

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 22<sup>ND</sup> NOVEMBER, 2021**

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The SEAC met on 22<sup>ND</sup> November, 2021 at 10:30 AM through Video Conferencing in Google Meet under the Chairmanship of Sri. B. P. Singh. The following members were present in the meeting.

1. Sri. B. P. Singh	-	Chairman
2. Dr. K. Murugesan	-	Secretary
3. Dr. D. Swain	-	Member
4. Prof. (Dr.) H.B. Sahu	-	Member
5. Sri. J. K. Mahapatra	-	Member
6. Sri. K. R. Acharya	-	Member
7. Prof. (Dr.) B.K. Satpathy	-	Member
8. Prof. (Dr.) P.K. Mohanty	-	Member
9. Dr. K.C.S Panigrahi	-	Member
10. Dr. Sailabala Padhi	-	Member

Draft proceeding of the meeting was finalized by the members through e-mail and also final proceeding of the meeting was confirmed by the members through e-mail. The agenda-wise proceedings and recommendations of the committee are detailed below.

**ITEM NO. 01**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S GRAND BAZAAR DEVELOPER LLP FOR EXPANSION OF RESIDENTIAL & COMMERCIAL PROJECT “GRAND BAZAAR” AT PLOT NO. 946, 948, 1017, 1021 & OTHERS, KHATA NO. 271, 272, MOUZA - NAUHATA, PS-CUTTACK SADAR, DIST-CUTTACK WITH TOTAL BUILT UP AREA 549414.47 SQMTR. OF SRI ASHISH GARG (DIRECTOR) - 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. The project falls under category “B” or activity 8 (b)-Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s Grand Bazaar Developer LLP has planned for expansion of Residential & Commercial Project “Grand Bazaar” at Plot No. 946, 948, 1017, 1021 & others Khata No.271 272, Mouza – Nauhata, P.S-Cuttack Sadar, No. 273, Tehsil- Cuttack, Dist- Cuttack, State- Odisha. Project is spread over a net plot area of 99751.63 m<sup>2</sup> (9.97 ha/24.64 acres) and will have total built-up area of 549414.47 m<sup>2</sup> (Existing -107323.8 m<sup>2</sup> + Proposed - 442090.67 m<sup>2</sup>).
4. M/s. Grand Bazaar Developer LLP. is located at Mouza – Nauhata, P.S-Cuttack Sadar, No. 273, Tehsil- Cuttack, Dist- Cuttack, State- Odisha. The location of project and study area can be seen in Survey of India Open Series No. F45T15 bounded by Latitude - 20° 22’ 36.06”N and Longitude - 85° 53’ 22.10”E. Project site is well connected with road. Site abuts the Puri canal road adjacent to it which is around 23.48 m wide site also connects to NH-5 which is adjacent to it towards East direction. Site connects to SH 60 at a distance of

1.93 km in North direction. Cuttack junction railway station is 9.83 km away in North. Biju Patnaik International Airport 15.64 km in South West. Nearest river is Kuakhai – 1.87km.

5. M/s Grand Bazaar Developer (Formerly known as M/s Tirumula Vinayak Developer Pvt. Ltd.) has obtained Environment Clearance for the existing part of the project vide letter no. 2132/SEIAA dated 24.09.2014.
6. Proposed Project involves the development of 27 numbers of Residential & Commercial Building (BLOCK A (A1-A14) –BLOCK O). Out of which 14 no.s of Blocks are Commercial (Block A (A1-A14), 11 no.s of block are Residential(Block- B,C,D,E,F,G,H,J,K,L,M,)), 1 Block is EWS flats (Block O) and 1 no.s of Residential cum commercial building(Block- N) with the allied facilities like Shops, Community center. Built-up area of project after development will be approx. 549414.47sq m. (Existing -107323.8m<sup>2</sup> + Proposed-442090.67m<sup>2</sup>)
7. The Building Details of the Project:

SL. NO.	DESCRIPTION	Existing Area (SQ M)	Proposed Area (SQ M)	Total (SQ M)
A.	Plot Area	99250.68	2050.23	101300.91
B.	Road Widening Area	1549.28	-	1549.28
C.	Net Plot Area (A-B)	97701.40	2050.23	99751.63
D.	Proposed Ground Coverage (37.67% of total area)	-	-	37579.18
E.	Proposed FAR (@4.019)	104185.18	296741.19	400926.37
F.	Lower basement 1 & 2, Upper basement and Non FAR Area (Stair case, Lift, Balcony, Ramp, Accessory Use)	3138.62	145349.48	148488.1
G.	<b>Built-up Area (E+F)</b>	<b>107323.8</b>	<b>442090.67</b>	<b>549414.47</b>
H.	Green Area (@20 % of plot area)	-	-	19950.2
I.	Road Area 15 %	-	-	14962.65
J.	Open/Paved Area	-	-	28161
K.	Parking Area(Commercial &Residential)	-	-	126204.70
L.	Height	-	-	72.90
M.	No of Dwelling Units	-	-	2302

8. **Water requirement:** Water requirement during construction phase is approx. 50-100 KLD. Source of water during construction phase will be private water tankers. Source of water during operation phase will be Municipal supply supplemented with ground water. Permission will be obtained from concerned authority prior extraction of ground water. Total water requirement during operation phase is 1584 KLD out of which Domestic water requirement is 1504 and fresh water requirement is 1046 KLD.
9. **Waste water details:** Total waste water generated is 1400 KLD .The wastewater will be treated in the STP of capacity of 1600 KLD provided within the complex. Treated water will be generated 1260 KLD which will be recycled within the project for flushing (458 m<sup>3</sup>/day),

landscaping (60 KLD), fire fighting (5 KLD), DG cooling (15 KLD) and construction in nearby areas/sewer e.t.c. 722 KLD will be used in case of non-monsoon period. In monsoon season will be recycled in with town ship for flushing (584 KLD), Reuse in plant premises (567 KLD) and car washing & internal Road (205 KLD).

10. **Power requirement:** The daily power requirement for the proposed Residential Project is preliminarily assessed as 13520 KW (Power from GRID – 12,816.96 KW and Power from Solar – 703.04 KW). In order to meet emergency, power requirements during the grid failure, there is provision of 2 nos. of DG set having 625 KVA (2 Nos.) capacities for power back up in the residential colony.
11. **Rain Water Harvesting:** Rain Water will be harvested through 60 nos. of recharging pits.
12. **Parking Requirement:** Total Parking Area provided = 126204/ 2564 ECS has been provided for vehicles parking in the project.
13. **Firefighting Installations:** Firefighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4).
14. **Green Belt Development:** Green area will be provided in 19950.2 m<sup>2</sup> (@ 20% of plot area) by using the local species.
15. **Solid Waste Management:** During operation phase, waste comprise of municipal waste. It is estimated that approx. 5992 kg/day will be generated from project site. Solid waste generated will be segregated into recyclable and non recyclable wastes. Recyclable waste will be sold to authorized vendors and the biodegradable/organic waste will be decompose and used as manure for landscaping and non-recyclable waste will be disposed off through the local vendor hired for waste management at site.
16. The total population of project after proposed will be 13065 persons including residential and floating population.
17. The estimated project cost is ` 500 Crores. Environment Management Cost = Rs 170 lakhs and annual recurring cost is 45 lakhs.
18. The Environment consultant **M/s P & M Solution, Noida** along with the proponent has made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s M/s P & M Solution, Noida**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – A** for conducting detailed EIA study.

- i. Certified existing EC compliance report and where were deviations (if any) with reasons for it be submitted.
- ii. Existing EC conditions / Existing features / proposed in reference to environmental parameters / natural resources and physical features (tabular) form be submitted.
- iii. Copy of Consent to Establish and Consent to Operate obtained from the State Pollution Control Board, Odisha for the existing project and Certified compliance report from the Board to the conditions stipulated in Consent to Establish and Consent to Operate for the existing project.
- iv. "Kissam" of the land with land scheduled & land use for the existing and proposed EC from the appropriate Revenue Authority be submitted.

- v. 3D features with dimensions of existing structures & proposed be submitted.
- vi. Water & waste water management with water balance (both existing & proposed) along with quantity of treated waste water being discharged now & proposed and to where it is discharged including the permission from the appropriate Drain / Nala / Sewer Authority. Internal drain network be submitted (existing & proposed) including its connectivity to the external Drain / Nala / Sewer with scale indicating start & fall out of such Drain / Nala including ownership of the land for the said connectivity.
- vii. Peak hourly rain fall of 4mm /hr is taken, which is far from reality. Therefore, rain water harvesting may not be done with peak hourly rain fall (maximum) of last 30 yrs date.
- viii. Gates, both entry & exist, with appropriate dimensions, both for residential & commercial complex be shown is the layout map with internal road network, fire tender corridor, pedestrian pathway at the gates be shown in the layout map with dimensions.
- ix. Provisions of solar power against total power demand be submitted with plan and exact calculations and as percentage of total demand of power.
- x. Basis of selection of no DG sets and its capacities, with locations in reference to predominant wind direction be submitted.
- xi. While calculating parking provisions is terms of ECS, provisions for two wheelers to be made including both for 4 wheelers & 2 wheelers and for floating populations / visitors to both commercial & residential complexes and open space parking.
- xii. Traffic study be undertaken through domain expert at entry & exit gates as well as at the intersecting point with public road and submit with traffic decongestion plan as and if necessary.
- xiii. Why some of water is 'ground water' is chosen when water bodies and available proximately for surface water use with provision of water Treatment plant?
- xiv. Comparative table showing all relevant parameters such as: built-up area, number of apartments, power load, Solar energy use %, Parking no of units and %, plantation %, Chimney position and height of DG set, drainage map with discharge points, ETP details, recharge pits, traffic load etc. in existing and in expansion proposed and the total after expansion.
- xv. Disaster Management plan as it is High flood level.
- xvi. Detail study report on biodiversity in that area.
- xvii. Recommendations from Fire fighting dept to be submitted.
- xviii. Greenbelt to be continuous around the project boundary.

## **ITEM NO. 02**

### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. MY HOME INDUSTRIES LTD FOR INSTALLATION OF CEMENT GRINDING UNIT OF 3.0 MTPA CAPACITY (1.5 MTPA IN PHASE-1 & 1.5 MTPA IN PHASE-2) OVER AN AREA 68 ACRES AT VILLAGE – BYREE, TAHASIL – DARPAN, DISTRICT – JAJPUR, ODISHA OF NILAMBAR MISHRA (AUTHORIZED SIGNATORY) – 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. The proposed mining project falls under category “B” Project or activity 3(b) as per EIA notifications 2006 and its subsequent amendments.
3. M/s. My Home Industries Ltd for Installation of Cement grinding unit of 3.0 MTPA capacity (1.5 MTPA in phase-1 & 1.5 MTPA in phase-2) over an area 68 acres at village – Byree, Tahasil – Darpan, District – Jajpur, Odisha of Nilambar Mishra (Authorized Signatory).
4. **Location and Connectivity** - The proposed site is spread over an area of 68 Acres or 27.51 Hectares out of which 5.41 Acres is private land. The geo coordinates of site are Latitude 20°36'43.92"N to 20°37'32.70"N and Longitude: 86°1'19.83"E to 86° 1'38.14"E & which falls on Toposheet No - F45U1, F45T14. The site is well connected by road and rail. Nearest National Highway is NH -16 at 3.68km. Byree Railway Station is at 1.10km from site. Nearest Airport is Biju Patnaik International Airport, Bhubaneswar – 45.65 km. Nearest habitation is Village Byree located at distance of 1.55km. Nearest city – Cuttack at 21.55km and Jajpur at 40.34km. Nearest River is Mendhakhai Nadi – 4.48 km and Birupa River at 7.33km. No national park or sanctuary is present within 10km radius from project site.
5. Raw Material requirement details is given in table below :

S.No.	Raw Material	Quantity (TPA)	Source	Mode of Transport
1.	Clinker	9,22,500	MHIPL, Telangana	Road / Rail
2.	Gypsum	75,000	Coromandel Fertiliser, Vizag / PPL, Paradeep	Road
3.	Fly ash	1,95,000	TATA Steel Kalinga Nagar	Road
4.	BF Slag	3,07,500	TATA Steel Kalinga Nagar	Road
5.	Coal	66,000	MCL, Talcher	Road

6. The annual production of cement is targeted at 1.5 MTPA during phase-1 and total 3.0 MTPA after completion of phase-2.
7. **Water Requirement** - The total requirement of water for the proposed cement grinding unit is 90KLD for both phases. The total water requirement will be met from the ground water through bore well & treated water will be re-used in green belt development. There is no waste water generation from the process. Domestic sewage to the tune of 12 KLD will be generated which will be primary treated (STP).

S.No.	Particulars	Requirement (KLD)
1	Industrial	60
2	Drinking & sanitation	15
3	Greenbelt & Dust Suppression	15
	<b>TOTAL</b>	<b>90</b>

8. **Power Requirement** - The grinding unit will require 12 MW (Phase-1: 10MW + Phase-2: 2MW) power to run the entire unit smoothly which shall be supplied by OPTCL / TPCODL. Silent DG set will be installed at the unit to fulfill power supply requirement during power failure.
9. **Employment Potential** – During construction phase, employment opportunity to approximately 350 persons is estimated. The total manpower requirement for the operation of the project will be 210 in phase-1 and additional 90 persons for phase-2.
10. **Greenbelt** - Greenbelt / Plantation will be done in about 33% (i.e 20 Acres) of the total project area.
11. **Waste Generation and Management** – Waste products generated are dust from APC Devices (100TPA), Ash from HAG (2500TPA) which will be completely reused in cement manufacturing process and used oil/lubricants (500litres/yr) will be sold to authorized processors. Sludge from settling tank of treatment system (0.5TPA) and Garbage or Food waste from Canteen (0.7TPA) will be used as manure for greenbelt development.
12. **Project Cost** - Capital cost of the project is estimated as ` 600 Crores (Phase-1: 410 Cr. + Phase-2: 190 Cr.). Cost for Environment Management Plan - Capital Cost: Rs 9 Crores and Recurring Cost: Rs 0.45 Crores/annum.
13. The Environment Consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – B** for conducting detailed EIA study:

- i. “Kissam” of the land is stated to be “Patita / Sorad” with no records available for “Sabak”. Therefore, land scheduled documents including “Sabak” record from appropriate Revenue Authority be submitted with conversion of land to “Industrial use”.
- ii. Separate layout with dimensions for proposed initial 1.5 MTPA & subsequent expansion to 3.0 MTPA capacity with showing physical features be submitted.
- iii. Since cement is a dust prone industry and other cement industries are operating in the vicinity besides proposal of one more Cement Industry in that area, Inversion / Dispersion Modeling study through domain expert of repute be undertaken and findings with mitigation measures be submitted.
- iv. Traffic study be undertaken by domain expert at entry and exit point to the plant, in between haulage road through village roads and interacting point with public road (SH/ NH) and traffic decongestion plan be submitted including total no. of vehicles (loaded / empty) per day for 1.5 MTPA & 3.0 MTPA to ply be submitted
- v. The vehicles are stated to move through village roads which are very narrow & not constituted to take thus load of vehicular traffic due to this proposed plant. As such, the following need to be complied:

- a) The village haulage roads to be very wide and strong to take this above additional land on due certification / endorsement of appropriate authority of the said roads.
- b) Permission to use those roads from the concerned BDO/ RD/ Works deptt as the case may be.
- vi. To submit the design of covered coal shed with garland drain and retaining wall around to arrest any possibility of ingress of coal fines to drain due to rain or cyclone.
- vii. Water harvesting management be submitted, taking highest peak hourly rain fall into consideration in last 30 years including water reservation (if any).
- viii. Internal drain network with dimensions including its connectivity with external drain be submitted including permission for the authority of such drain to take the load of liquid effulents of the plant (if any).
- ix. Provision of solar power be made & submitted with detail plan & calculation and as percentage of total power demand.
- x. STP of appropriate capacity & design be submitted.
- xi. Adoption of ISO 14001/ OHSAS be confirmed, including identification of occupational health hazards and SOP of mitigation measures be submitted.

### **ITEM NO. 03**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. RISHABH MINING PVT. LTD. FOR GANDHARGALA DECORATIVE STONE MINES OVER AN AREA OF 13.193 HA. LOCATED IN VILLAGE GANDHARGALA, P.S. TITLAGARH, DISTRICT BALANGIR, ODISHA OF SRI SUMANT CHAND JAIN (DIRECTOR) - 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. The project falls under category "B" or activity 1(a) – Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. Gandhargala quarry lease area over 32.60 acres or 13.193 hectares Khata no: 54, Plot no: 1/P, 298/P, 299/P in village Gandhargala, PS Titlagarh, district Balangir, Odisha was executed on 16.12.1999 for decorative stone for a period of 10 years in favour of M/s Rishabh Mining. As per Odisha Minor Mineral Concession Rule, 2016 the validity of lease is deemed to be extended upto 15.12.2029.
4. Modification of Mining Plan was approved by the Director of mines, Bhubaneswar vide letter No. letter no. 6244/DM, dated 18.08.2021.
5. **Location and Connectivity** - The area of mining lease area is located in the Survey of India Toposheet no. 64P/4, latitudes of 20°13'53.5" & 20°14'13.7"N and longitudes of 83°02'28.4" & 83°02'51.4"E. The land use pattern of the lease area extent of 13.193ha is rocky waste land under the revenue class of "Pathar Chatan & Dunguri".The ownership

entire lease area over 13.193ha is Government owned under the revenue head of “Abad Ajogya Anabadi”. Lease area is accessible from Titlagarh at a distance of 13.5 km through Titlagarh – Sindhekela road and a distance of 0.5 km Kuchha road up to lease area. The nearest railway station is located at Titlagarh in Odisha State at a distance of 14 km from the lease area nearest weekly local market sits on Thursday at Kholan (3.5km). There is no seasonal or perennial nala in the lease area. The region around the lease area is dotted with ponds for surface water and tube wells, for ground water. Tang jore a seasonal drain, exists at distance of 0.5 km South of lease area which flows due SE and discharges water in to Under River. The confluence point of Tang jore and Under River located at a distance of 2 km south of the lease area. Under River controls the drainage system of the region and flows due NE at a distance of 3 km south of the lease area.

6. Another mine of Midley Minerals over an area of 29.77 Ha located within 500m of project site. (EC granted vide letter no. SEIAA/2128 dated 27.10.2016). Hence the mines has not taken into cluster consideration.
7. As per DFO, Bolangir the lease area does not include any forest land.
8. The mines was under operation till 2013-14 and since then mines is closed due to requirement of Environment clearance. At present the mine is non operational as per direction of DDM, Mines due requirement of EC.
9. As per the requirement of OMMCR, 2006, a polishing unit was set up at Titlagarh in 2001 with support from IPICOL.
10. A court case was initiated by M/s Gallop Granite regarding ownership of the mines and the Hon’ble Highcourt directed for the operation of the mines on 2.11.2005.
11. After compliance to all formalities the Director of Mines, Odisha allowed for operation of mines on 10.12.2009. The mining operation was started in 2010 and continued till 2014.
12. **Method Of Mining** - The method of mining belongs to Opencast semi-mechanized method using machineries such as Excavator, Line offset compressor, jack-hammer, wire ropes and drill rod etc.
13. **Total Reserves & Production** - As per the reserve calculated the geological reserve of the lease area is 667227 cu.m and mineable reserve is 442,008 cu.m. The annual production from the lease area will be 6006 cu.m of decorative stone and total stone excavation from the lease area will be 20,020m<sup>3</sup>/ annum. Height and width of the benches will be maintained at 6m each and overall slope angle will be at around 45° with the horizontal. The details of the proposed production during the plan are given below the table,

**Table No.1.1 Details of the production during the Period (2011-2014)**

Year	Volume of Recoverable Decorative Stone (m <sup>3</sup> )
2011-2012	750.091
2012-2013	322.084
2013-2014	126.138
2014- Till date	Mine closed due to requirement of EC



**Table No.1.2 Details of the proposed production during the Period**

<b>Year</b>	<b>Volume of Recoverable Decorative Stone (m<sup>3</sup>)</b>	<b>Volume of Waste (m<sup>3</sup>)</b>
5 <sup>th</sup> Year	5005.00	14014.00

14. **Waste generation and utilization** - A total of 111,952m<sup>3</sup> (insitu) or 134,342m<sup>3</sup> (broken) wastes generated conceptually. These waste of 135,992m<sup>3</sup> will be dumped taking into account 10% more for safe & scientific dumping. Waste utilized for haul road construction: 1000m road length x 10m width = 10000 cu.m. Maintenance of the road connecting the lease area to Titlagarh - Sindhekela road (1400m x 10m width) = 21000 Cu,m and Waste to be dumped = 50595 cu.m. The waste will be dumped temporarily in the proposed area earmarked in the plan and will be sold as minor mineral after seeking required approvals from Govt. authorities.
15. **Green Belt** - There will be proposed for green belt in and along the periphery of the quarry lease area of during the plan period using 1200nos. of saplings (Amla, Neem, Mango,Gamhari, Kasi, Bahada, Jamun, and Bamboo) for rehabilitation over an area of 4800m<sup>2</sup> (safety zone) and in conceptual period 7700 nos. of saplings over an area 50840 m<sup>2</sup> (Quarry area and dumping areas).
16. **Water Requirement** - Total water requirement for the project will be 5KLD Drinking water will be made available by putting up a tube well in the lease area and carried to quarry site, stored in an earthen pot and kept under a shed to preserve coolness.2.5KLD for drinking purposes,1.5KLD for plantation and 1.5 KLD for dust separation.
17. **Power Requirement** - Power Requirement will be met through DG sets.
18. **Employment Potential** - There are total 48 personnel engaged in the mining operation which includes Management & supervisory persons 04 nos. and workers (skilled/semi-skilled/un-skilled) 44 nos.
19. The project cost is ` 400 lakhs.
20. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – C** for conducting detailed EIA study

- i. Dump management with detail calculations of waste utilization / inventory / sale including its chemical characteristics be submitted.
- ii. Water management with rain water harvesting along with calculation be submitted.
- iii. Soil profile study undertaken by approved domain expert be submitted.
- iv. Silt management including SOP for silt management for desliting of surrounding water body(s) / Agricultural land be submitted.
- v. Proposed “Zero discharge” mechanism be submitted.

- vi. "NOC" from CGWA / permission from W.R Deptt. Govt. of Odisha for use of ground water be submitted.
- vii. Proposed budget for CSR / CER as per the law with due approval of the Govt. authority be submitted.
- viii. Brief write up why the proposed quarry is not approached under cluster?
- ix. Details of plantation done earlier and proposed along with location details.
- x. Details of waste management along with the composition of waste is to be provided.

#### **ITEM NO. 04**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. RISHABH MINING PVT. LTD FOR DANGARAPARA DECORATIVE STONE MINES OVER AN AREA OF 4.047 HA IN VILLAGE DANGARAPARA NO. 97 UNDER TITILAGARH TAHASIL OF BALANGIR DISTRICT, ODISHA OF SRI SUMANT CHAND JAIN (DIRECTOR) - EC**

1. The proposal is for Environmental Clearance of M/s. Rishabh Mining Pvt. Ltd for Dangarapara decorative stone mines over an area of 4.047 Ha in Village Dangarapara No. 97 under Titilagarh Tahasil of Balangir District, Odisha of Sri Sumant Chand Jain (Director).
2. The project falls under category "B2" or activity 1(a) – Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. The Quarry/Mining lease is over an area 4.047 ha or 10.00 acres for decorative stone/Granite. Accordingly, the lease area of 10 acres has been depicted as Khata no.-86 and Plot no-9/917Village Dangarapara No. 97 under Titilagarh Tahasil of Balangir District, Odisha has been granted on 06.09.1999 for a period of 10 (ten) years in favour of M/s. Rishabh Mining Pvt. Ltd. The lease period was expired on 05.09.2009 and the lessee had applied for renewal of the same and has been recorded as RML No. 11, Dt. 19.05.2009. Meanwhile, OMMC Rules, 2016 came into force which is subsequently amended on 21.05.2018 and show-cause notice for rejection of RML vide letter no. 7984/S&M, dtd. 23.09.2020 has been issued from Department of Steel & Mines, Govt. of Odisha. The lessee has submitted the compliance letter dtd.10.10.2020 furnishing the evidence of setting up of cutting & polishing unit at Titilagarh, Dist. Bolangir, Odisha w.e.f.15.10.2001towards the requirement of the show cause and requested for the extension of the lease period. Based on this compliance and as per rule-8A of OMMC Amendment Rules, 2018 the lease is likely to be extended up to 06.09.2029.
4. Modification of Mining Plan was approved by the Director of mines, Bhubaneswar vide letter No. letter no. 6244/DM, dated 18.08.2021.
5. **Location and Connectivity** - The lease area is located in survey of India Toposheet No. 64 P/4 (F 44 X4) Latitude-20°12'22.22" N to20°12'29.13" N Longitude-83°04'00.93" E to 83°04'11.52" E. The entire M L area of 4.047Hectares is a barren hilly terrain and comes under Kissam Patita in village Dangarapara no 97 under Titilagarh Tahasil of Balangir District. The village Dangarapara97 is situated at a distance of 11 km from Titilagarh. The area is accessible from Balangir at a distance of 80 km on Titilagarh -Balangir road. The nearest place of importance is Titilagarh which lies at a distance of 12 km from the

area. Nearest rail-head is at Titilagarh. The area approach from NH 201 – 14.5 Km and SH 16 – 4.8 Km.

6. Approval of mining plan and PMCP in respect to Dangarapra Decorative stone mine over 10.00Acr. or 4.047 ha in village Dangarapara under Titilagarha Tahasil of Balangir district of Rishabh Mining Private Limited was approved by Directorate of Mines, Odisha, Bhubaneswar vide letter no. MXXII(b)-06/2021/ 5787/DM dated 03.08,2021.
7. **Method Of Mining** - The method of mining belongs to Opencast semi-mechanized method using machineries such as Excavator, Line offset compressor, jack-hammer, wire ropes and drill rod etc.
8. **Total Reserves & Production** - As per the reserve calculated the geological reserve of the lease area is 69315cu.m and mineable reserve is 31810cu.m. The annual production from the lease area will be 6000cu.m of decorative stone and total production from the lease area will be 29985cu.m. Height and width of the benches will be maintained at 6m each and overall slope angle will be at around 45° with the horizontal. The details of the proposed production during the plan are given below the table.

Year	Total Vol. of Excavation (m3)	Vol. of Decorative Stone (m3)	Vol. of Presently non-saleable Rock mass (m3)	Vol. of Waste (m3)	Vol. of Soil mixed Boulder (m3)	Total Vol. of Waste (m3)	Swell Vol. of Waste (m3)
<b>2021-22</b>	23970	5993	3596	14382	3162	17544	22807
<b>2022-23</b>	23970	5993	3596	14382	408	14790	19227
<b>2023-24</b>	10098	2525	1515	6059	714	6773	8805
	13900	3475	2085	8340	2200	10540	13702
<b>Sub-Total</b>	<b>23998</b>	<b>6000</b>	<b>3600</b>	<b>14399</b>	<b>2914</b>	<b>17313</b>	<b>22507</b>
<b>2024-25</b>	24000	6000	3600	14400	1000	15400	20020
<b>2025-26</b>	24000	6000	3600	14400	900	15300	19890
<b>TOTAL</b>	<b>119938</b>	<b>29985</b>	<b>17991</b>	<b>71963</b>	<b>8384</b>	<b>80347</b>	<b>104451</b>

9. **Waste generation and utilization** - During the total of rock mass 80347m<sup>3</sup> (in-situ) or 104451m<sup>3</sup> swollen (swell factor of 1.3) waste/rejects is likely to be generated during the plan period. These wastes will be utilized con-currently for construction and maintenance of road in the lease area. Remaining wastes will be sold time to time for construction purpose, after obtaining required permission of Govt. authorities. For temporary storing of these wastes, an area of 0.822 Ha has been earmarked in the north eastern part of the M.L area at an average of 3m height maintaining the overall slope of the dump at 22° presently non-saleable stones of 17991m<sup>3</sup> at an average of 3m height maintaining the overall slope of the dump at 22°.
10. **Green Belt** - There will be proposed for green belt in and along the periphery of the quarry lease area of during the plan period using 1000nos. of saplings (Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo) for rehabilitation over an area of 0.580m<sup>2</sup> (safety zone) and in conceptual period 980 nos. of saplings over an area of 1.232m<sup>2</sup> (around water reservoir and dumping area).

11. **Water Requirement** - Daily water requirement for the project will be 3500 liters per day which will be sourced by tanker from the Panchayat.
12. **Power Requirement** - Power Requirement will be met through DG sets.
13. **Employment Potential** - There are total 35 personnel engaged in the mining operation which includes include Permit manager-01, Mining mate-01, Office asst-02, Mechanical Engineer-1 (part time), Skilled Worker-12, Unskilled Worker-18.
14. The project cost is ` 200 lakhs.
15. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar**, the SEAC decided to take decision on the proposal after the proponent submits the following information/ documents:

- i. Dump management with detail calculations of waste utilization / inventory / sale including its chemical characteristics be submitted.
- ii. Water management with rain water harvesting along with calculation be submitted.
- iii. Soil profile study undertaken by approved domain expert be submitted.
- iv. Silt management including SOP for silt management for desliting of surrounding water body(s) / Agricultural land be submitted.
- v. Proposed "Zero discharge" mechanism be submitted.
- vi. "NOC" from CGWA / permission from W.R Deptt. Govt. of Odisha for use of ground water be submitted.
- vii. Proposed budget for CSR / CER as per the law with due approval of the Govt. authority be submitted.
- viii. Certificate from the concerned mining officer that there is no mine within 500m radius of proposed quarry.
- ix. Certificate from the concerned DFO that there is no forest land involved in the lease area.
- x. Details of waste management along with the composition of waste is to be provided.

#### **ITEM NO. 05**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KHEMABEDA DECORATIVE STONE MINES DEPOSIT OVER AN AREA OF 3.805 HECTARES OR 9.40 ACRES LOCATED IN VILLAGE KHEMABEDA UNDER BOIPARIGUDA TAHASIL OF KORAPUT DISTRICT OF SMT. DEVARA LATHA – EC**

1. The proposal is for Environmental Clearance for Khemabeda decorative stone mines deposit over an area of 3.805 Hectares or 9.40 Acres located in village Khemabeda under Boipariguda Tahasil of Koraput District of Smt. Devara Latha.
2. The project falls under category "B2" or activity 1(a) – Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.

3. The Department of Steel & Mines, Government of Odisha has issued the letter of Intent (LOI) vide Letter No.6547/S&M, Bhubaneswar dated 05.09.2019 for a period of 30 years. Subsequently, the precise area map along with boundary description & land schedule of the area has also been issued to the lessee vide letter No. 7500/DM., Dated 25.09.2019.
4. Mining Plan was approved by the Director of mines, Bhubaneswar vide letter No. letter no. 1448/DM dated 22.02.2021.
5. **Location and Connectivity** - The lease area is located in survey of India Toposheet No. 65 J/6 (E 44 K6) Latitude - 18°38'11.2"N to 18°38'19.7"N & Longitude 82°24'36.6"E to 82°24'48.8"E. The land use pattern of the mining lease area comes under the non forest agricultural land (Abada Ajogya Anabadi), bearing Khata no: 315, Plot no: 1337. The nearest railway stations is Koraput Railway Station at an aerial distance of 37 Km. The lease area can be approached from NH: 43 & SH: 25 at a distance of 36 Km & 6 Km, nearest Airport is Jeypore Airport which is at a distance of 85 Km. The area is devoid of any stream. The drainage pattern of the area is dendrite. As the region shows an undulated hilly topography, there is neither any seasonal nor any perennial nalla flowing within the applied mining lease area.
6. **Method Of Mining** - The method of mining belongs to Opencast semi-mechanized method using machineries such as Excavator, Line offset compressor, jack-hammer, wire ropes and drill rod etc.
7. **Total Reserves & Production** - As per the reserve calculated the geological reserve of the lease area is 238152cu.m and mineable reserve is 104656cu.m. The annual production from the lease area will be 1654cu.m of decorative stone and total production from the lease area will be 8112cu.m. Height and width of the benches will be maintained at 6m each and overall slope angle will be at around 45° with the horizontal. The details of the proposed production during the plan are given below the table.

Year	Total Vol. of excavation (m3)	Vol. of Waste@ 50% (m3)	Volume of Presently non saleable stone@ 20% (m3)	Vol. of Decorative Stone (Block & Khanda) @ 30% (m3)
1st	5200	2600	1040	1560
2nd	5408	2704	1082	1622
3rd	5408	2704	1082	1622
4th	5512	2756	1102	1654
5th	5512	2756	1102	1654
	<b>27,040</b>	<b>13,520</b>	<b>5,408</b>	<b>8,112</b>

8. **Waste generation and utilization** - During the total rock mass 13520m<sup>3</sup> (in-situ) or 16224m<sup>3</sup> swollen (swell factor of 1.2) waste/rejects is likely to be generated during the five year plan period. Depending upon the essentiality about 70% of these waste/rejects will be utilized con-currently for construction and maintenance of road in the lease area and will be disposed of as minor mineral other than decorative stone with the permission of the competent authority. The remaining wastes will be confined to be dumped on the demarcated area towards north-west over 0.132hectares at an average of 3m height maintaining the overall slope of the dump at 22°.
9. Water table occurs at a depth of 5m (at 215mRL) in rainy season and 8m (at 212mRL) in summer season from the general surface level (at 220mRL). The mine working is proposed up to 724mRL. So there will be no possibility of puncture of water table during the plan period.

10. **Green Belt** - There will be proposed for green belt in and along the periphery of the quarry lease area of during the plan period using 1500nos. of saplings for rehabilitation over an area of 7810m<sup>2</sup> (safety zone) and in conceptual period 910 nos. of saplings over an area of 4550m<sup>2</sup> (around quarry boundary and dumping area).
11. **Water Requirement** - Total water requirement for the project will be 5 KLD out of which 2 KLD will be required for drinking and domestic purpose and 1.5 KLD for dust suppression and 1.5 KLD for plantation purpose. Source of domestic water will be nearby village well.
12. **Power Requirement** - Power Requirement will be met through DG sets.
13. **Employment Potential** - There is total 25nos personnels engaged in the mining operation include 5nos Managerial Staff, 8nos Skilled worker and 12nos Unskilled Worker.
14. The project cost is ₹ 200 lakhs.
15. The Environment consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar**, the SEAC decided to take decision on the proposal after the proponent submits the following information/ documents:

- i. Dump management with detail calculations of waste utilization / inventory / sale including its chemical characteristics be submitted.
- ii. Water management with rain water harvesting along with calculation be submitted.
- iii. Soil profile study undertaken by approved domain expert be submitted.
- iv. Silt management including SOP for silt management for desilting of surrounding water body(s) / Agricultural land be submitted.
- v. Proposed "Zero discharge" mechanism be submitted.
- vi. "NOC" from CGWA / permission from W.R Deptt. Govt. of Odisha for use of ground water be submitted.
- vii. Proposed budget for CSR / CER as per the law with due approval of the Govt. authority be submitted.
- viii. Brief write up why the proposed quarry is not approached under cluster?
- ix. PM<sub>2.5</sub> and PM<sub>10</sub> data is to be submitted for the study area.
- x. Certificate from the concerned DFO that there is no forest land involved in the lease area.
- xi. Details of waste management along with the composition of waste is to be provided.

  
SECRETARY, SEAC

Approved  
  
CHAIRMAN, SEAC

**STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR TOWNSHIP/ AREA DEVELOPMENT PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT**

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- 1) Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.
- 2) Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
- 3) Examine baseline environmental quality along with projected incremental load due to the project.
- 4) Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
- 5) Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project
- 6) Submit the details of the trees to be felled for the project.
- 7) Submit the present land use and permission required for any conversion such as forest, agriculture etc.
- 8) Submit Roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.
- 9) Ground water classification as per the Central Ground Water Authority.
- 10) Examine the details of Source of water, water requirement, use of treated waste water and prepare a water balance chart.
- 11) Rain water harvesting proposals should be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water. Examine details.
- 12) Examine soil characteristics and depth of ground water table for rainwater harvesting.
- 13) Examine details of solid waste generation treatment and its disposal.
- 14) Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
- 15) DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment. Examine and submit details.
- 16) Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.
- 17) A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
- 18) Examine the details of transport of materials for construction which should include source and availability.

- 19) Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
- 20) Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
- 21) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 22) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 23) **This Terms of References (TORs) is valid for a period of four years from the date of issue of TORs for submission of the EIA/EMP report.**



**TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR M/S. MY HOME INDUSTRIES LTD FOR INSTALLATION OF CEMENT GRINDING UNIT OF 3.0 MTPA CAPACITY (1.5 MTPA IN PHASE-1 & 1.5 MTPA IN PHASE-2) OVER AN AREA 68 ACRES AT VILLAGE – BYREE, TAHASIL – DARPAN, DISTRICT – JAJPUR, ODISHA OF NILAMBAR MISHRA (AUTHORIZED SIGNATORY)**

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**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 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, SO<sub>2</sub>, NO<sub>x</sub>, 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 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 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 FOUR YEARS FOR SUBMISSION OF THE EIA-EMP REPORTS ALONG WITH PUBLIC HEARING PROCEEDINGS (WHEREVER STIPULATED).**

**TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN THE EIA/EMP REPORT**

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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. Name and area of other mines within 500 meter of the lease area.
4. 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.
5. 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).
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.



11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
17. 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.
18. 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.
19. 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 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.

20. 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.
21. 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).
22. 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.
23. 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.
24. 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.
25. Environment Impact Assessment / Environment Management Plan document shall be in accordance with the provisions & generic structure stipulated in the EIA Notification 2006 dated 14.09.2006 & subsequent amendments.

26. 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.
27. 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.
28. 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.
29. 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.
30. The general features such as surface drainage, mineral transportation and process flow of beneficiation plant, power and water supply shall be indicated.
31. 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.
32. 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
33. EIA-EMP document shall include land use pattern including agriculture, forest land, water bodies and settlements.
34. Existence of National Park, Wild Life sanctuary, migratory routes of wild animals within 10 km of mine lease area shall be brought out.
35. Topographical map of study area (core & buffer zone -10 km from the boundary of core zone) showing major topographical features shall be included.
36. EIA-EMP document shall include biological environment (flora and fauna) and socio-economic environment within the study area.
37. 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.
38. Environmental Monitoring Programme and the environment management plan shall also be covered measures of mines in cluster (within 500m) of the said mine.
39. 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.
40. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
41. 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.
42. 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.

43. 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.
44. 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.
45. 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.
46. 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.
47. 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.
48. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
49. 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.
50. 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.
51. 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.

52. 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.
53. 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.
54. 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.
55. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
56. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
57. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
58. 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.
59. 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 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.
60. **This Terms of References (TORs) is valid for a period of four years from the date of issue of TORs for submission of the EIA/EMP report after conducting public hearing.**