency.
- 13. The proponent shall provide provisions for controlled ventilation and lighting systems.
- 14. The proponent shall provide solar panels and contribute to the grid from the solar panel as proposed.
- 15. All the construction of Buildings shall be energy efficient and conform to the green building norms. The PP shall ensure that carbon neutral building.
- 16. The proponent shall provide adequate capacity of DG set (standby) for the proposed STP so as to ensure continuous and efficient operation.

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# Regulatory Frameworks

- 17. The proponent shall adopt methodologies to effectively implement the Solid Waste Management Rules, 2016, E-Waste (Management) Rules, 2016, Plastic Waste Management Rules, 2016 as amended, Bio-Medical Waste Management Rules, 2016 as amended, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended, Construction and Demolition Waste Management Rules, 2016, & Batteries (Management and Handling) Rules, 2001.
- 18. The project proponent shall ensure to provide adequate elevated closed area earmarked for collection, segregation, storage & disposal of wastes generated within the premises as per provisions of Solid Waste Management Rules, 2016, E-Waste (Management) Rules, 2016, Plastic Waste Management Rules, 2016 as amended, Bio-Medical Waste Management Rules, 2016 as amended, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended, Construction and Demolition Waste Management Rules, 2016, & Batteries (Management and Handling) Rules, 2001.
- 19. The proponent shall provide elevator as per rules CMDA/DTCP.

# Database maintenance & audits

- 20. The database record of environmental conditions of all the events from pre-construction, construction and post-construction should be maintained in digitized format.
- 21. The proponent should maintain environmental audits to measure and mitigate environmental concerns.

#### **Biodiversity**

- 22. There should not be any impact due to the modification of the habitat on critically endangered species, biodiversity, etc,.
- 23. The proponent shall ensure that the proposed activities in no way result in the spread of invasive species.
- 24. The proponent shall adopt sustainability criteria to protect the micro environment from wind turbulences and change in aerodynamics since high rise buildings may stagnate air movements.
- 25. The proponent shall ensure almost safety for the existing biodiversity, trees, flora & fauna shall not disturb under any circumstances.
- 26. The proponent shall develop building-friendly pest control strategies by using non chemical measures so as to control the pest population thereby not losing beneficial organisms.
- 27. The proponent shall adopt strategies to prevent bird hits.

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#### Safety measures

- 28. The proponent should develop an emergency response plan in addition to the disaster management plan.
- 29. The proponent shall develop detailed evacuation plan for disabled people and safety evacuation plan in emergencies.
- 30. All bio-safety standards, hygienic standards and safety norms of working staff and patients to be strictly followed as stipulated in EIA/EMP.
- 31. The disaster management and disaster mitigation standards to be seriously adhered to avoid any calamities.
- 32. The proponent shall provide the emergency exit in the buildings.
- 33. The proponent shall adhere to the provision and norms regard to fire safety prescribed by competent authority.

#### Water/Sewage

- 34. The proponent shall ensure that no treated or untreated sewage shall be let outside the project site & shall find access to nearby water-bodies under any circumstances other than the permitted mode of disposal.
- 35. The proponent shall provide STP of adequate capacity as committed and shall continuously & efficiently operate STP so as to satisfy the treated sewage discharge standards prescribed by the TNPCB time to time.
- 36. The proponent shall periodically test the treated sewage the through TNPCB lab /NABL accredited laboratory and submit report to the TNPCB.
- 37. The proponent shall periodically test the water sample for the general water quality core parameters including fecal coliform within the proposed project site through TNPCB lab /NABL accredited laboratory and submit report to the concerned authorities.
- 38. The proponent shall ensure that provision should be given for proper utilization of recycled water.
- 39. The project proponent shall adhere to storm water management plan as committed.

#### **Parking**

40. The project proponent shall adhere to provide adequate parking space for visitors of all inmates including clean traffic plan as committed.

### Solid waste Management

41. The proponent shall ensure that no form of municipal solid waste shall be disposed outside the proposed project site at any time.

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42. The proponent should strictly comply with, Tamil Nadu Government order regarding ban on one time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986.

# **EMP**

- 43. The proponent shall ensure that the EIA/EMP and disaster management plan should be adhered strictly.
- 44. The proponent shall ensure that all activities of EMP shall be completed before obtaining CTO from TNPCB.
- 45. The proponent shall provide and ensure the green belt plan is implemented as indicated in EMP. Also, the proponent shall explore possibilities to provide sufficient grass lawns.

## **Others**

- 46. As per the 'Polluter Pay Principle', the proponent will be held responsible for any environmental damage caused due to the proposed activity including withdrawal of EC and stoppage of work.
- 47. The project proponent shall adhere to height of the buildings as committed.

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