

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 17TH MARCH, 2018**

The SEAC met on 17th March, 2018 at 11:00 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Dr. B.K. Patnaik. The following members were present in the meeting.


1. Dr. B. K. Patnaik	-	Chairman
2. Sri B.P. Singh	-	Member
3. Dr. D. K. Rout	-	Member
4. Sri S. Behera	-	Member
5. Dr. S. C. Nayak	-	Member
6. Sri A. C. Mohanty	-	Member
7. Dr. D. Swain	-	Member
8. Prof. P.K. Mohanty	-	Member
9. Dr. R.C. Mohanty	-	Member

The agenda wise proceedings and recommendation of the committee are detailed below.

ITEM NO. 1


PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR EXPANSION OF CEMENT GRINDING UNIT FROM 1.70 MTPA TO 4.20 MTPA AT VILLAGE – BISWALI, POST-BARUNIA, TAHASIL – TANGI, DISTRICT – CUTTACK OF M/S KAPILASH CEMENT MANUFACTURING WORKS (A UNIT OF OCL INDIA LTD.) (TOR)

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. M/s Kapilas Cement Manufacturing Works (KCMW), a Unit of OCL India Limited under the Dalmia Bharat Group is operating a Cement Grinding Unit having installed capacity of 1.35 MTPA, later on up-graded to 1.7 MTPA at Village. Biswali, P.O. Barunia, Tehsil Tangi, Dist- Cuttack, Odisha.
3. M/s Kapilas Cement Manufacturing Works proposes for expansion of existing Cement Grinding Unit from 1.7 MTPA (PSC, PPC and CC) to 4.2 MTPA (PSC, PPC and CC) through installation of new Cement Grinding Mill and associated equipment at existing plant location at Village- Biswali, P.O. Barunia, District Cuttack, Odisha. As per EIA Notification dated 14th Sept., 2006, as amended from time to time; this project falls under Category "B", Project or Activity 3 (b).
4. Environmental Clearance was granted by SEIAA, Odisha vide Letter No. 624/SEIAA on dated 17.11.2011 and amended Environmental Clearance was granted vide letter no. 3779/SEIAA Dt. 10.11.2017 for 2.7 MTPA (1.7 MTPA + 1.0 MTPA) Cement Grinding Unit and 1 X 27 MW CPP.
5. Stage-II FC for 11.97 acre was granted by MoEF&CC, Govt. of India vide letter no.10 F (con) 288/2012/2334/F & E, Bhubaneswar, dated 13.11.2013.
6. The total project area is 348 acres. Proposed expansion will be carried out over the available vacant land (42.0 acres) within the existing plant premises. About 115 acre (33%)


Secretary, SEAC

of the total project area has already been covered under green belt & plantation.

7. The site is located at Village Biswali, PO. Barunia, District. Cuttack, Odisha. The site falls under the Survey of India Open Series Map (Topo Sheet) No. F45T14, F45U2. The Latitude and Longitude of the proposed site is 20° 37' 26" N and 85° 59' 45" E respectively.
8. The Plant is located at about 10 km from NH-16 (Formerly NH-5). The nearest major town is Cuttack at a distance of 35 KMs from the plant site. The nearest Railway station is at Byree, which is 4 km from the existing Plant site. Plant is having its own private Railway siding within the Plant premises which is connected to Byree railway station located at a distance of about 4 km from the existing plant. The nearest airport is at Bhubaneswar, which is about 65 kms from the Plant site.
9. There is No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor etc. falls within 10 km radius of the plant site. Total Cost of the proposed expansion project will be ₹ 300 Crores. Capital cost for environmental protection measures will be ₹ 14 crores and recurring cost would be ₹ 130 Lakhs/annum.
10. Total power requirement for the proposed expansion will be 15 MVA which will be sourced from Open Access Power from own CPP at Rajgangpur / Existing Captive Solar PV Power Plant of 2.5 MW capacity & Proposed Solar Power Plant/ OPTCL/ CESU. Total nos. of employees will be 748 (existing = 698 nos. & expansion = 50 nos.).
11. Total water requirement of proposed project is 680 KLD. 400 KLD for existing 1.7 MTPA & additional 280 KLD for 2.5 MTPA. Industrial Water will be met from Rain Water Harvesting & drinking water will be sourced from bore well.
12. Raw materials required for the proposed project are Clinker, Slag, Gypsum & Fly ash. Clinker will be procured from its parent Unit at Rajgangpur, Odisha and from other Group Units as & when required, BF Granulated slag from nearby Steel Plants in Kalinga Nagar, Dhenkanal-Angul Belt, Vizag, etc., Gypsum from nearby chemical/Fertilizer Plants in Odisha, West Bengal, Andhra Pradesh and from imported sources and fly ash from nearby Thermal Power Plants in the State of Odisha. Transportation of raw material and product (cement) would be done by road and railway.
13. Zero Liquid Discharge (ZLD) concept shall be adopted as being practiced for existing set-up. No waste water will be generated from the process. Cooling Tower blow down will be recirculated through cooling and treatment. The entire treated waste water will be recycled for various purposes inside the plant. Domestic waste water generated from plant will be treated in the existing STP (3 nos. of STP of capacity 250 KLD, 15 KLD & 50 KLD). The treated water from STP is being used for dust suppression & green belt development.
14. High efficient bag filters will be installed to maintain particulate matter emissions within permissible limit. Domestic effluent will be treated in STP and treated water will be used for plantation.
15. Dust collected from various pollution control equipment will be recycled back into the process. STP Sludge will be utilized as manure for plantation. Used oil will be sold to authorised reprocessors.
16. The company has identified certain areas, to be considered for imparting the ESC activities in the context of the local scenario of the area. The company proposes to invest ₹ 11.95


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crores on the ESC activities, which is about 3.983 % of the total project cost (` 300 Crores). This fund shall be utilized over a period of 5 years.

17. Collection of baseline data has been started from March' 2018 (summer season) as per MoEF&CC, Govt. of India Office Memorandum dated 29.08.2017. This baseline data will be used for preparation of EIA/EMP Report as per standard ToR, published by MoEF&CC, Govt. of India.
18. The Consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** made a detailed presentation on behalf of the project proponent.

Considering the information / documents furnished and presentation made by the Consultant M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar on behalf of the proponent, the SEAC prescribed "Terms of Reference (ToR)" for undertaking detailed EIA study as per **Annexure-I**.

ITEM NO. 2


PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF DISTRICT HEAD QUARTER HOSPITAL WITH 100 BEDDED MOTHER CHILD HOSPITAL AT PLOT NO.3513,3514,3605, KHATA NO.2523, SAMAGUDIA, KENDRAPARA, ODISHA OF OFFICE OF THE CHIEF DISTRICT MEDICAL OFFICER, KENDRAPARA WITH TOTAL BUILT UP AREA 25,699.90 M² EC.

The proponent did not attend the meeting. The SEAC decided to defer the proposal to next meeting.

ITEM NO. 3

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PETA DECORATIVE STONE MINES OVER AN AREA 24.664 ACRES / 9.981 HA AT VILLAGE PETA, TAHASIL-MOTU, DISTRICT- MALKANGIRI OF SRI K. SRINIVASA RAO (EC).

1. Peta decorative stone Mines of Sri K. Srinivasa Rao over an area of 9.981 Ha is located in village Peta, Tahasil - Motu, Dist - Malkangiri, Odisha. The lease was granted by Steels & Mines Dept, Govt, of Odisha in favour of Sri K. Srinivasa Rao vide letter no. 2372/SM. Bhubaneswar dated 12.03.2015.
2. The mining plan for the decorative stone deposit was prepared as a statutory requirement under rule 12 of the Granite conservation & development rules 1999 to expedite execution of ML deed. The mining plan was approved vide letter no. MXXII(a)-09/2015-10284/DM dated 30.11.2015. The ML area is located in Plot No. 4 (P), Khata No. 119 in Peta village. The ML area is covered in the Toposheet No. 65 G/5 and bounded by Latitude 17° 54' 48" N to 17° 54' 54" N and longitude 81° 27' 28" E to 81° 27' 44" E.
3. In a day about 1500 liter of potable water will be consumed by the mines staff for domestic used. During the mining operation about 10,000 liters of water will be required for block cutting, and non-domestic purpose (Dust suppression and Plantation). The peak water requirement in the lease area will be 11500 Liters/ day. 125 KW DG set will be used as the source of power. 20,000 liters of diesel will be required per month for DG set and operation of mining machineries. A total of 138600 m³ (insitu) or 152460 m³ (Swollen) waste/ rejects is likely to be generated during the plan period. The waste will be dumped over an area of 10796 Sq.m area at an average height of 15m. The waste will be utilized concurrently for


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construction and maintenance of road inside the lease area and also sold to local entrepreneur for use as construction material. Total project cost will be approximately ₹ 5.0 Crores.

4. The proponent was asked to furnish a letter from mining officer regarding details of mines within 500m of the proposed mine. The DDM, Koraput circle vide his letter dt. 29.04.2016 has intimated that there is no any granted/executed mines within 500 meters periphery of the Peta Decorative Stone Mines over an area of 24.664 Acres or 9.981 hectares in village Peta under Motu tahsil of Malkangiri district in favour of Sri K.Srinivas Rao, but the above area is common boundary (South side of the ML area) with the mining lease of area above 19 ha., proposed to be granted by the State Govt., in favour of Sri Ch. Venugopal. The proponent during presentation on 02.05.2016 had also clarified that area of both the lease will be more than >25 ha. Odisha – Chhatisgarh inter-State boundary is 200 meter away from the boundary of proposed mine lease area.
5. The SEAC opined that the project will be treated as Category 'A' since the total lease area of mines in the cluster is >25 ha and the interstate boundary is 200m from the boundary of lease area. The SEAC returned the proposal to SEIAA, Odisha with a request to transfer the file to MoEF&CC, Govt. of India for appraisal of the project as Category 'A' project.
6. The proponent has again applied for environmental clearance as per amended EIA notification, vide SO 2269(E) dtd. 1st July, 2016 with a claim that the mining lease of area above 19 ha. proposed to be granted by the State Govt., in favour of Sri Ch. Venugopal is non-operating since last three years. The SEIAA, Odisha has forwarded the application for appraisal.
7. The DDM, Koraput circle vide his letter No. 2740 dt. 28.11.2016 has intimated that there is no any granted / executed mines within 500 meters of the Peta Decorative Stone Mines over an area of 24.664 acres or 9.981 hectares in village Peta under Motu Tahsil of Malkangiri district in favour of Sri K. Srinivas Rao, but the above area is common boundary (South side of the ML area) with the old working mining lease area for Decorative Stone over an area of 19.923 hectares in village Peta of Malkangiri district in favour of M/s. Pallava Granite Industries, which was in operation from 1.12.1997 to 3.12.2005 and since then the lease is not in operation till now. Further, it is also informed that the above mining lease area for Decorative Stone over an area of 19.425 hectares in village Peta of Malkangiri district has been proposed for grant in favour of Sri Ch. Venugopal by the Govt. in department of Steel & Mines, Odisha.
8. The SEAC opined that the mining lease of area 19.425 heacters of Sri Ch. Venugopal will not be included in the cluster approach as per amended EIA notification 1st July, 2016 as it is closed more than three years. The SEAC also decided to appraise Peta Decorative Stone Mines of Sri K. Srinivas Rao over 9.981 ha. as independent mines as category-B2 project.
9. The proponent along with consultant made a detailed presentation before the SEAC on 15.12.2016. The SEAC observed that the consultant has not visited the site and the data is not presented correctly. The SEAC decided to take decision on the proposal after receipt of the following information / document.
 - a) Certificate from the Water Resource department about exact distance of the Saberi river from the boundary of the mining lease and the mining activity will not affect

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Saberi river.

- b) Justification that the mining activity will not affect the flow of the river Saberi.
 - c) Photographs of the proposed area indicating the flow of river Sabari and Nallah flowing adjacent to the mining lease connecting river Sabari.
 - d) EMP has been prepared very casually manner. The consultant should visit the site and collect data correctly. The EMP should be modified incorporating correct data and modified EMP to be submitted.
 - e) List of adjoining villages and number of household in the villages with CSR activities proposed by the proponent shall be mentioned in EMP
10. The proponent furnished the compliance to the above clarification sought by the SEAC. From the compliance furnished by the proponent, the SEAC observed the following:
- a) The Chief Construction Engineer, Potteru Irrigation Project has furnished report about distance of mine lease from the River Saberi and effect of mining activity on River Saberi. In the report, they have furnished copy of EC issued by MoEF&CC, Govt. of India to mining lease of area 19.425 heacters of Sri Ch. Venugopal within 500 meter of the lease area. In the EC, both the proposals have been processed in cluster approach.
 - b) Odisha – Chhatishgarh inter-State boundary is 200 meter away from the boundary of proposed mine lease area. Hence, this proposal may be considered as category – A project and may be appraised at MoEF&CC, Govt. of India.
11. The committee in its meeting held on 23.03.2017, decided to return the proposal to SEIAA, Odisha with request to transfer the file to MoEF&CC, Govt. of India to appraise the proposal as category- A as per above observation of the SEAC.
12. The SEIAA, Odisha transferred this case to MoEF&CC, Govt. of India on 03.06.2017. The MoEF&CC, Govt. of India transferred the case to SEIAA, Odisha on 10.01.2018 considering the fact that General condition will not apply on cluster approach according to MoEF&CC, Govt. of India notification dated 01.07.2016 as Peta Decorative mine of Ch. Venugopal Rao having area of 19.981 ha. has been already granted EC on 05.01.2017 and also lease is not in operation for more than 3 years. In this connection, the MoEF&CC, Govt. of India has issued a clarification letter to the SEIAA, Odisha vide letter no. Z-11013/98/2017-IA.II(M), dated 18th January, 2018.
13. The proponent along with the Consultant **M/s Cognizance Research India Pvt. Ltd., GT-20, Sector – 117, Noida** made a detailed presentation on behalf of the project proponent.

Considering the information / documents furnished and presentation made by the Consultant M/s Cognizance Research India Pvt. Ltd., GT-20, Sector – 117, Noida on behalf of the proponent and clarification given by the MoEF&CC, Govt. of India, the SEAC consider the proposal as category-B2 and recommended to grant Environmental Clearance for the proposal valid from the date of Environmental Clearance accorded upto the lease period with stipulated conditions as per **Annexure-II**.



Secretary, SEAC


ITEM NO. 4

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR DHUNKAPARA DECORATIVE STONE MINES OVER AN AREA OF 23.337 HA OR 57.667 ACRES AT VILLAGE-DHUNKAPARA, TAHASIL-POLASARA, DIST- GANJAM OF SMT. M. M. MATHRUSRI IN CLUSTER AREA OF 55.8 HA (TORS IN CLUSTER)

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. Dhunkapara decorative stone mine cluster is located on 55.8 ha of land in village Dhunkapara under Polosara tehsil of Ganjam District, Odisha owned by Smt. M. M. Annapurna, Iliyas Granites & Amar Jyoti for a period of 20 years by Govt. of Odisha.
3. The mining plan is prepared as per rule 15 and 12 of GCDR and rule 21 of OMMC, 2016. The total estimated reserve is for 16, 83,323 m³ and the production from plan period will be maximum 1,95,660 m³ in plan period. Geologically the reserve is categorized as Charnockite in the name of commercial granite.
4. The entire M.L area is in hilly waste land under the revenue class of Parbat and the tenant is "Abad Ajogya Anabadi" of Govt. of Odisha. The proposed mining is by open cast and semi mechanized method with deployment of machines like Jack Hammer, Drill Compressors, Hydraulic Excavators and Tippers. This will be a single shift mining, only during the day time on six days a week basis. Height and width of the benches will be maintained at 6m each and overall slope angle at 45° with the horizontal. As there is hardly any overburden, therefore most of the waste would be from dressing of the blocks and the rejected blocks which will be stacked in a designated area as per the mining plan.
5. The M.L area is covered in Survey of India Toposheet no E45A13 (74A/13) and bounded by latitude: 19° 46' 13.20" N to 19° 46' 28.70" N and Longitude: 84° 48' 12.20" E to 84° 48' 45.20" E. There is no agricultural or grazing land within the lease hold area. Close to the lease boundary in the same village there is another similar quarry of Iliyas Granites & Amar Jyoti Granite. This ML area is accessible from Jagannathpur through NH 5 via Polosara and 1 km from Buguda-Polosara main road with connecting moorum road. The nearest railway station is at Humma located at a distance of 80 km from the ML area. The nearest habitation is at Dhunkapara at a distance of 750 m from the lease boundary.
6. The details of the mines in the cluster are as follows:

Lease Name	Lease area in ha.	Status	Production in m ³
Smt. M.M. Annapurna	23.337	New	21000 m ³ decorative stones
M/s Iliyas Granites	14.933	Operating (EC has been granted)	8438 m ³ decorative stones
M/s Amar Jyoti Granites	17.53	New	Mining Plan to be prepared

7. Geologically the area is on the foothills of a hill with flat planar surface having dendritic pattern of local drainage. These charnockites are part of Eastern Ghat super group rocks belonging to Archean age. These charnockites are overlain by narrow patches of alluvium


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on the foot hill side and weathered granites on top of the hills. From the nature of the rocks 20% of the mineable quantity is suitable for sale when the available volume of charnockite is estimated at 16,83,323 m³ for M M Mathrusri and for the whole cluster it is 56,20,883 m³.


8. There is no blasting proposed for this exploitation of ore. The total waste for the plan period will be 63,000 m³ out of which the minerable reserve is 93,18,193 m³ for Iliyas and M M Mathrusri whereas with average 50 % utilization the quantity is 46,59,096 m³ and wastes will be used for construction and maintenance of the road conditions surrounding the ML area and the rest will be dumped over 0.768 ha of land on the west side of the lease hold area.
9. During mining, precautions will be taken for minimizing air pollution due to operation and transportation, noise pollution due to mechanical operations and plantations along the roads as well as safety zone for prevention of erosion and degradation. Around 180 skilled and unskilled labours shall be engaged for the operation. The project cost is estimated at ₹ 176.42 lacs with ₹ 12.34 lacs towards Environment Management Cost for M M Mathrusri.

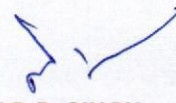
Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Global Tech Enviro Experts Pvt. Ltd., Bhubaneswar**, the SEAC prescribed "Terms of Reference (ToR)" for undertaking detailed EIA study in cluster approach as per Annexure - III.

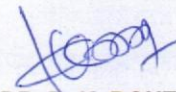
ITEM NO. 5

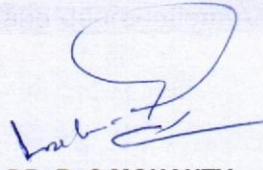
DISCUSSION ON 06 OLD COUNTRY LIQUOR PROPOSALS (DEFERRED CASES OF SEAC MEETING HELD ON 31.01.2018)

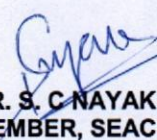
A part proceeding has already been prepared and sent to SEIAA, Odisha for consideration.



DR. B. K PATNAIK
CHAIRMAN, SEAC



SRI B.P. SINGH
MEMBER, SEAC



DR. D. K. ROUT
MEMBER, SEAC

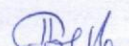

DR. R. C MOHANTY
MEMBER, SEAC


DR. S. C NAYAK
MEMBER, SEAC

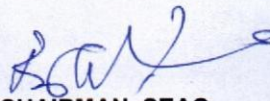

SRI A. C MOHANTY
MEMBER, SEAC



DR. D. SWAIN
MEMBER, SEAC


PROF. P.K. MOHANTY
MEMBER, SEAC


SRI S. BEHERA
MEMBER, SEAC

APPROVED


CHAIRMAN, SEAC



Secretary, SEAC

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR EXPANSION OF CEMENT GRINDING UNIT FROM 1.70 MTPA TO 4.20 MTPA AT VILLAGE – BISWALI, POST- BARUNIA, TAHASIL – TANGI, DISTRICT – CUTTACK OF M/S KAPILASH CEMENT MANUFACTURING WORKS (A UNIT OF OCL INDIA LTD.)

A. STANDARD TERMS OF REFERENCE (ToR)

1. Executive Summary
2. Introduction
 - i. Details of the EIA Consultant including NABET accreditation
 - ii. Information about the project proponent
 - iii. Importance and benefits of the project
3. Project Description
 - i. Cost of project and time of completion.
 - ii. Products with capacities for the proposed project.
 - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
 - iv. List of raw materials required and their source along with mode of transportation.
 - v. Other chemicals and materials required with quantities and storage capacities
 - vi. Details of Emission, effluents, hazardous waste generation and their management.
 - vii. Requirement of water, power, with source of supply, status of approval (energy balance with provision of renewable energy), material balance, water balance diagram for different purposes with water harvesting, man-power requirement (regular and contract)
 - viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided
 - ix. Hazard identification and details of proposed safety systems.
4. Site Details
 - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
 - ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet, (including all eco-sensitive areas and environmentally sensitive places)

- iii. Co-ordinates (lat-long) of all four corners of the site.
 - iv. Google map-Earth downloaded of the project site.
 - v. Map showing sample collection location
 - vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
 - vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
 - viii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included, (not required for industrial area). Land schedule to be furnished.
 - ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
 - x. Geological features and Geo-hydrological status of the study area shall be included.
 - xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided, (mega green field projects)
 - xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
 - xiii. R&R details in respect of land in line with state Government policy
5. Forest and wildlife related issues (if applicable):
- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department, (if applicable)
 - ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*)
 - iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
 - iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-a-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
 - v. Certificate from the concerned DFO that the location is not within the notified Eco-sensitive Zone of Kapilash Wildlife Sanctuary and exact distance of the


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project location from the boundary of Kapilash Wildlife Sanctuary.


- vi. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
- vii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM 10, PM2.5, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQPM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.


7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific


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- terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modeling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling - in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
 - iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
 - iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
 - v. Details of stack emission and action plan for control of emissions to meet standards.
 - vi. Measures for fugitive emission control
 - vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
 - viii. Proper utilization of fly ash (Hot Air Gas) shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
 - ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
 - x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
 - xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

- xii. Action plan for post-project environmental monitoring shall be submitted.
 - xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.
8. Occupational health
- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
 - iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
9. Corporate Environment Policy
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have 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? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Enterprise Social Commitment (ESC)
- i. Adequate funds (atleast 2.5 % of the project cost) shall be earmarked towards


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the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Specific Socio- economic development activities need to be elaborated upon including soil development programme.

12. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing existing operation of the project from SPCB shall be attached with the EIA-EMP report.
13. 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.
14. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
15. A tabular chart with index for point wise compliance of above TORs.

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES

1. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
2. If the raw materials used have trace elements, an Environment Management Plan shall also be included.
3. Raw material requirement comparing with existing requirement.
4. Land use breakup comparing with earlier land use breakup as submitted during Environmental Clearance application of existing plant.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Conversion of existing land kism to industrial use.
8. Detailed carbon balance / budget should be prepared.
9. Should ensure rail transport matching to the project completion.

10. Stations of Air and Water quality baseline study including other environmental parameters should be selected keeping in view the surrounding industries and proposed location such that only the environment parameter can be monitor specifically for the plant during operation period.

C. THE TORS PRESCRIBED SHALL BE VALID FOR A PERIOD OF THREE YEARS FOR SUBMISSION OF THE EIA-EMP REPORTS ALONG WITH PUBLIC HEARING PROCEEDINGS (WHEREVER STIPULATED) AS PER MOEF&CC, GOVT. OF INDIA O.M. NO. J-11013/41/2006-IA-II(I)(P), DATED 08.10.2014.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF
PETA DECORATIVE STONE MINES OVER AN AREA 24.664 ACRES / 9.981 HA AT
VILLAGE PETA, TAHASIL-MOTU, DISTRICT- MALKANGIRI OF
SRI K. SRINIVASA RAO.**

A. Specific conditions

1. The Project Proponent shall obtain consent from the State Pollution Control Board, Odisha and effectively implement all the conditions stipulated therein.
2. Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
3. Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass through the villages. The Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
4. Project Proponent shall ensure the safeguard and wellbeing of villagers and school, regular health monitoring of all residents in the area and the compliance Report shall be submitted to the Regional office of the Ministry and SEIAA, Odisha.

B. Standard conditions

1. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA, Odisha 5 years in advance of final mine closure for approval.
2. No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
4. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
5. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.
6. Mining shall be carried out as per the provisions outlined in the approved mining plan as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).
7. Protection of vegetation in the surrounding areas, and proper storage of solid waste, subgrade ore and their use have to be given priority during mining operation.

8. Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office and SEIAA, Odisha.
9. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board.
10. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.
11. Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
12. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
13. Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
14. There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
15. The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.
16. The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these

species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adapted to that micro climate.

17. The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
18. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.
19. Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
20. The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.
21. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.
22. As per the Company Act, the CSR cost should be 2 % of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio Economic Development of the neighborhood Habitats which could be planned and


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executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

23. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
24. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
25. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
26. The project authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
27. The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
28. A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
29. State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
30. The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.
31. The SEIAA, Odisha may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
32. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
33. The above mentioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY IN CLUSTER APPROACH AND INFORMATION TO BE INCLUDED IN THE EIA/EMP REPORT FOR DHUNKAPARA DECORATIVE STONE MINES OVER AN AREA OF 23.337 HA OR 57.667 ACRES AT VILLAGE- DHUNKAPARA, TAHASIL-POLASARA, DIST- GANJAM OF SMT. M. M. MATHRUSRI IN CLUSTER AREA OF 55.8 HA.

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/Topo sheet, 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 Topo sheet 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, 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


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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. Proposal for Common Non-Mineralized Zone for dumping of rejects / OB.
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



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indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with 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 Dept. 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 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 modelling 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 modelling 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. Environment Impact Assessment / Environment Management Plan document shall be in accordance with the provisions & generic structure stipulated in the EIA



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Notification 2006 dated 14.09.2006 & subsequent amendments.

25. EIA-EMP document shall be based on the maximum achievable mineral extraction of the mine and according to the impact of mines in cluster (within 500m) of the said mine.
26. EIA-EMP document shall include complete profile of the all the Project Proponent, implementing organization of mines in cluster (within 500m) of the said mine.
27. EIA-EMP document shall corer land description of project site (plot/survey / khasara number, village, tehsil, district, state & extent of land involved), of mines in cluster (within 500m) of the said mine.
28. EIA-EMP document shall include deposit conditions working depth mining scheme, details of machinery, backfilling of mine pit with type of blasting, drilling and explosives.
29. The general features such as surface drainage, mineral transportation and process flow of beneficiation plant, power and water supply shall be indicated.
30. The baseline environmental status within 10km radius from the boundary limit of mining lease area (buffer zone) and core zone with respect to air, water, noise and soil shall be covered of mines in cluster(within 500m) of the said mine.
31. Baseline data generation for one season (post monsoon) with respect to air, water, noise and soil shall be generated on the same sampling locations for obtaining EC
32. EIA-EMP document shall include land use pattern including agriculture, forest land, water bodies and settlements.
33. Existence of National Park, Wild Life sanctuary, migratory routes of wild animals within 10 km of mine lease area shall be brought out.
34. Topographical map of study area (core & buffer zone -10 km from the boundary of core zone) showing major topographical features shall be included.
35. EIA-EMP document shall include biological environment (flora and fauna) and socio-economic environment within the study area.
36. EIA-EMP document shall include anticipated impacts on land, air, noise and water environment and the mitigation measures of mines in cluster (within 500m) of the said mine.
37. Environmental Monitoring Programme and the environment management plan shall also be covered measures of mines in cluster (within 500m) of the said mine.
38. 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.
39. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
40. 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.

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41. 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.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
48. 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.
49. Occupational Health impacts of the Project should be anticipated and the 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.
50. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial


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measures should be detailed along with budgetary allocations.

51. 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.
52. 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.
53. 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.
54. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
55. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
56. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
57. 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.
58. Besides the above, the below mentioned general points are also to be followed
 - a) All documents to be properly referenced with index and continuous page numbering.
 - b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - c) 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.
 - d) Where the documents provided are in a language other than English, an English translation should be provided.
 - e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF 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.
 - g) 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



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documentation.

- h) 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.
59. **This Terms of References (TORs) is valid for a period of three years from the date of issue of TORs for submission of the EIA/EMP report. (This is in confirmation with the MoEF&CC, Govt. of India office memorandum No. J-11013/41/2006-IA-II(I) (part) dated 08.10.2014).**



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