MINUTES

654th MEETING

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY-TAMIL NADU

Date: 13.09.2023

MINUTES OF THE 654th MEETING OF THE STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HELD ON 13.09.2023.

Agenda No	Description	File No.	Minutes
a)	Confirmation of the minutes of the 653 rd meeting of the Authority held on 11.09.2023.		The minutes of the 653 rd meeting of the Authority held on 11.09.2023 was confirmed.
b)	The Action taken on the decisions of the 653 rd meeting of the Authority held on 11.09.2023.	1	The Member Secretary informed that 653 rd Minutes uploaded in Parivesh website and action taken report will be putup ensuing meeting.
1.	Existing Rough stone and Gravel quarry lease over an extent of 2.00.0 Ha at S.F.No.579/1B (P) in Periyamanjuveli village, Aravakurichi Taluk, Karur District, Tamil Nadu by Thiru.P.Vijayakumar - Environment Clearance. (SIA/TN/MIN/433697/2023)	10181	The Authority noted that the subject was appraised in 403 rd meeting of SEAC held on 24.08.2023 and the SEAC has furnished its recommendations for the grant of Environmental Clearance to the project subject to the conditions stated therein. After detailed discussions, the Authority decided to seek the following additional particulars from the PP: 1. Certified compliance report for Phase I and Phase II quarrying activities carried out in the existing quarry. 2. Details of quantity mined from the lease area bearing S.F.No 579/1A 3. Letter from the Department of Geology & Mining detailing the current status of the quarry. On receipt of the details sought, the Committee will deliberate further and decide on future course of action. The Authority decided to request the Member Secretary, SEIAA TN to call the details sought from the PP through PARIVESH Portal.

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2.	Proposed Black Granite quarry lease over an extent of 3.40.0 Ha at S.F.No.3/7B(P), 3/8B(P), 385/4(P), 386/3B, 459/1(P), 459/3A(P), 459/3B1(P), 459/B2(P), 462/3(P), 462/4A(P) & 462/4B(P) in	10187	Hence, the proponent is advised to submit the abovementioned details within a period of 30 days failing which the proposal will be automatically delisted from the PARIVESH Portal. The Authority noted that the subject was appraised in 403 rd meeting of SEAC held on 24.08.2023 and the SEAC has furnished its recommendations for the grant of Environmental Clearance to the project subject to the conditions stated therein. After detailed discussions, the Authority decided to
	Karandapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu by Tvl. Sri Ram Exports - Environment Clearance. (SIA/TN/MIN/433173/2023)		request the Member Secretary, SEIAA TN to address the PCCF/Chief Wildlife Warden, Government of Tamil Nadu requesting him to furnish the details of ESZ notified for Cauvery South Wildlife Sanctuary. On receipt of the details sought, the Committee will deliberate further and decide on future course of action.
3.	Proposed Rough stone and Gravel lease over an extent of 1.62.5 Ha at S.F.No.98/5(P) & 98/6(P) in Parapatti village, Salem South Taluk, Salem District, Tamil Nadu by Thiru S.Somasundaram - Environment Clearance. (SIA/TN/MIN/496065/2023)	10199	The Authority noted that the subject was appraised in 403 rd meeting of SEAC held on 24.08.2023 and the SEAC has furnished its recommendations for the grant of Environmental Clearance to the project subject to the conditions stated therein. After detailed discussions, the Authority decided to seek the following additional details from the PP: 1. What are the additional safeguards to be provided to ensure sustainable mining for ten years with section plane in the field. 2. PP shall include the extra efforts to be taken to ensure monitoring mechanism for sustainable mining in the EMP.

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3. Transport mechanism in place to ensure sustainable mining. 4. Environment monitoring cell should be formed to oversee the mining operation. 5. What are the reporting mechanisms in place? On receipt of the details sought, the Committee will deliberate further and decide on future course of action. The Authority decided to request the Member Secretary, SEIAA TN to call the details sought from the PP through PARIVESH Portal. Hence, the proponent is advised to submit the abovementioned details within a period of 30 days failing which the proposal will be automatically delisted from the PARIVESH Portal. 4. Proposed Black Granite quarry 10176 The authority noted that the subject was appraised lease over an extent of 4.25.0 ha in in 403rd SEAC meeting held on 24.08.2023. S.F. No. 73(Part) at Pasinayanapalli Based on the presentation and documents furnished Village, Bargur Taluk, Krishnagiri by the project proponent, SEAC noted that a District, Tamil Nadu by M/s. W.P.No.18317 of 2020 and W.P.No.16060/2020 Lakshmi Metallics Private Limited and W.M.P.No.19999 of 2020 is pending with - For Environmental Clearance. Hon'ble Madras High Court and decided to (SIA/TN/MIN/434616/2023) recommend the proposal for the grant of Environmental Clearance subject to the outcome of the above-mentioned Writ Petition. Authority after detailed deliberation, decided that since a writ petition W.P.No.18317 of 2020 and W.P.No.16060/2020 and W.M.P.No.19999 of 2020 is pending with Hon'ble Madras High Court, the examination of the proposal is kept in abeyance and further course of action for this proposal is subject to the outcome of the

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			W.P.No.18317 of 2020 and W.P.No.16060/2020 and W.M.P.No.19999 of 2020 pending in Hon'ble Madras High Court. Meanwhile, the proponent is requested to submit the current status of the Writ Petition pending before Hon'ble Madras High Court. Upon the receipt of the above, further deliberation shall be done.
5.	Proposed Rough stone & Gravel quarry lease over an extent of 3.85.50 ha in S.F. No. 276, 278, 279, 281, 283/1, 283/2, 283/3A, 283/3B, 283/4, 284/1, 284/2A & 284/2B at Appaiyanaickenpatti Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu by Tmt. R.Sivasakthi - For Environmental Clearance. (SIA/TN/MIN/435503/2023)	10194	The proposal was placed in the 403rd SEAC meeting held on 24.08.2023. Based on the presentation and document furnished by the proponent, SEAC noted that there is one fireworks unit located within 200m radius from the proposed mine lease area. Hence, 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".

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			Similarly, Rule 36 (1-A) (c) also
			indicates;
			" 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 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 grant of Environmental Clearance for this
			proposal will be detrimental to environment
			and safety of people working in the fireworks in
			this area and consequently decided not to
			recommend issue of Environmental Clearance
			to this proposal.
			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 403 rd
			SEAC minutes. Further, Authority decided to close
			and record this proposal.
6.	Proposed Rough stone quarry lease	10200	The proposal was placed in the 403 rd SEAC
	over an extent of 1.10.0 ha in S.F.		Meeting held on 24.08.2023. SEAC has furnished
	No. 96 (Part) & 97 (Part) at		its recommendations for granting Environmental
	Hosapuram Village, Denkanikottai		Clearance subject to the conditions stated therein.
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Taluk, Krishnagiri District, Tamil Nadu by M/s. S.S.A. Blue Metals -For Environmental Clearance. (SIA/TN/MIN/431008/2023)

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 1,07,830m³ of rough stone up to the depth of 21m (8m AGL + 13m BGL) and the annual peak production should not exceed 22,695m3 of rough stone. 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 minute.

- 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 mine plan period, till the project life. They should also review the EC conditions to ensure that they have all been adhered to and implemented.
- The project proponent shall furnish a Certified Compliance Report obtained from MoEF&CC while seeking a renewal of the mining plan to cover the project life.
- 4. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP.
- 5. As per the OM vide F. No. IA3-22/1/2022-IA-III [E- 172624] Dated: 14.06.2022, the Project

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4C, 4D, 68/2B (P), 2C (P), 2G (P), 2H (P), 70/1A1 (P) & 1A2 of Serpakkam Village, Uthiramerur Taluk, Kancheepuram District. Tamil Nadu by Thiru. D. Kirubananthan -For Environmental clearance. (SIA/TN/MIN/435713/2023)

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 decided to grant mining, Environmental Clearance for the quantity of 5,18,845m³ of rough stone & 9068m³ of gravel up to the depth of 42m below ground level and the annual peak production should not exceed 1,07,590m³ of rough stone & 24,908m³ gravel. 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.

- 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 mine plan period, till the project life. They should also review the EC conditions to ensure that they have all been adhered to and implemented.
- The project proponent shall furnish a Certified Compliance Report obtained from MoEF&CC while seeking a renewal of the mining plan to cover the project life.
- 4. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP.

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			 As per the OM vide F. No. IA3-22/1/2022-1A-III [E-172624] Dated: 14.06.2022, the Project Proponents are directed to submit the sixmonthly 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. 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.
9.	Proposed Grey Granite Quarry lease over an extent of 3.02.0 Ha (Patta Land) at S.F.Nos. 405/1B1A2 (Part) & 405/1B2 of Chendarapalli Village, Bargur (Formerly Krishangiri) Taluk, Krishnagiri District, Tamil Nadu by Thiru. B. S. Ravi – For Environmental clearance (SIA/TN/MIN/435150/2023)	10195	The authority noted that the subject was appraised in the 403 rd SEAC meeting held on 24.08.2023. During the meeting, the Committee noted that the project proponent was absent and hence the subject was not taken up for discussion. Further, the proponent vide mail has requested to postpone the meeting since the documents are insufficient for appraisal. Hence, the Committee decided to defer the proposal. The Authority noted the minutes of SEAC.
10.	Proposed Rough stone quarry lease over an extent of 2.00.0Ha at SF.No. 418(P) of 66-Mettupatti Village, Vadipatti Taluk, Madurai District, Tamil Nadu by	10196	The Authority noted that the subject was appraised in the 403 rd SEAC meeting held on 24.08.2023. Based on the presentation and documents furnished by the project proponent, SEAC decided to grant of Terms of Reference (TOR) under

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Thiru.N.Athimuthan - For Terms of Reference under Violation . (SIA/TN/MIN/433376/2023)

Violation category, subject to the specific TORs stated therein, in addition to the standard terms of reference for EIA study for non-coal mining projects and the EIA/EMP report along with assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter by the accredited consultants. The grant of Terms of Reference (TOR) under Violation category does not entail EC which is subject to the outcome of the final orders of the Hon'ble High Court of Madras in the matter of W.P.(MD) No. 11757 of 2021.

After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Terms of Reference (ToR) under violation category for undertaking EIA study followed by the EMP report along with assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter by the accredited consultants subject to the conditions as recommended by SEAC & normal / Standard conditions in addition to the following conditions and conditions stated therein vide Annexure 'B'.

- The PP shall furnish Copy of valid mining lease approval obtained from the competent Authority.
- The PP shall furnish Copy of approved review of scheme of mining plan by the competent authority of the Dept of Geology and Mining.

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11.	Existing Black Granite quarry lease over an extent of 1.07.5Ha in S.F.No:277/3A1B, 277/3A2,	10185	The authority noted that the subject was appraised in the 403 rd SEAC meeting held on 24.08.2023 and SEAC noted that this project falls under violation
			 The PP shall furnish EMP for the project life including progressive mine closure plan and final mine closure plan with detailed budget plan. The PP shall study in detail about CO₂ release and temperature rise and add to micro climate alternations and the same shall be included in the final EIA report. The PP shall study in detail about impact on the water bodies and natural flow of surface and ground water and the same shall be included in the final EIA report. The PP shall study in detail about Soil health, Climate change leading to Droughts, Floods etc. The PP shall study in detail about release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people. The PP shall study in detail about Possibilities of water contamination and impact on aquatic ecosystem health. The PP shall study in detail about impact on flora, fauna, biodiversity and water table and the same shall be included in the final EIA report. The PP shall study the impact on Invasive Alien Species (IAP).

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282/1A2 and 282/2B,
Rayandapuram Village,
Thandrampattu Taluk,
Tiruvannamalai District, Tamil
Nadu by Thiru.N.Viswanathan –
For Terms of Reference under
Violation.

(SIA/TN/MIN/434868/2023)

Reference (TOR) under Violation category, subject to the following TORs, in addition to the standard terms of reference for EIA study for non-coal mining projects and ToR given in Annexure-I, the EIA/EMP report along with assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter by the accredited consultants. The grant of Terms of Reference (TOR) under Violation category does not entail EC which is subject to the outcome of the final orders of the Hon'ble High Court of Madras in the matter of W.P.(MD) No. 11757 of 2021.

After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Terms of Reference (ToR) under violation category for undertaking the Environment Impact Assessment Study and preparation of Environment Management Plan subject to the standard terms of reference in addition to the conditions as recommended by SEAC & following conditions in addition to the conditions in 'Annexure B' of this minute. Further, this ToR granted will be legally subject to the outcome of the case W.P (MD). No. 11757 of 2021 pending before Hon'ble Madurai Bench of the High Court of Madras.

The PP shall furnish an Independent Chapter 13
as per the MoEF & CC Violation Notification –
S.O. 804 (E), dated. 14.03.2017 prepared by the
accredited consultants within a period of one
year from the issue of this specific ToR,
comprises of assessment of ecological damage

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12.	Existing Rough stone quarry lease	10197	for the project activities carried out during the violation period, and the remediation plan and natural & community resource augmentation plan corresponding to the ecological damage assessed and economic benefit derived due to violation as a condition of Environmental Clearance. 2. As a part of procedural formalities as per the MoEF & CC Violation Notification – S.O. 804 (E), dated. 14.03.2017, the action will be initiated by the competent authority under section 15 read with section 19 of the Environment (Protection) Act, 1986 against violation. The authority noted that the subject was appraised
	over an extent of 1.46.0Ha (Government Poramboke Land in		in the 403 rd SEAC meeting held on 24.08.2023. SEAC noted that during the meeting the Committee
	S.F. No:809 (Part-3), Alur Village,		noted that the project proponent was absent for the
	Hosur Taluk, Krishnagiri District,		meeting. Hence the subject was not taken up for
	Tamil Nadu by Thiru.K.Srinivasan		discussion and the project proponent shall furnish
	- For Environmental Clearance.		the reason for his absence.
	(SIA/TN/MIN/435102/2023		In view of the above, the authority noted the 403 rd
			SEAC meeting held on 24.08.2023.
13.	Proposed Rough stone and Gravel	10203	The authority noted that the subject was appraised
	quarry lease over an extent of		in the 403 rd SEAC meeting held on 24.08.2023.
	2.00.0Ha of S.F.Nos.1/3B (Part) at		SEAC has furnished its recommendations for
	Muthukkadu Village, Kulathur		granting Environmental Clearance subject to the
	Taluk, Pudukkottai District, Tamil Nadu by Mr.S.Thirumurugan - For		conditions stated therein. After detailed discussions, the Authority taking into
	Environmental Clearance.		account the recommendations of SEAC and also the
	(SIA/TN/MIN/435790/2023)		safety aspects and to ensure sustainable, scientific
			and systematic mining, decided to grant
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Environmental Clearance for the quantity of 3,22,640 m³ of Rough Stone & 31,360 m³ of Gravel and the depth upto 45m BGL and the annual peak production should not exceed 69,160 m³ of Rough Stone & 17,920 m³ of Gravel. 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.

- 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.
- The EC granted is subject to review by District Collector, Mines Dept. and TNPCB on completion of every mine plan period, till the project life. They should also review the EC conditions to ensure that they have all been adhered to and implemented.
- The project proponent shall furnish a Certified Compliance Report obtained from MoEF&CC while seeking a renewal of the mining plan to cover the project life.
- 4. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP.
- 5. 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 sixmonthly compliance on the environmental conditions prescribed in the prior environmental

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			clearance letter(s) through newly developed compliance module in the PARIVESH Portal from the respective login. 6. 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. 7. The PP shall carryout transplantation/plantation/afforestation of tall native saplings in the ratio1:10 in regard to existing the trees cut down (or) 500 Nos. of Trees per hectare of mining lease area all along the periphery within the proposed mining area and as well as avenue plantation as committed.
14.	Proposed Rough Stone and Gravel	10180	The Authority noted that the subject was appraised in the 403 rd SEAC meeting held on 24.08.2023.
	Quarry over an extent of 1.91.00 Ha at S.F.Nos.353/1B, 353/2A, 367/2		SEAC has furnished its recommendations for
	& 368/1 of Madhavakurichi		granting Environmental Clearance subject to the
	Village, Manur Taluk, Tirunelveli		conditions stated therein.
	District, Tamil Nadu by Thiru. Asan		After detailed discussions, the Authority taking into
	Ibrahim -For Environmental		account the recommendations of SEAC and also the
	Clearance.		safety aspects and to ensure sustainable, scientific
	(SIA/TN/MIN/434185/2023)		and systematic mining, decided to grant
		<u> </u>	Environmental Clearance for the quantity of
			1,24,129 m ³ of rough stone & 31,842 m ³ of
		•	Gravel up to the depth of 23m BGL and the
			annual peak production should not exceed 26764

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m³ of rough stone & 9,264 m³ of Gravel. 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.

- 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 mine plan period, till the project life. They should also review the EC conditions to ensure that they have all been adhered to and implemented.
- 3. The project proponent shall furnish a Certified Compliance Report obtained from MoEF&CC while seeking a renewal of the mining plan to cover the project life.
- 4. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP.
- 5. 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 sixmonthly 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.

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			6. 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.
15.	Proposed Multi Colour Granite Quarry over an extent of 1.33.5Ha at S.F.Nos. 536/2A2, 536/3 & 536/4B of Kalugur Village, Kulithalai Taluk, Karur District, Tamil Nadu by Thiru.M.Gandhi- For Environmental Clearance. (SIA/TN/MIN/430234/2023)	10186	The Authority noted that the subject was appraised in the 403 rd SEAC meeting held on 24.08.2023. 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 RoM –21,689 m³ which includes 10844.5 m³ of granite recovery (@50%) & 10844.5 m³ of granite waste (@50%) up to the depth of 37m below ground level and the annual peak production should not exceed 3825 m³ of granite recovery. 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 Environmental

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- Clearance is valid as per the approved mine plan period (2023-2027).
- The EC granted is subject to review by District Collector, Mines Dept. and TNPCB on completion of every mine plan period, till the project life. They should also review the EC conditions to ensure that they have all been adhered to and implemented.
- The project proponent shall furnish a Certified Compliance Report obtained from MoEF&CC while seeking a renewal of the mining plan to cover the project life.
- 4. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP.
- 5. 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 sixmonthly 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.
- 6. 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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16. Proposed Rough Stone Quarry over an extent of 0.71.0Ha at S.F.No: 4/1 of Ganapathipatti Village, Harur Taluk, Dharmapuri District, Tamil Nadu by M/s. Sri Amman Blue Metals -For Terms of Reference under Violation.

(SIA/TN/MIN/433309/2023)

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The Authority noted that the subject was appraised in the 403rd SEAC meeting held on 24.08.2023. Based on the presentation and documents furnished by the project proponent, SEAC decided to grant of Terms of Reference (TOR) under Violation category, subject to the specific TORs stated therein, in addition to the standard terms of reference for EIA study for non-coal mining projects and the EIA/EMP report along with assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter by the accredited consultants. The grant of Terms of Reference (TOR) under Violation category does not entail EC which is subject to the outcome of the final orders of the Hon'ble High Court of Madras in the matter of W.P.(MD) No. 11757 of 2021.

After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Terms of Reference (ToR) under violation category for undertaking EIA study followed by the EMP report along with assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter by the accredited consultants subject to the conditions as recommended by SEAC & normal / Standard conditions in addition to the following conditions and conditions stated therein vide Annexure 'B'.

The PP shall furnish an Independent Chapter
 as per the MoEF & CC Violation

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Notification – S.O. 804 (E), dated. 14.03.2017 prepared by the accredited consultants within a period of one year from the issue of this specific ToR, comprises of assessment of ecological damage for the project activities carried out during the violation period, and the remediation plan and natural & community resource augmentation plan corresponding to the ecological damage assessed and economic benefit derived due to violation as a condition of Environmental Clearance.

- The proponent shall withdraw the pending EC application SIA/TN/IMN/413314/2023,
 Dated 06.01.2023 (9726/2022) from PARIVESH Portal.
- 3. The PP shall furnish Copy of valid mining lease approval obtained from the competent Authority.
- 4. The PP shall furnish Copy of approved review of scheme of mining plan by the competent authority of the Dept of Geology and Mining.
- The PP shall furnish EMP for the project life including progressive mine closure plan and final mine closure plan with detailed budget plan.
- 6. The PP shall study in detail about CO₂ release and temperature rise and add to micro climate alternations and the same shall be included in the final EIA report.
- 7. The PP shall study in detail about impact on the water bodies and natural flow of surface and ground water and the same shall be included in the final EIA report.

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			 The PP shall study in detail about Soil health, Climate change leading to Droughts, Floods etc. The PP shall study in detail about release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people. The PP shall study in detail about Possibilities of water contamination and impact on aquatic ecosystem health. The PP shall study in detail about impact on flora, fauna, biodiversity and water table and the same shall be included in the final EIA report.
			12. The PP shall study the impact on Invasive Alien Species (IAP). In case the PP does not furnish Chapter 13 as directed by SEAC, MS, SEIAA may refer the file to SEAC for further action.
extent 249/5, Uthapp Usilam District K.R.Ka Enviror	by Thiru. aruppasamy— For ment Clearance under	6240	The Authority noted that the subject was placed in the 403 rd meeting of SEAC held on 24.08.2023 and the SEAC has sought certain additional details from the PP. The proponent is advised to submit the above-mentioned details within a period of 30 days failing which the proposal will be automatically delisted from the PARIVESH Portal.
an exte 416/2A Veppal Pochan	ed Grey granite quarry over ent of 2.02.5 Ha in SF.No. & 417/2B at ampatty Village, apalli Taluk, Krishnagiri t, Tamil Nadu by M/s. Sri		The authority noted that this proposal was placed for appraisal in 395 th meeting of SEAC held on 27.07.2023 and the committee noted that the PP/EIA consultant has given "request for withdraw" in online portal. But PP in his letter stated that "We have not applied for withdraw the

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Balaji Land Promoters Pvt. Ltd -For Environmental Clearance Extension.

(SIA/TN/MIN/295179/2022)

proposal from the portal and we still processing the proposal for extension of validity of EC". Meanwhile it was noted that the PP has filed a fresh application '10119'. Hence the SEAC decided that EDS may be raised on the fresh application asking explanation to the PP for filing two applications and requesting to process the two files simultaneously. 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 certified compliance report.
- 2. The PP shall furnish letter from AD, Mines detailing the following,
 - (a) What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 - (b) Quantity of minerals mined out.
- (c)Highest production achieved in any one year
 - (d)Detail of approved depth of mining.
- (e)Actual depth of the mining achieved earlier.
 - 3. The PP shall furnish an explanation for filing two applications (Extension Application 4941 and Fresh Application 10119) and requesting to process the two files simultaneously.

After detailed discussions, the authority raised ADS. The PP has now submitted reply for SEIAA ADS. The reply was placed in 654th authority

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			In view of the above, the authority after detailed
			discussions decided to refer back the file to SEAC
			and SEAC is requested to appraise the project based
			on the above views.
19.	Proposed rough stone quarry lease	9949	The authority noted that earlier, the proposal was
	over an extent of 1.64.0 Ha at		appraised in the 387 th SEAC meeting held on
	S.F.No. 1254/7, 1276/1, 1276/2A,		28.06.2023. Based on the presentation, documents
	1276/2B, 1276/3A, 1276/3B &		& KML details furnished by the project proponent,
	1277/2 of Katchaikatti Village,		the Committee observed that the quarry of
	Vadipatti Taluk, Madurai District,		K.Ramesh (SEIAA Proposal number.8461) lies
1	Tamil Nadu by		within a distance of 400m from the current proposed
	Thiru.N.Viswanathan - For		quarry. Further, in the 500m cluster letter
	Environmental Clearance		dated.08.02.2021 issued by Joint Director/Assistant
			Director (i/c), Dept.of G&M in the case of
			K.Ramesh (SEIAA Proposal No.8461), it was
			mentioned that there were 2 existing quarries and 2
			proposed quarries are located within the vicinity of
			the lease under appraisal. Besides, the area of the
			total cluster covering the above quarries exceeds
			5Ha. However the Assistant Director, Dept. of
			G&M has not furnished the details of any existing
			or proposed quarries located within a radius of
			500m radius from the quarry of
			Thiru.N.Vishwanathan (current proposal) in his
			cluster letter dated.21.01.2023.
			Hence, the Committee decided that SEIAA may
			obtain clarification from AD Mines in this regard
			and hence decided to defer this proposal in this
			meeting.
			Accordingly, a letter dated. 21.08.2023 was
			addressed to the Assistant Director of Geology &
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minutes. to withdraw the proposal. seeking remarks. 20. Proposed Rough Stone and Gravel 9841 quarry over an extent of 4.32.10 Ha | New No 9926 The SEAC noted the following: in S.F.No. 264/2(P), 264/3A(P), 267/1B, 267/2(P) & 267/3of Akkinampattu Village, Cheyyur Taluk, Chengalpattu District, Tamil Nadu by M/s. Naraj Blue Metal Pvt application Ltd- For Terms of Reference.

Mining Department, Madurai District seeking clarification as indicated in the 387th SEAC meeting

Meanwhile, the proponent has submitted a request

In view of the above, the authority decided to forward the request of proponent to SEAC for

The proposal was earlier placed in the 367th SEAC Meeting held on 31.03.2023.

4. The proponent had submitted online application in the name of Thiru. P. Naraj Rough stone and Gravel Quarry and the number is SIA/TN/MIN/418675/2023 and offline File No.9841/2023. Due to change in name of the project, the proponent tried to withdraw the application but the withdraw option was not available due to technical issues. Subsequently, the proponent had submitted new online application in the name of M/s. Naraj Blue Metals Private Limited Rough stone and Gravel Quarry and the application number is SIA/TN/MIN/421650/2023 and offline File No.9926/2023 and requested before the committee to appraise the proposal pertaining to online proposal number SIA/TN/MIN/421650/2023 and File No.9926/2023.

Subsequently, the proposal was placed in 614th SEIAA meeting held on 24.04.2023 & 25.04.2023.

SEIAA-TN

The Authority after detailed deliberation, decided that

- The proponent shall give clear justification for withdrawal of the online proposal no. SIA/TN/MIN/418675/2023 and offline File No.9841/2023.
- The proponent shall submit withdrawal request in online through Parivesh Portal pertaining to online proposal no. SIA/TN/MIN/418675/2023.
- The proponent is requested to upload the approved mining plan in the Parivesh Portal for the online proposal number SIA/TN/MIN/421650/2023.

In the view of the above, Authority decided that the process for online proposal no. SIA/TN/MIN/421650/2023 and File No.9926/2023 shall be kept in abeyance until proper justification and withdrawal process of F.No.9841 is completed. The Authority decided to request Member Secretary – TN to communicate the minutes to the proponent. Subsequently, proponent had submitted a representation to O/o SEIAA on 11.05.2023.

Based on the above, the proposal was again placed in 631st SEIAA meeting held on 19.06.2023.

The Authority after detailed deliberation decided that the proponent shall approach National Informatics Centre (NIC) in withdrawing the file pertaining to SIA/TN/MIN/418675/2023 and offline File No.9841/2023 in Parivesh Portal. Upon the completion of withdrawal process further action with respect to SIA/TN/MIN/421650/2023 and File No.9926/2023 shall be taken. The MS-SEIAA may

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also address NIC/Parivesh to assist in withdrawal and the proponent expressed his difficulties in withdrawal.

Subsequently, the proponent submitted a reply vide letter received by this O/o SEIAA dated: 24.08.2023. The authority noted that

- 1. The proponent/consultant had approached monitoring team, Forest and Climate Change Informatics Division (FCCID), MoEF&CC to address their difficulties in withdrawing the proposal pertaining to online proposal number SIA/TN/MIN/418675/2023 via E-mail dated 20.07.2023.
- Subsequently, monitoring team had replied to the above request made by the proponent/consultant that

"...proposal can be withdrawn before adding in the agenda".

In the view of the above facts, Authority after detailed deliberation decided that

- A. The proponent's application vide online proposal number SIA/TN/MIN/418675/2023 herewith stands closed and recorded, since the project name and the company name in the Parivesh portal is different. Hence, decided that MS-SEIAA shall intimate to the proponent that for afore-stated reasons, the proponent's application is closed and recorded.
- B. After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Terms of Reference (ToR) along with Public Hearing for proposal

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pertaining to online number vide SIA/TN/MIN/421650/2023 under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions in addition to the following conditions and the conditions mentioned in 'Annexure B' of this minute:

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 Biological Diversity Act, 2002, Biological diversity Rules, 2004 & TN Forest Act, 1882 and

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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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- 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 CO₂ 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.

j) 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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MMAN CHAIRMAN SEIAA-TN 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

- 1. 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.,
- 3. 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

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

MEMBER SECRETARY

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