

**Minutes of the 113<sup>rd</sup> SEAC Meeting held on 05<sup>th</sup> June' 2018**

<p><b>113- F.No.5778 / 2018</b></p>	<p><b>Existing Silica Sand Quarry over an extent of 1.17.0 Ha. at S.F.No.74/2B3 &amp; 89/4B Chettipukam Village, Vedaranyam Taluk, Nagappattinam District, by M/s. Silver sand Mines &amp; Minerals – ToR to be issued under violation notification of MoEF &amp; CC - Regarding.</b></p>
	<p>The proponent, <b>M/s. Silver sand Mines &amp; Minerals</b> has applied for ToR to SEIAA –TN on 07.04.2018 for mining of Silica Sand Quarry over an extent of 1.17.0 Ha. at S.F.No.74/2B3 &amp; 89/4B Chettipukam Village, Vedaranyam Taluk, Nagappattinam District.</p> <p>The Ministry of Environment, Forest and Climate Change (MoEF&amp;CC) Notification S.O. 804 (E) dated 14.03.2017 has stated that the cases of violations will be dealt strictly as per the procedure specified in the following manner:</p> <p><i>“In case the project or activities requiring prior Environmental Clearance under EIA Notification 2006 from the concerned Regulatory Authority are brought for Environmental Clearance after starting the construction work, or have undertaken expansion, modernization and change in product-mix without prior EC, these projects shall be treated as cases of violations and in such cases, even Category B projects which are granted Environmental Clearance by the SEIAA constituted under sub-section(3) section 3 of the Environment (Protection) Act 1986 shall be appraised for grant of Environmental Clearance only by the Expert Appraisal Committee and Environmental Clearance will be granted at the Central Level”.</i></p> <p>Accordingly it was informed that the application for seeking Environmental Clearance after starting activity without prior EC for Silica Sand Quarry over an extent of 1.17.0 Ha. at S.F.No.74/2B3 &amp; 89/4B Chettipukam Village, Vedaranyam Taluk, Nagappattinam District could not be processed at SEIAA-TN and the proponent was requested to submit the proposal to MoEF&amp;CC for Environmental Clearance stating the violations.</p> <p>The MoEF&amp;CC notification S.O.1030 (E) dated 08.03.2018 has stated that the cases of violations projects or activities covered under category A of the Schedule to the EIA Notification, 2006, including expansion and modernization of existing projects or activities and change in product mix, shall be appraised for</p>



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grant of Environmental Clearance by the EAC in the Ministry and the Environmental Clearance shall be granted at Central level, and for category B projects, the appraisal and approval thereof shall vest with the State or Union territory level Expert Appraisal Committees and State or Union territory Environment Impact Assessment Authorities in different States and Union territories, constituted under sub-section (3) of section 3 of the Environment (Protection) Act, 1986.

The MoEF&CC office memorandum No. F.No.Z-11013/22/2017-IA.II(M) dated: 15.03.2018 have issued the following guidelines regarding implementation of Notification S.O.1030 (E)

- i. The proposals received up to 13<sup>th</sup> September, 2017 on the Ministry's portal, shall be considered by the EAC or the SEAC / SEIAA in the respective States / UTs, as the case may be, in order of their submission.
- ii. All the proposals of category 'B' projects / activities pertaining to different sectors, received within six months only i.e. up to 13<sup>th</sup> September, 2017 on the Ministry's portal, but yet not considered by the EAC in the Ministry, shall be transferred online to the SEAC / SEIAAs in the respective States / UTs.
- iii. The proposals submitted directly for considering of EC (in place of ToR), shall also be considered on the same lines, in order of their submission on the Ministry's portal.
- iv. All the projects of category 'B' pertaining of different sectors, although considered by the EAC in the Ministry and accorded ToR, shall be appraised for grant of EC by the SEAC / SEIAA in the respective States / UTs.
- v. All projects / activities of all sectors, shall be required to adhere to the directions of Hon'ble Madras High Court vide order dated 13<sup>th</sup> October, 2017 while upholding the Ministry's Notification dated 14<sup>th</sup> March, 2017.

The MoEF&CC office memorandum No. F.No.Z-11013/22/2017-IA. II(M) dated: 16.03.2018 has issued the following directions regarding compliance of directions of Hon'ble Madras High Court order dated 14<sup>th</sup> March, 2018 in WMP

Nos.3361, 3362 & 3721 of 2018in WP.No.11189 of 2017.

1. The project proponent, who have not submitted the proposals within six months window i.e up to 13<sup>th</sup> September, 2017 in pursuance of the ministry's notifications.O.804(E) dated 14.03.2017, are required to submit the proposals within 30 days, to the EAC for category A projects or the SEAC/SEIAA in the respective States/UTs for category B projects.
2. The project proponent, who have submitted the proposals on the Ministry's portal after 13<sup>th</sup> September, 2017 are also required to submit the proposals within 30 days, to the EAC for category A projects or the SEAC/SEIAA in the respective States/UTs for category B projects

In view of the above directions, the project proponent, who have **submitted the proposals within six months window** i.e up to 13<sup>th</sup> September, 2017 in pursuance of the ministry's notification S. O. 804(E) dated 14.03.2017, has submitted the details of the proposal to the O/o SEIAA-TN for obtaining specific Terms of Reference for Silica Sand Quarry over an extent of 1.17.0 Ha. at S.F.No.74/2B3 & 89/4B Chettipukam Village, Vedaranyam Taluk, Nagappattinam District.

The proposal was placed before the 113<sup>rd</sup> SEAC Meeting held on 05.06.2018. The members of the SEAC interacted with the proponent regarding the project proposal and environmental implications of the mining operation.

The Essential features of the projects are as follows:

1. Government order/ Lease details:

The mining lease was granted in Rc.No. 4544/MM3/2007 dated 07.07.2009 for a period of Twenty Years. The lease deed was executed on 23.09.2009. Mining Operation commenced on 25.09.2009. The lease will expire on 22.09.2029.

2. Mining Plan/Scheme of Mining approval details:

The Mining Plan was approved by Indian Bureau of Mines in letter No.TN/NPM/MP/SST-1734-Mds dated 01.06.2006 before the grant of Mining Lease. (for the plan period 2009-2010 to 2013-2014).

The Scheme of Mining was approved by Indian Bureau of Mines in letter



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No. TN/NPM/ S.Sand/MS-1149-MDS dated 23.12.2014 for the period of 2014-15 to 2018-19.

The Mining operation and quantity of material mined are as follows:

YEAR	PLANNED(T)	ACTUAL(T)
2009-2010	1442	740
2010-2011	1254	7610
2011-2012	1254	1650
2012-2013	1254	100
2013-2014	1254	200
<b>TOTAL</b>	<b>6458</b>	<b>10300</b>

The actual quantity of production is higher than the approved quantity of production in the mining plan.

3. As per the IBM Scheme of Mining approved for the years 2014-15 to 2018-19, the production schedule for the years 2014-15 to 2018-19 states that the total quantity of recoverable Silica Sand should not exceed 9065 tonnes.

For 2014-15 - 2679 tonnes

For 2015-16 - 1108 tonnes

For 2016-17 - 2884 tonnes

For 2017-18 - 1231 tonnes

For 2018-19 - 1163 tonnes

4. The waste that will be resulting in the mining operation for the 5 years 2014-15 to 2018-19 will be 477 tonnes.

5. The silica sand is loose and free flowing. There is no need of any blasting or drilling in the projected operations. Thus the use of explosives and calculation of powder factor does not arise. Only tippers will be used. Loading will be done manually by hand shovels.

6. Silica Sand is to be transported by tippers of 10 T capacity.

The project attracts violation as per MoEF & CC gazette notification S.O No 804 (E) Dated 14.03.2017.

The project proponent has submitted the documents regarding the particulars of the lease and mining working. It was observed that mine was in



operation without obtaining Environmental Clearance. As the case above stands affirmative, the project is being granted Terms of Reference for undertaking Environmental Impact Assessment and preparation of EMP. The SEAC recommends the Terms of Reference for the project for assessment of Ecological damage, remediation plan and natural & community resource augmentation plan to be prepared as an independent chapter in the Environment Impact assessment report by the Accredited consultant and also with collection and analysis of data for assessment of ecological damage, preparation of remediation plan and natural & community resource augmentation plan to be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, accredited by NABET or a laboratory of council of Scientific and Industrial research Institutions working in the field of environment. Three months data relating to the ecological parameters is to be submitted with analysis.

The project proponent besides above has to also submit the No Objection certificate (NOC) in compliance of the orders of the Hon'ble Supreme court to approach State Mines and Geology Department for certification regarding payment of 100% cost of illegally mined minerals to the State Government in terms of the Section 21(5) of the MMDR Act, 1957. The amounts so payable to the state government for the Silica Sand Blocks, would inter-alia, account for the mining operation in violation of the following:-

- Without Environmental Clearance (EC) or in excess of quantity approved in EC.
- Without consent to Operate (CTO) or in excess of quantity approved in CTO.
- Without mining plan/scheme of mining or in excess of quantity approved in mining plan/scheme of mining.
- Without forest clearance
- Any other violation.

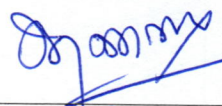

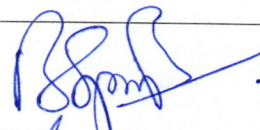
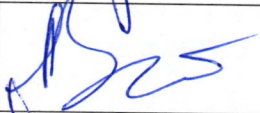
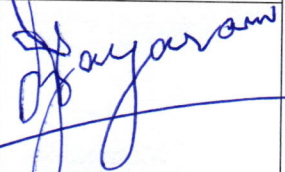
The project proponent is hereby directed to furnish information and NOC as per the guidelines issued by MoEF & CC, orders of the Hon'ble Supreme court and the annexure provided by SEIAA, while submitting EIA/EMP for consideration of EC.

The proposal is recommended for the grant of Standard ToR for mining projects as specified by MoEF & CC subject to the above conditions in addition to the Additional TOR specified by the SEAC to deal with the violation aspects of the mining projects.

In addition to the above, the proponent shall submit the following details along with EIA report.

1. The report for green belt developed with necessary photographs.

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	<p>2. Approved mining scheme</p> <p>3. The proponent shall spent the CER fund to the nearby schools in terms of furniture, construction of toilets etc., and submit the proof for the same.</p> <p>4. The proponent shall furnish the photographs for fencing around the project site along with the boundary pillar giving the geo co ordinates.</p> <p>5. Estimation of reserve of Silica sand needs to be carried out in systematic way by taking up augur drilling upto the bottom of silica sand bed.</p> <p>6. The proponent shall arrange for proper training of the workmen in the Mine Vocational Training Centre as per the Mines Act'1952 to educate the precautionary measures to be taken while exposed to silica.</p>		
S.No	Name	Designation	Signature
1	Dr. K. Thanasekaran	Member	
2	Dr.K.Valivittan	Member	
3	Dr.Indumathi M. Nambi	Member	
4	Dr. G. S. Vijayalakshmi	Member	
5	Dr. M. Jayaprakash	Member	
6	Shri V. Shanmugasundaram	Member	
7	Shri B. Sugirtharaj Koilpillai	Member	
8	Shri. P. Balamadeswaran	Co-opt Member	
9	Shri. M.S. Jayaram	Co-opt Member	



Part-I

**STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR NON-COAL MINING PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT**

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large,



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may also be detailed in the EIA Report.

- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly,



detailed mitigative measures required, should be worked out with cost implications and submitted.

- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be



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shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per

CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.

- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) 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. In case the working will intersect groundwater table, a detailed Hydro



Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the

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proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
  - a) Executive Summary of the EIA/EMP Report
  - b) All documents to be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.



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- d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
- e) Where the documents provided are in a language other than English, an English translation should be provided.
- f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
- g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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**PART-II**

**Additional TOR specified by the SEAC to deal with the violation aspects of the mining projects**

**SECTION A**

As per the MoEF & CC Notification S.O. 1030 (E) dated: 08.03.2018,

1. "The cases of violations will be appraised by the Expert Appraisal Committee at the Central level or State or Union territory level Expert Appraisal Committee constituted under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 with a view to assess that the project has been constructed at a site which under prevailing laws is permissible and expansion has been done which can run sustainably under compliance of environmental norms with adequate environmental safeguards, and in case, where the findings of Expert Appraisal Committee for projects under category A or State or Union territory level Expert Appraisal Committee for projects under category B is negative, closure of the project will be recommended along with other actions under the law.
2. In case, where the findings of the Expert Appraisal Committee or State or Union territory level Expert Appraisal Committee on point at sub-paragraph (4) above are affirmative, the projects will be granted the appropriate Terms of Reference for undertaking Environment Impact Assessment and preparation of Environment Management Plan and the Expert Appraisal Committee or State or Union territory level Expert Appraisal Committee, will prescribe specific Terms of Reference for the project on assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter in the environment impact assessment report by the accredited consultants, and the collection and analysis of data for assessment of ecological damage, preparation of remediation plan and natural and community resource augmentation plan shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or a environmental laboratory accredited by the National



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Accreditation Board for Testing and Calibration Laboratories, or a laboratory of the Council of Scientific and Industrial Research institution working in the field of environment."

After the appraisal of the project, the SEAC decided that the Para No.2 stated above is applicable to the project. Hence, the proponent is directed to prepare appropriate reports as contained in the Para 2.

While complying with the specific aspects of the MoEF & CC directions as stated in the Para 2 above, the following steps should be followed:

Step 1: Enumerate the aspects of Violation:

- a) The proponent should enumerate the violations as applicable to the project.
- b) Furnish a description of each violation with quantitative and qualitative data.
- c) Violation categories are to be decided taking into consideration the stage at which the project execution stands.

Step 2: Ecological Damage Assessment:

- a) For each aspect of violation enumerated in step (1), identify the resultant environmental damage that may have been caused.
- b) Furnish a description of the environmental damages with quantitative and qualitative data.

Step 3: Remediation Plan:

- a) For the Environmental damage(s) identified in the step (2) above, prepare the remediation plan for the each or combination of damages.
- b) The remediation plan should essentially consists of problem statement, target to be achieved (quantity), standards, technology/procedure for remediation, equipment and machinery to be used, time schedule and remediation cost(direct and indirect cost, capital as well as O&M costs).

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**SECTION B**

**1. Natural resource Augmentation:**

a) The resources that should be considered for augmentation should essentially consist of land, biota, air, water and other resources as applicable.

b) Proponent may choose one or more of the resource augmentation as applicable and provide a description of the augmentation proposal in detail for each resource.

c) The proponent should also furnish the cost for each augmentation scheme.

**2. Community resource Augmentation:**

a) The proponent should prepare a plan of action for addressing the needs of the community in terms of resources in the sectors of education, health and sports primarily and other such resources as applicable to the community in the vicinity of the project.

b) The community resource augmentation plan should consist of rehabilitation of houses and people, budget allocation and time schedule for completing the activity.

**SECTION C**

The proponent should prepare content for the ecological damage assessment, remediation plan, natural resource augmentation and community resource augmentation separately in a chapter and include in the EIA / EMP report.

**SECTION D**

a) After the appraisal of the EIA / EMP report submitted by the proponent, the SEAC will make a judgement of the quality of the content in the EIA / EMP report specifically with reference to the chapter covering the ecological damage assessment, remediation plan, natural resource augmentation and community resource augmentation.



- b) In the judgement of SEAC, if the quality of the content in the chapter is not satisfactory, the SEAC may direct the proponent to further revise the chapter and resubmit the EIA/EMP report.
- c) If SEAC concludes that the technical part is satisfactory and the costing aspect is not satisfactory then the SEAC may revert to legal provisions, MoEF & CC guidelines and similar expert committee recommendations for finalizing the cost aspects or the SEAC may use its own expertise and experience in finalizing the cost.

**SECTION E**

The proponent is directed to furnish data as per the questionnaire appended. It will help the SEAC in arriving the ecological damage and the associated cost.

**SECTION F**

In compliance with the Supreme Court order stated in MoEF & CC letter F.No. 3-50/2017 IA.III-pt dated: 05<sup>th</sup> January 2018, the proponent is required to submit the No Objection Certificate obtained from the Department of Geology and Mining, Government of Tamil Nadu regarding payment of 100% cost of illegally mined mineral under section 21(5) of MMDR Act 1957 which would account for mining operations in violation of the following:

- a) Without Environmental Clearance (EC), or in excess of the quantity approved in EC
- b) Without Consent to Operate (CTO) or in excess of the quantity approved in CTO and
- c) Without mining plan/scheme of mining or in excess of the quantity approved in mining plan / scheme of mining
- d) Without Forest Clearance
- e) Any other violation

List out the details of reserve forest and wildlife sanctuary nearby the project site (the details should also include other districts which are nearby the project site) and also furnish the detail of distance between the project site and reserve forests/wildlife sanctuary.

Whether the project site attracts the HACA clearance? If so, also furnish the HACA clearance for the mining from the competent authority.

The proponent is instructed to fill in the form contained in Annexure 1 to work out the details of the ecological damage during the violation period.

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**Annexure 1**

**Additional information for considering EC for mining projects**

S.No.	Details to be provided	Page no.																																			
1)	Name of the project lease & owner																																				
2)	Lease Extent																																				
3)	Lease Validity																																				
4)	Approved Mining Plan/Scheme – Review a) Specify whether DSR is provided ( applicable in case of minor minerals only)																																				
5)	Specify - Nature and type of violation I. Without EC or in excess of quantity approved in EC II. Without CTO or in excess of quantity approved in CTO III. Without mining plan/Scheme of mining or in excess of quantity approved in Mining plan/Scheme of mining. IV. Without forest Clearance V. Any other violation																																				
6)	Violation period I. Number of months II. Number of Years																																				
7)	Exploitation/Excavation quantity- Reserves proved through exploration by drilling																																				
8)	Give details of production from the date of execution of the lease deed / since 1994 <table border="1"> <thead> <tr> <th>Year and quantity</th><th colspan="2">2010-2011*</th><th colspan="2">2011-2012*</th><th colspan="2">2012-2013*</th></tr> <tr> <th></th><th>Planned</th><th>Planned</th><th>Planned</th><th>Actual</th><th>Planned</th><th>Actual</th></tr> </thead> <tbody> <tr> <td>Ore/mineral/granite blocks (tonnes)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>Waste (tonnes/cu.m)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="7">* year of mining operation</td></tr> </tbody> </table>	Year and quantity	2010-2011*		2011-2012*		2012-2013*			Planned	Planned	Planned	Actual	Planned	Actual	Ore/mineral/granite blocks (tonnes)							Waste (tonnes/cu.m)							* year of mining operation							
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9)	Quantity mined out during the violation period & if, yes indicate the violated quantity, in term of % of consented quantity. <table border="1"> <thead> <tr> <th>Year and quantity mined out during the violation period</th><th colspan="2">2010-2011</th><th colspan="2">2011-2012</th><th colspan="2">2012-2013</th></tr> <tr> <th></th><th>Planned</th><th>Planned</th><th>Planned</th><th>Actual</th><th>Planned</th><th>Actual</th></tr> </thead> <tbody> <tr> <td>Ore/mineral/granite blocks (tonnes)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Year and quantity mined out during the violation period	2010-2011		2011-2012		2012-2013			Planned	Planned	Planned	Actual	Planned	Actual	Ore/mineral/granite blocks (tonnes)																					
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Ore/mineral/granite blocks (tonnes)																																					



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	Waste excavation (tonnes/cu.m)							
10)	State illegal mining/encroachments outside the lease boundary? Percentage of quantity mined out outside the lease boundary.							
11)	Method of working							
	I. Category type: (a) Mechanised (b) Semi – Mechanised (c) Manual							
	II. Construction and design of haul roads							
	a) Dimension as per the statutory requirements which were followed or otherwise							
	b) Number of vehicles plying on the main haul roads inside the mine and the approach road to the pit located outside the mine, if any.							
	c) Are any measures taken to minimise fugitive dust generated from mine haul roads? Does it comply with the CPCB/PCB Guidelines?							
	d) Is there a possibility that air pollutants emitted from the project area that do not comply with air quality standards as per CPCB/PCB?							
12)	Mechanized / Semi – Mechanized Method of Mining							
	(i) Number of loading / excavating equipments as per approved mining plan and capacity.							
	(ii) Number of loading / excavating equipments actually being deployed and capacity.							
	(iii) Type and number of transporting equipments.							
	(iv) Type of transporting system used – (a) trucks (b) Any other mode							
	(v) Capacity and Number of trucks used as per approved mining plan							
	(vi) Capacity and Number of trucks used actually in the mine.							
	(vii) Number and capacity of loading equipments and trucks used not in line with approved mining plan.							
		Capacity (m³)		Numbers				
		Excavator						
		Trucks						
	(viii) Impact of excess deployment of loading equipments (excavators) and transporting equipments on environment.							
	(a) Air pollutants							
	(b) Water Quality							
	(c) Land Quality							
	(d) Noise level							



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	(ix) Does the deployment of loading equipments (excavators) and trucks fulfil the statutory requirements as per MMR 1961, with respect to the site conditions?	
13)	Method of Rock Breaking/Material preparation for the excavation:	
	(i) Methodology adopted –	
	a) Drilling and blasting	
	b) Rock breakers	
	c) Rippers	
	d) Surface miners	
	e) Direct mucking by excavators	
	f) Manual means	
	g) Any other methods or combination of above	
	(ii) In case of drilling and blasting method:	
	(a) Type of blasting: short hole or deep hole	
	(b) Whether controlled blasting technique adopted? If yes, specify the technique with details of study, year of study	
	(c) Impacts due to blasting defined as per the studies, if any carried out previously as indicated	
	(d) Dust pollution	
	(e) Noise level (dB(A))	
	(f) Ground vibration studies and Fly rock projection	
	(iii) Impact of preparation of Ore and waste on environment-	
	a) Air Pollution	
	b) Noise Pollution	
	c) Water Pollution	
	d) Safety standards	
	e) Traffic density	
	f) Road Condition (vulnerability)	
14)	Construction and Design of Dumps.	
	a) Place/Location	
	b) Approach to Dump from the mine distance and safety standards.	
	c) Area of extent occupied	
	d) Dimension of Dump and No. of terrace with heights (benches)	
	e) Vegetation covered ; If yes, specify the details of plants	



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15)	Construction and Design of Waste Dumps	
	(i) Numbers and Location of Dumps as per approved Mining Plan	
	(ii) Specify whether reject dumps are located within or outside mining lease	
	(iii) Area occupied in excess of the approval mining plan.	
	(iv) Dimension of Terracing, Light, shapes, etc., Dump as per approved Mining Plan	
	(v) Fresh/Existing Dimension Height, shape, width. etc., of Dumps in the mine.	
	(vi) Volume/Quantity added to Waste/Dump during the violated period.	
	(vii) Approach to the Dump-Dimension, distance.	
	(viii) Number of and type of equipments deployed in Dump.	
	(ix) Provision of Garland drains around the Dumps.	
	(x) Any vegetation made on the slopes.	
	(xi) Provision of safety standards.	
	(xii) Impact of Waste/Dumps on environment.	
	a) Air pollution	
	b) Water pollution	
16)	Construction and Design of Ore and sub grade ore/mineral Stacks:-	
	(i) Number and Location of Ore stacks.	
	(ii) Dimension of Ore/sub grade Stacks as per the Approved Mining Plan	
	(iii) Volume/Quantity added during the violation period.	
	(iv) Any Screening plant or any other loading equipment engaged during the violated period.	
	(v) Approach to Ore / sub grade stack –Distance, hazards.	
	(vi) Safety standards adopted while operation.	
	(vii) Impact of ore/sub grade on environment	
	a. Air pollution	
	b. Water pollution	
	c. Dust pollution	
17)	Mine Pit Water	
	(i) Intersection of Ground water table, specify the measures taken.	
	(ii) Ground water table as per hydro geological Studies (Pumping test).	



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	(iii) Provision of Garland drains around pit and dumps	
	(iv) Water pollution	
	(v) Management of mine water.	
	(vi) Ultimate pit limit, w.r.t Ground water intersection and management of drainage of ground water.	
18)	Diversion of General Drainage/River/Nallah course for mining	
19)	Clearing of vegetation before the commencement of mining operation- Number of trees (species wise)	
20)	Man Power	
	(a) Statutory management	
	(b) Regular (Non –statutory) Manpower	
21)	Occupational Health and Safety.	
	(a) Periodical monitoring of health standards of persons employed as per Mine Act, 1952.	
	(b) Failure to inform statutory bodies periodically, if any	
22)	Population (Nearby Habitation)	
	(i) Population/Significant Population/Dense Population within the buffer zone of 10 Kms.	
	(ii) People displacement due to mining activities	
	(iii) Location/ Existence of habitation near the river or any other historical/sensitive/ forest distance.	
	(iv) Impact of mining on Surrounding and habitation-Air, Water, Noise, Pollution.	
	(v) Socio Economic aspects of mining.	
23)	CSR	
	(a) Field ground Activities or studies. Actual amount spent towards CSR and the future proposal.	
24)	NOC from DMG for quantity clarification in respect of settlement of all the amount payable against identified violation.	
25)	For the Clearance of EC, Public Hearing is mandated as per MoEF & CC Notification. Give reason for exemption of public hearing.	
26)	Conceptual post mining land use/restoration	
27)	Litigation/court cases, if any pending	
28)	Disaster management plan for the mine	