

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 16th OCTOBER, 2020**

The SEAC met on 16th October, 2020 at 11:00 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. Prof (Dr.) H. B. Sahu	-	Member
3. Dr. D. Swain	-	Member
4. Prof. (Dr.) P.K. Mohanty	-	Member
5. Sri. J. K. Mahapatra	-	Member
6. Sri. K. R. Acharya	-	Member
7. Prof.(Dr.) B.K. Satpathy	-	Member
8. Dr. Sailabala Padhi	-	Member
9. Dr. K.C.S Panigrahi	-	Member

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

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KATHAJODI RIVER SAND QUARRY, UNIT-37, BADAMBADI SAND MINES ON RIVER KATHAJODI OVER AN AREA OF 5.06 HA. / 12.50 AC. IN VILLAGE - UNIT-37, BADAMBADI, TAHASIL - CUTTACK SADAR, DISTRICT - CUTTACK OF TAHASILDAR CUTTACK SADAR - 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. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category "B1".
3. The proposed Badambadi Sand Bed Mines project is for river bed sand mining on Kathajodi River at village Unit-37, Badambadi under Cuttack Sadar Tahasil of Cuttack District, Odisha, over an area of 5.06Ha or 12.50Acres.
4. The Quarry lease has been proposed to be granted by the Tahasildar, Cuttack Sadar to the applicant (successful bidder) for minor mineral (River Sand) for five years. As per the Director of Geology, Odisha, the mining plan has been approved by the Deputy Director of Geology, Cuttack, Odisha vide memo no.3156/DG on dated 21.05.2020.
5. The lease area is located in survey of India toposheet no 73 H/3 and bounded between the latitudes of 20°27'01.69" N to 20°27'08.51" N and longitudes of 85°52'53.47" E to 85°53'02.56" E. and is in Khata No.-540, Plot No. – 661 & 663, Kisam - Nadi. The area is located at a distance of 1 Km from the district head quarter Cuttack and is at a distance of 26 Km from the state capital Bhubaneswar. Nearest road is Cuttack-Paradip road which is located at a distance of 2.5Km towards North-West direction from the lease area. The site is well connected to NH-5 at a distance of 1.5Km. Nearest railway station is Cuttack railway Station which is located at distance of 2.5 Km towards North-North-East direction from the lease area. Nearest airport is Bhubaneswar airport at a distance of 22Km from the mining lease area. Nandankanan zoological Park is at 15km. Nearest

Densely Populated area (Badambadi) – 1.5km.

6. The Geological Reserve is 455274cum and Mineable Reserve is 375003cum. Total production within plan period is 225000cum and 45000cum per annum. Opencast manual method will be adopted for sand mining. Excavation & loading of sand into the Hyva/trucks/tractors will be done by manual means. Total area of the lease area is 5.06Ha out of which 4.17 Ha areas will be use for excavation of sand within the plan period and 0.89Ha areas dedicated for safety zone/plantation purpose.
7. Water Requirement – Water requirement for the project will be 3 KLD. For drinking & domestic purpose water requirement will be 2 KLD, water requirement for Green belt development and dust suppression will be 1 KLD. Ground water will be used for drinking and domestic purpose whereas surface water will be used for green belt development and dust suppression.
8. Power Requirement - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
9. Employment Potential: Total number of employee will be around 50 which includes skilled, semi-skilled & unskilled category in the mine.
10. The project cost is 10 lakhs.
11. 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 – A** for conducting detailed EIA study.

- (i) Distance of all nearby mines in Topomap.
- (ii) Relocation of mines for safeguard of sensitive areas nearby.
- (iii) Certificate from the concerned Tahasildar about the geo coordinates and distance of the Bridge from the boundary of the lease area and other mines located within 500 meter from the periphery of the lease boundary.
- (iv) Details of river embankment / bank protection management including its distance from the lease boundary.
- (v) Approach road for mineral transportation to be provided i.e. from lease boundary to the haulage road. Details of haulage road with length and width to be provided.
- (vi) Distance between haulage road and nearby village road to be indicated.
- (vii) Responsibilities of perpetual perennial maintenance of haulage road to be specified including the village road if used for the purpose of transportation of sand including the public road / public village road till it intersects SH / NH etc.
- (viii) Mitigation measures to be taken to ensure not to disturb free flow of river.
- (ix) Traffic study and management in reference to area occupied by sensitive facilities (educational institutions, Ring road nearby) through an expert of repute to be submitted.
- (x) Operation time i.e. time for movement of empty and loaded vehicles to be mentioned.
- (xi) Any electric HT line within 500 meters of the lease area if existing to be indicated.

- (ii) Distance of lease boundary from nearby habitation duly certified by the Tahasildar.
- (xiii) Certified copy of half yearly condition wise compliance Report on Environmental Clearance conditions submitted to MoEF&CC, Regional Office, Bhubaneswar.
- (xiv) NOC from concerned competent Authority for usage of road for transportation of sand and the lease boundary is close to Ring Road.
- (xv) Annual replacement study report is to be submitted.
- (xvi) Details of year-wise past production.
- (xvii) Details of safety zone w.r.t lease area and river bank / embankment.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KATHAJODI RIVER SAND QUARRY, BAGULAPADA MINES ON RIVER KATHAJODI OVER AN AREA OF 5.26 HA. / 13.00 AC. IN VILLAGE - BAGULAPADA, TAHASIL - CUTTACK SADAR, DISTRICT - CUTTACK OF TAHASILDAR CUTTACK SADAR - 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. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category "B1".
3. The proposed Bagulapada Sand Bed Mines project is for river bed sand mining on Kathajodi River at village- Bagulapada under Cuttack Sadar Tahasil of Cuttack District, Odisha, over an area of 5.26Ha or 13.00Acres.
4. The Quarry lease has been proposed to be granted by the Tahasildar, Cuttack Sadar to the applicant (successful bidder) for minor mineral (River Sand) for five years. As per the Director of Geology, Odisha, the mining plan has been approved by the Deputy Director of Geology, Cuttack, Odisha vide memo no.3161/DG on dated 21.05.2020.
5. The lease area is located in survey of India toposheet no. (73 H/3) & between latitude of 20°26'14.38N to 20°26'21.22.15"N and longitudes of 85°56'21.52" E to 85°56'33.57"E and is in Khata No.-26 , Plot No.- 116, Kisam: Nadi. The area is located at a distance of 2 Km from the district head quarter Cuttack and is at a distance of 26 Km from the state capital Bhubaneswar. Nearest Railway station is Cuttack Railway station at a distance of 5 Km from the project site. The nearest road is Cuttack-Paradip Road located at a distance of 1Km. The site is well connected to NH-5 at a distance of 5Km & NH-42 at a distance of 10.31 km. Nearest airport is Bhubaneswar airport at a distance of 20Km from the mining lease area. Nandankanan zoological Park is at 15km. Nearest Densely Populated area (Nayabazar) – 2.5km.
6. The Geological Reserve is 151758 cum and Mineable Reserve is 116670cum. Total production within plan period is 70000cum and 14000cum per annum. Opencast manual method will be adopted for sand mining. Excavation & loading of sand into the trucks/tractors will be done by manual means. Total area of the lease area is 5.26Ha out of which 3.889 Ha areas will be use for excavation of sand within the plan period and 0.971Ha areas dedicated for safety zone/plantation purpose
7. Water Requirement – Water requirement for the project will be 3 KLD. For drinking &

domestic purpose water requirement will be 2 KLD, water requirement for Green belt development and dust suppression will be 1 KLD. Ground water will be used for drinking and domestic purpose whereas surface water will be used for green belt development and dust suppression.

8. Power Requirement - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
9. Employment Potential: Total number of employee will be around 21 which includes skilled, semi-skilled & unskilled category in the mine.
10. The project cost is 10 lakhs.
11. 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 – A** for conducting detailed EIA study.

- (i) Distance of all nearby mines in Topomap.
- (ii) Certificate from the concerned Tahasildar about the geo coordinates and distance of the Bridge from the boundary of the lease area and other mines located within 500 meter from the periphery of the lease boundary.
- (iii) Details of river embankment / bank protection management including it's distance from the lease boundary.
- (iv) Approach road for mineral transportation to be provided i.e. from lease boundary to the haulage road. Details of haulage road with length and width to be provided.
- (v) Distance between haulage road and nearby village road to be indicated.
- (vi) Responsibilities of perpetual perennial maintenance of haulage road to be specified including the village road if used for the purpose of transportation of sand including the public road / public village road till it intersects SH / NH etc.
- (vii) Mitigation measures to be taken to ensure not to disturb free flow of river.
- (viii) Traffic study and management in reference to area occupied by sensitive facilities (educational institutions, NH-5, bus stop nearby) through an expert of repute to be submitted.
- (ix) Operation time i.e. time for movement of empty and loaded vehicles to be mentioned.
- (x) Any electric HT line within 500 meters of the lease area if existing to be indicated.
- (xi) Distance of lease boundary from nearby habitation duly certified by the Tahasildar.
- (xii) Certified copy of half yearly condition wise compliance Report on Environmental Clearance conditions submitted to MoEF&CC, Regional Office, Bhubaneswar.
- (xiii) NOC from concerned competent Authority for usage of road for transportation of sand.
- (xiv) Study report on Geological strata, soil and sand deposit.
- (xv) Study of rate of replenishment in that area w.r.t 10 years data available in **CWC**.

(vi) Details of year-wise past production.

(xvii) Details of safety zone w.r.t lease area and river bank / embankment.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KATHAJODI RIVER SAND QUARRY, RAJAHANSA ON RIVER KATHAJODI OVER AN AREA OF 5.46HA. /13.50 AC. IN VILLAGE – RAJAHANSA, TAHASIL - CUTTACK SADAR, DISTRICT - CUTTACK OF TAHASILDAR CUTTACK SADAR - 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. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category "B1".
3. The proposed Kathajodi River Sand Quarry project is for river bed sand mining on Kathajodi River at village Rajahansa under Cuttack Sadar Tahasil of Cuttack District, Odisha, over an area of 5.46Ha or 13.50Acres.
4. The Quarry lease has been proposed to be granted by the Tahasildar, Cuttack Sadar to the applicant (successful bidder) for minor mineral (River Sand) for five years. As per the Director of Geology, Odisha, the mining plan has been approved by the Deputy Director of Geology, Cuttack, Odisha vide memo no. 3164/DG on dated 21.05.2020.
5. The lease area is located in survey of India toposheet no 73 H/3 and bounded between the latitudes of 20°25'20.98" N to 20°25'35.89"N and longitudes of 85°57'14.63"E to 85°57'23.15"E. in Khata No.-960 , Plot No.- 857, Kisam - Nadi. Nearest road is Cuttack-Paradip road which is located at a distance of 3 Km from the lease area. The site is well connected to NH-5 and NH- 42 at a distance of 6 Km and 15 Km respectively from the lease area. Nearest railway station is Cuttack railway Station which is located at distance of 6 Km from the lease area. Nearest airport is Bhubaneswar airport at a distance of 22Km from the mining lease area. Nandankanan zoological Park is at 12km. Nearest Densely Populated area Rajahansa – 3km.
6. The Geological Reserve is 112836cum and Mineable Reserve is 101549cum. Total production within plan period is 60000cum and 12000cum per annum. Opencast manual method will be adopted for sand mining. Excavation & loading of sand into the 4 trucks and 6 tractors will be done by manual means. Total area of the proposed mine is 5.46Ha, out of which 4.23Ha areas will be use for excavation of sand within the plan period and 1.23 Ha areas dedicated for safety zone/plantation purpose.
7. Water Requirement – Water requirement for the project will be 3 KLD. For drinking & domestic purpose water requirement will be 2 KLD, water requirement for Green belt development and dust suppression will be 1 KLD. Ground water will be used for drinking and domestic purpose whereas surface water will be used for green belt development and dust suppression.
8. Power Requirement - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
9. Employment Potential: Total number of employee will be around 17 which includes skilled, semi-skilled & unskilled category in the mine.

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Nodal Officer, SEAC

10. The project cost is ₹ 10 lakhs.

11. 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 – A** for conducting detailed EIA study.

- (i) Distance of all nearby mines in Topomap.
- (ii) Certificate from the concerned Tahasildar about the geo coordinates and distance of the Bridge from the boundary of the lease area and other mines located within 500 meter from the periphery of the lease boundary.
- (iii) Details of river embankment / bank protection management including it's distance from the lease boundary.
- (iv) Approach road for mineral transportation to be provided i.e. from lease boundary to the haulage road. Details of haulage road with length and width to be provided.
- (v) Distance between haulage road and nearby village road to be indicated.
- (vi) Responsibilities of perpetual perennial maintenance of haulage road to be specified including the village road if used for the purpose of transportation of sand including the public road / public village road till it intersects SH / NH etc.
- (vii) Mitigation measures to be taken to ensure not to disturb free flow of river.
- (viii) Traffic study and management in reference to area occupied by sensitive facilities (educational institutions, NH-5, bus stop nearby) through an expert of repute to be submitted.
- (ix) Operation time i.e. time for movement of empty and loaded vehicles to be mentioned.
- (x) Any electric HT line within 500 meters of the lease area if existing to be indicated.
- (xi) Distance of lease boundary from nearby habitation duly certified by the Tahasildar.
- (xii) Certified copy of half yearly condition wise compliance Report on Environmental Clearance conditions submitted to MoEF&CC, Regional Office, Bhubaneswar.
- (xiii) NOC from concerned competent Authority for usage of road for transportation of sand.
- (xiv) Study report on Geological strata, soil and sand deposit.
- (xv) Study of rate of replacement in that area w.r.t 10 years data available in **CWC**.
- (xvi) Details of year-wise past production.
- (xvii) Details of safety zone w.r.t lease area and river bank / embankment.

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR NUAPALLI SAND QUARRY OVER AN AREA OF 7.867 HA./19.44 AC. ON KUSUMI RIVER LOCATED AT VILLAGE-NUAPALLI, TAHASIL- BHAPUR, DIST-NAYAGARH OF SRI. RAJESH KUMAR PRADHAN – 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. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category "B1".
3. The proposed Nuapalli Sand Quarry project is for river bed sand mining on Kusumi River at at Village-Nuapalli, Tahasil- Bhapur, Dist-Nayagarh, Odisha, over an area of 7.867 Ha./19.44 Ac.
4. The Quarry lease has been proposed to be granted by the Tahasildar, Bhapur to the applicant (successful bidder) for minor mineral (River Sand) for five years vide order no. 2192 dated- 03.08.2018. The Mining Plan of the Mining Project has been approved by Deputy Director of Geology, Directorate of Geology, Bhubaneswar, Odisha vide memo no.11786 on dated 20.11.2018.
5. The lease area is bounded by longitude: 85° 10' 03.00" E to E 85° 11' 01.20" & latitude: 20° 14' 03.00"N to N 20° 14' 48.70". It is a part of area covered in the Survey of India Toposheet No. 73-H/4. in Khata No.- 231, Plot No - 01, 859 Kisam - Nadi. The lease area is located at a distance of 8.0 km from Tahasil Bhapur. Village Nuapalli is at a distance of 1.0 km from to the mining area. District Nayagarh is at a distance of 28.0 km. Khandapada is the nearest place from the lease area for all infrastructure facilities like hospital, school, bus service, market. The east coast railway line is at a distance 28.0 kms from the lease area. NH-224 is at a distance of 26.0 km and SH-1 is at a distance of 24.0 km from the lease area. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10Kms radius of the lease area.
6. The Geological Reserve is 48840 cum and Mineable Reserve is 26017cum. The Mining will be done with semi mechanized method for excavation & loading into trucks/ tractors for transport to the users' destination. The quarry will be worked for five years. The average proposed rate of production is 2800 Cum per annum (in five years, total production will be 12000Cu.m). Excavation & loading of sand into the trucks/tractors will be done by manual means.
7. **Water Requirement** – Water requirement for the project will be 1.5 KLD for drinking & domestic purpose, green belt development and dust suppression. Ground water will be used for drinking and domestic purpose whereas surface water will be used for green belt development and dust suppression.
8. **Power Requirement** - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
9. **Employment Potential** - Total number of employee will be around 17 which includes skilled, semi-skilled & unskilled category in the mine.
10. The project cost is 25 lakhs.
11. The Environment consultant **M/s Ardra Consulting Services Pvt. Ltd. Bhubaneswar**

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Nodal Officer, SEAC

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 Ardra Consulting Services Pvt. Ltd. Bhubaneswar**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – A** for conducting detailed EIA study.

- (i) Certificate from the concerned Tahasildar about the geo coordinates and distance of the Bridge from the boundary of the lease area and other mines located within 500 meter from the periphery of the lease boundary.
- (ii) Details of river embankment / bank protection management including it's distance from the lease boundary.
- (iii) Approach road for mineral transportation to be provided i.e. from lease boundary to the haulage road. Details of haulage road with length and width to be provided.
- (iv) Distance between haulage road and nearby village road to be indicated.
- (v) Responsibilities of perpetual perennial maintenance of haulage road to be specified including the village road if used for the purpose of transportation of sand including the public road / public village road till it intersects SH / NH etc.
- (vi) Mitigation measures to be taken to ensure not to disturb free flow of river.
- (vii) Traffic study and management in reference to area occupied by sensitive facilities (educational institutions, NH-5, bus stop nearby) through an expert of repute to be submitted.
- (viii) Operation time i.e. time for movement of empty and loaded vehicles to be mentioned.
- (ix) Any electric HT line within 500 meters of the lease area if existing to be indicated.
- (x) Distance of lease boundary from nearby habitation duly certified by the Tahasildar.
- (xi) Study report on extent of down streaming.
- (xii) Details of proposed barrage and bridge near to lease area.
- (xiii) Dense river bank plantation to prevent erosion.
- (xiv) Details of safety zone w.r.t lease area and river bank / embankment.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR MADHAPUR SAND QUARRY OVER AN AREA OF 12.50 AC. / 5.059 HA. ON RIVER MAHANADI LOCATED AT VILLAGE – MADHAPUR, TAHASIL – BHAPUR, DISTRICT - NAYAGARH OF SRI. BENUDHAR PRADHAN – 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. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category "B1".
3. The proposed Madhapur Sand Quarry project is for river bed sand mining on Mahanadi River at village Madhapur under Bhapur Tahasil of Nayagarh District, Odisha, over an

area of 5.059Ha or 12.50 Acres.

4. The Madhapur Sand Quarry lease has been proposed to be granted by the Tahasildar, Bhapur to the applicant (successful bidder) for minor mineral (River Sand) for five years. The Mining Plan of the Mining Project has been approved by Deputy Director of Geology, Bhubaneswar, Odisha vide memo no.6390/DG on dated 18.10.2017.
5. The lease area is bounded by longitude: $85^{\circ} 13' 49.20''E$ to $85^{\circ} 13' 55.20''E$ & latitude: $20^{\circ} 21' 14.20''N$ to $20^{\circ} 21' 23.10''N$. It is a part of the area covered in the Survey of India Toposheet No. 73-H/3 in Khata No- 1237, Plot No - 2, Kisam - Nadi. The lease area is located at a distance of 10.0 km from Tahasil Bhapur. Village Madhapur is at a distance of 1.0 km from to the mining area. District Nayagarh is at a distance of 30.0 km. Bhapur is the nearest place from the lease area for all infrastructure facilities like hospital, school, bus service, market. The east coast railway line is at a distance 35.0 kms from the lease area. NH-224 is at a distance of 25.0 km and SH-65 is at a distance of 6.0 km from the lease area. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10Kms radius of the lease area.
6. The Geological Reserve is 30200cum and Mineable Reserve is 22800cum. The Mining will be done with semi mechanized method for excavation & loading into trucks/ tractors for transport to the users' destination. The quarry will be worked for five years. The average proposed rate of production is 4000 Cu. m per annum (in five years, total production will be 14730Cu.m). Excavation & loading of sand into the trucks/tractors will be done by manual means.
7. **Water Requirement** – Water requirement for the project will be 1 KLD for different purposes like domestic, Dust suppression, plantation purposes. Water will be withdrawn from ground water source.
8. **Power Requirement** - No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes.
9. **Employment Potential** - Total number of employee will be around 10 which includes skilled, semi-skilled & unskilled category in the mine.
10. The project cost is 10 lakhs.
12. The Environment consultant **M/s Ardra Consulting Services Pvt. Ltd. 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 Ardra Consulting Services Pvt. Ltd. Bhubaneswar**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – A** for conducting detailed EIA study.

- (i) Certificate from the concerned Tahasildar about the geo coordinates and distance of the Bridge from the boundary of the lease area and other mines located within 500 meter from the periphery of the lease boundary.
- (ii) Details of river embankment / bank protection management including it's distance from the lease boundary.
- (iii) Approach road for mineral transportation to be provided i.e. from lease boundary to the haulage road. Details of haulage road with length and width to be provided.
- (iv) Distance between haulage road and nearby village road to be indicated.

- (v) Responsibilities of perpetual perennial maintenance of haulage road to be specified including the village road if used for the purpose of transportation of sand including the public road / public village road till it intersects SH / NH etc.
- (vi) Mitigation measures to be taken to ensure not to disturb free flow of river.
- (vii) Traffic study and management in reference to area occupied by sensitive facilities (educational institutions, NH-5, bus stop nearby) through an expert of repute to be submitted.
- (viii) Operation time i.e. time for movement of empty and loaded vehicles to be mentioned.
- (ix) Any electric HT line within 500 meters of the lease area if existing to be indicated.
- (x) Distance of lease boundary from nearby habitation duly certified by the Tahasildar.
- (xi) Study report on extent of down streaming.
- (xii) Details of proposed barrage and bridge near to lease area.
- (xiii) Dense river bank plantation to prevent erosion.
- (xiv) Details of safety zone w.r.t lease area and river bank / embankment.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. HINDUSTAN MINERALS INDUSTRIES FOR BADA AGULA DECORATIVE STONE MINES OVER AN AREA OF 16.131HA./ 36.86AC. IN VILLAGE - BADA AGAULA, TAHASIL - MUNIGUDA, DIST - RAYAGADA, ODISHA OF SRI HEMANT KUMAR ROUT (SUBMITTED UNDER CLUSTER APPROACH -TOTAL AREA UNDER CLUSTER-28.15 HA) – TOR

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study in cluster approach for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. As per EIA Notification dated 14.09.06 and its subsequent amendments S.O.141 (E) on dated 15.1.2016, the project falls under, Category "B1".
3. This is a proposal for Terms of Reference for Bada Agula Decorative Stone Mines over an area 16.131ha and 12.019 ha (Total area under cluster- 28.15Ha) in Bada Agula Village, Tahasil- Muniguda in the District- Rayagada, Odisha of Sri Hemant Kumar Rout (Proprietor).
4. A cluster of Decorative stone mines at- Bada Agula, covering an area of 28.15ha in village Bada Agula under Muniguda tahasil of Rayagada District, Odisha owned by same lessee and leased out for 30yrs as follows.
 - a) M/s. Hindustan Minerals Industries, M L area allocated 16.131 ha, Khata No- 61 Plot No- 518/p,578/p.
 - b) M/s. Hindustan Minerals Industries, M L area allocated 12.019 ha. Khata No- 61 Plot No- 582/p.
5. The mining plan along with the PMCP of both quarries was approved by Joint Director of Mines, Director of Mines, Odisha, Bhubaneswar vide Letter No. MXXII-(a) 7/2019/5186/DM on dated 30.07.2020 and Letter No. MXXII-(a) 6/2019/5163/DM on dated 29.07.2020 for a period of five years. The total estimated Geological reserve is for 1600932 m³ (recoverable) and Mineable reserve is 852729 m³ (recoverable). The production from plan period will be maximum 13200 m³ in plan period. Geologically the reserve is categorized as Granite gneiss known as Lavender Blue in the name of commercial granite.

6. The entire M.L area is in hilly waste land under the revenue class of Pahad 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 L/D bore machines, jack hammer drill, compressor, hydraulic excavators & tippers. The major activities of mining will include removal of waste material; block cutting/splitting, dressing, and loading & transportation. Decorative stone will be produced in the form of blocks/khanda stone. However, the proposed rate of production will be 13200Cum per annum of saleable decorative stone after the quarry is fully developed. The overall stripping ratio of decorative stone to waste/rejects will be 1:1.50. Individual benches will be kept at 6m height (max) with minimum width of 6m. The overall slope angle will be at 45° with the horizontal. The mine working is proposed up to 322mRL for Bada Agula 16.131 Ha. and 319 mRL for Bada Agula 12.019 Ha.
7. The M.L area is covered in Survey of India Toposheet no E44F10 & E44F6(65M/10) and bounded by Latitude:19°38'47.10"N to 19°38'13.30"N and Longitude-83°33'25.40"E to 83°33'41.10"E and Latitude: 19° 38' 46.30" N to 19° 38' 15.40" N and Longitude-83° 33' 42.20"E to 83° 33' 52.60"E. The lease area is accessible from Muniguda at a distance of about 10.6Km by metalled road towards south. Nearest Villages from the ML area are Kantarabali (1.2Km) & Bada Angula (1.4Km). The nearest railway station is at Muniguda, located at a distance of 7.6km. Nearest airport is Biju Pattnaik International Airport, Bhubaneswar at a distance of 245.4 km away from the lease area. Village Bada Agula is at a distance of 1.4km to the mining lease area where all the infrastructure facilities like hospital, school, bus service, market, etc. is readily available.
8. The details of the mines in the cluster are estimated to excavate a total ROM of 60840cum, waste 24336cum, non saleable stone 12168 cum & decorative stone 24296cum.
9. **Water Requirement** – Total water requirement: 5 KLD (Each mines) 10 KLD for Cluster. Dust suppression: 3.0 KLD, Plantation: 3.0 KLD and Drinking/ Domestic: 4 KLD. Source is Tanker for Domestic purpose and RWH for dust suppression and plantation.
10. **Power Requirement** will be met through DG sets.
11. **Employment Potential** - Total number of employee will be around 56 which includes skilled, semi-skilled & unskilled category in the mine.
12. **Green Belt** – Cluster Mines has planned to develop green belt over an area of 3.253 ha in 7.5m safety zone along lease boundary at the end of plan period with 1000 trees consisting of Mango, Neem, Mahaneem, Chakunda, Accacia etc
13. The **project cost** of custer mines is Rs.450 lakhs.
14. 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 – B** for conducting detailed EIA study in cluster approach.

- (i) Detailed calculation of area for dump with dimensions and slope.
- (ii) Detailed amount of maximum stock stored as waste along with composition of waste and its management.

- (iii) Periodically testing of waste water.
- (iv) Distance of haulage road from village road.
- (v) Size of garland drain, retaining wall around waste dump with justification. Adequacy of area assigned for waste dump.
- (vi) Undertaking by project proponent for not disturbing the general flow of seasonal nala.
- (vii) Periphery of cluster, width of greenbelt proposed and no of plants to be planted be furnished
- (viii) Mitigation measures to reduce impact on mining as water reservoir is close to project site.
- (ix) Details of drainage plan proposed.
- (x) Details of silt management be submitted.
- (xi) Present use of land.
- (xii) NOC of Panchayat for usage of haulage road/Panchayat road.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. HINDUSTAN MINERALS INDUSTRIES FOR BADA AGULA DECORATIVE STONE MINES OVER AN AREA OF 12.019 HA. IN VILLAGE - BADA AGAULA, TAHASIL - MUNIGUDA, DIST - RAYAGADA, ODISHA OF SRI HEMANT KUMAR ROUT (SUBMITTED UNDER CLUSTER APPROACH - TOTAL AREA UNDER CLUSTER-28.15 HA) – TOR

The proposal was considered in item no. 6 of the agenda above for issue of ToRs for undertaking detailed EIA study in cluster approach. Hence, no separate ToRs is required to issue for this proposal.

Secretary, SEAC


21.10.2020
Chairman, SEAC

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

A. STANDARD TOR FOR MINING PROJECT

1. The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors..
2. Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
3. 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.
4. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
5. 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.
6. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
7. Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
8. 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.
9. 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 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


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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.
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 alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
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. 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.
26. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
27. 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.
28. 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.



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29. 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.
30. Details of any stream, seasonal or otherwise, passing through the tease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be.
31. 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.
32. 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.
33. 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.
34. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
35. 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.
36. 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.
37. 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.
38. 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.

39. 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.
40. 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.
41. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
42. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
43. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
44. 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.
45. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per MoEF&CC, Govt. of India O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
46. The Action Plan on the compliance of the recommendations of the CAG as per MoEF&CC, Govt. of India Circular No. J-11013/71/2016-IA.I (M), dated 25,10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
47. Compliance of the MoEF&CC, Govt. of India Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgement of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.

B. 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


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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.

- C. The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report after conducting public hearing.**

TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY IN CLUSTER APPROACH AND INFORMATION TO BE INCLUDED IN THE EIA/EMP REPORT FOR M/S. HINDUSTAN MINERALS INDUSTRIES FOR BADA AGULA DECORATIVE STONE MINES OVER AN AREA OF 16.131HA/ 36.86AC. IN VILLAGE - BADA AGAULA, TAHASIL - MUNIGUDA, DIST - RAYAGADA, ODISHA OF SRI HEMANT KUMAR ROUT (SUBMITTED UNDER CLUSTER APPROACH - TOTAL AREA UNDER CLUSTER-28.15 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. 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.


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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,


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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 cover 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


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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.



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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


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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.**


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