

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 5<sup>th</sup> November, 2022**

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The SEAC met on 5<sup>th</sup> November, 2022 at 10:30 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

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|------------------------------|---|---------------------|
| 1. Sri. Sashi Paul           | - | Chairman            |
| 2. Dr. K. Murugesan          | - | Secretary           |
| 3. Dr. Rabi Narayan Patra    | - | Member (through VC) |
| 4. Dr. Chittaranjan Panda    | - | Member              |
| 5. Prof. (Dr.) H.B. Sahu     | - | Member (through VC) |
| 6. Prof. (Dr.) Abanti Sahoo  | - | Member (through VC) |
| 7. Dr. Ashok Kumar Sahu      | - | Member              |
| 8. Er. Fakir Mohan Panigrahi | - | Member              |
| 9. Prof. (Dr.) B.K. Satpathy | - | Member              |
| 10. Dr. K.C.S Panigrahi      | - | Member (through VC) |
| 11. Shri. Jayant Kumar Das   | - | 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 OF ENVIRONMENTAL CLEARANCE FOR CHANDIPOSHI IRON ORE BLOCK (OPENCAST MECHANIZED) (CAPACITY:1.0 MILLION TONS PER ANNUM (ROM) IRON ORE, TOTAL EXCAVATION 1.0945 MTPA INCLUDING 0.0945 MTPA WASTE 2X 250 TPH MOBILE CRUSHING AND 3X350 TPH MOBILE SCREENING PLANTS, ML AREA: 131.580 HECTARE) AT VILLAGE: BADAINDUPUR, SANUA, SARGIGARH & TEHREI TEHSIL KOIRA, DISTRICT SUNDARGARH, ODISHA FOR M/S. RUNGTA MINES LTD OF SRI HIRAK MAZUMDER- EC.**

1. This proposal is for environmental Clearance of M/s. Rungta Mines Ltd. for Chandiposhi Iron ore block (opencast mechanized) (Capacity - 1.0 Million Tons per Annum (Rom) Iron Ore, Total excavation 1.0945 MTPA including 0.0945 MTPA waste 2x 250 TPH Mobile crushing and 3x350 TPH Mobile screening plants, ML area: 131.580 Hectare) At Village: Badaindupur, Sanua, Sargigarh & Tehrei, Tahasil - Koira, District - Sundargarh, Odisha of Sri Hirak Mazumder.
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. M/s Rungta Mines Limited was declared as the "Preferred Bidder" for Chandiposhi Iron Ore Block as per auction conducted by Government of Odisha. The Project area comprises of 83.602 ha forest land and 47.978 ha non forest land. The project area is presently a virgin land. The mining plan is already approved by IBM for a period from 2024-25 to 2028-29. As per the estimation of Government of Odisha, total quantity of mineral resources reserved in

this area is 47.07 million tonnes. Total 23 mines are working within 10 km study area of proposed Chandiposhi Iron Ore Block of M/s Rungta Mines Ltd.,

4. **Location and connectivity:** The proposed mine is located in villages of Badaindupur, Sanua, Sargigarh & Tehrei, Tahasil Koira, District Sundergarh, Odisha. The mining lease area falls in the Survey of India Toposheet no. 73 G/5 (open series map F45N5). The area is bounded by Latitude 21°53'20.76434" to 21°54'14.12851" N and Longitude 85°17'16.48253" to 85°18'04.32181" E. The area is well connected by a panchayat road running from Koira to Rugudi through the SE part of the block which finally meets the NH 520 road. The nearest railway station is Jaroli at 13.4 km, NE. The nearest airport is situated at Ranchi, Bhubaneswar and Jharsuguda.
5. **Topography:** Chandiposhi Iron ore block is located on an area with undulating topography. The topography is predominantly rugged terrain with small hillocks and intervening shallow valleys in central and southern portions. The Tehrei nala basin is present in north and northwestern portion. Plain land used for agriculture is present in northeastern side. There is also a road in the northern portion of the mine lease. The Iron ore block is a virgin area.
6. There is 83.602-hectare forest land (Revenue + DLC) within lease area (core zone). Application for seeking Forest Clearance has been submitted by the company and is under process.
7. **TOR Details** - The mining project Chandiposhi Iron Ore Block has been granted Terms of Reference (TOR) for preparation of EIA/EMP Report vide MOEF&CC's letter no. IA-J-11015/8/2022-IA-II(NCM) dated 11 March 2022.
8. **Public Hearing Details** - The State Pollution Control Board, Odisha, Bhubaneswar issued an advertisement in newspaper in Odia – "Dharitri" and in English -"The Times of India" on 28.06.2022 to conduct the public hearing of M/s Rungta Mines Ltd. for Chandiposhi Iron Ore Block on 03.08.2022 at 10:00 am. During public hearing, most of the people welcomed the project and raised few points related to generation of employment opportunity, provision of good school & education, water supply facility, establishment of healthcare unit, skill development, etc.
9. **EIA/EMP Report** : The proponent has submitted final EIA/EMP report to SEIAA, Odisha for final appraisal for grant of Environmental Clearance as the proposal is presently coming under Category B1 project as per MoEF&CC, Govt. of India notification vide SO 1886(E), dated 20<sup>th</sup> April 2022.
10. **Mining Process** - The proposed project will be an Opencast Mechanized Iron Ore Block having production capacity 1.0 MTPA and total excavation will be 1.0945 MTPA (1 MTPA of ROM Iron ore and 0.0945 MTPA of waste/overburden) in a mining lease area and project area of 131.58 ha. The conventional opencast mining is adopted with deep hole drilling and blasting with excavation by hydraulic excavator and dumper combination. Fully mechanized opencast mining method shall be adopted with excavator, loader, dumpers etc. for excavation work. Height & width of individual benches is proposed to be kept as 9m and 15m respectively. The conventional opencast method with utilization of excavator of capacity up to 4.2 m<sup>3</sup>, dumpers of capacity up to 40 MT, rock-breakers, deep-hole drilling and blasting will be adopted.

11. **Green belt** - A green belt in the 7.5 m wide safety zone along the periphery of the mine lease has been proposed. Multi-tier green belt shall also be established in a 10m buffer zone along the public road passing through the north of the project as well as Tehrei nala passing through the northwest and north of the project.
12. **Water requirement** - Total water requirement is estimated to be around 251 KLD for the mining operation, which included 187 KLD from surface water and 64 KLD from ground water.
13. **Power requirement** - Mine will receive power at 200 KVA from the nearby line of TP Western Odisha Distribution Limited. In case of power failure, diesel generators of total capacity 200 KVA will be used.
14. **Manpower** - The manpower required for the mine in unskilled, semi-skilled, skilled & other categories will be 176 persons of whom 75 will be statutory.
15. **Traffic density** survey was conducted at two locations namely, NH-520 near Kashira village (5.2 km, NW) and on road via Sargigarh village (0.5, NE). Traffic volume recorded was 10900 and 428 passenger car units per day, respectively. Based on observed traffic data and existing road width, current utilisation of maximum capacity of the road is 36.3% at NH-520 and 10.7% at Sargigarh.
16. **Flora and fauna** - Within core zone 47 species of trees, 21 species of shrubs, 7 species of climbers and 5 species of grasses and herbs are present. 3 species of mammals, 3 species of reptiles, 10 species of birds were recorded from the core zone.
17. **Project cost** - The estimated project cost is Rs. 152 crores.
18. The Environment consultant **M/s Centre for Envotech and Management Consultancy Pvt Ltd. (CEMC), Bhubaneshwar** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant **M/s Centre for Envotech and Management Consultancy Pvt Ltd. (CEMC), Bhubaneshwar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – A** and following specific conditions. **However, the Environmental Clearance shall be issued by the SEIAA, Odisha after receipt of Stage-I Forest Clearance from the proponent as stipulated in MoEF&CC, Govt. of India office memorandum no. J-11013/41/2006-IA.II(I), dated 09.09.2011 and office memorandum no. J-11013/41/2006-IA.II(I), dated 18th May, 2012.**

- a) The proponent shall utilize different grades of iron ore (ROM) and waste generated according to IBM guidelines.
- b) The proponent shall carryout compensatory afforestation for the project site.
- c) The proponent shall adopt additional measures for dust suppression.
- d) Conversion of Gochar / Grazing land involved in lease area shall be made before going for mining activity.
- e) Rainwater harvesting structures shall be implemented.
- f) The lessee shall take adequate safeguard measures to ensure the free flow of the 3 nearby tributaries/nallahs.

- g) The EC is limited to secondary crushing and screening operations (dry process) as per approved mining plan. Under no circumstances, the lessee shall carry out any beneficiation activity (wet process) of low grade ore.
- h) All the ores (45-55) and +55 grades shall be used and ores & rejects shall be transported as per approved mining plan for their use. Only temporary stacks shall be operated. The mine shall avoid segregation & generation of fines and flow of silt during rainy session.
- i) Green processes like Controlled drilling, Environment friendly blasting, safe transportation and conveying, silt-management shall be followed as per guidelines.

## **ITEM NO. 02**

### **PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S RUNGTA MINES LTD FOR PURHEIBAHAL IRON ORE BLOCK OVER AN AREA OF 64.337 HA FOR PRODUCTION OF 1.0MTPA OF IRON ORE WITH TOTAL EXCAVATION-1.064 MTPA. (ROM IRON ORE - 1.0 MTPA + OVERBURDEN 0.064 MTPA) LOCATED AT VILLAGES - BADAINDUPUR & SANINDUPUR, TAHASIL- KOIRA, DISTRICT-SUNDERGARH OF SRI HIRAK MAZUMDER-EC**

1. This proposal is for environmental clearance of M/s Rungta mines Ltd. for Purheibahal Iron ore block over an area of 64.337ha. for production of 1.0MTPA of Iron ore with total excavation - 1.064MTPA (ROM Iron ore: 1.0MTPA + overburden 0.064MTPA) located at villages - Badaindupur & Sanindupur, Tahasil - Koira, District - Sundergarh of Sri Hirak Mazumder.
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. The proposed project is a green field project for Production of 1.0 MTPA of Iron Ore with total Excavation 1.064 MTPA (ROM Iron Ore: 1.0 MTPA + Over Burden: 0.064 MTPA) of Purheibahal Iron Ore Block of M/s Rungta Mines Limited spread over 64.337 Ha in village Badaindupur and Sanindupur, Tahasil : Koira, District : Sundergarh, Odisha.
4. **Location:** The area is bounded by the latitudes from 21° 54' 58.9174" to 21° 55' 34.84448" N and longitudes from 85° 17'24.51774ll to 85° 18' 00.84765E as per DGPS survey of India Toposheet No. 73G/5 (F45N5). The project is located at village Badaindupur and Sanindupur under Koira Tehsil in Sundargarh district of Odisha State.
5. The lease area does not fall under any CRZ areas. Proximity to CRZ areas is much beyond 10 kms from the lease boundary. The M.L area over 64.337ha comprises forest & non-forest land. According to the land schedule the total forest land is 29.642 Ha and the non-forest land is 34.695 Ha.
6. **TOR Details** - The Terms of Reference (ToR) was issued on 07.02.2022 vide letter no. 3995/SEIAA, by SEIAA, Odisha.
7. **Public Hearing Details** - Public Hearing for Pureibahal Iron Ore Block was conducted on 03-08-2022 at open ground near Sanindpur Chowk in Sanindpur Village of Sundergarh District, Odisha. The public notice for the same was advertised in newspaper "The Times of India", & "The Sambad", on 28-06-2022. The issues raised during Public Hearing process are Air & Noise Pollution, Employment of local Youths and Peripheral developments, which are been duly addressed by the Management and a strategy for on-the ground implementation of the proposed plans.

8. **Mining Process:** It is an Open Cast Mechanized method of mining with the deployment of major earth moving machineries like excavators, dumpers, pay loaders & DTH drills and dumpers etc. The operation will be on general shift basis. The mine lease hold area is 64.337 Ha. The mining plan was approved by IBM vide letter No MP/A/20-ORI/BHU/2021-22 dtd. 24/11/2021.
9. **Green belt:** During the plan period about 12.99ha. of dump, mineral storage area and haulage roads shall be planted with approximately 20,000 nos of trees. During conceptual period, maintenance of plantation/re-grassing will be done. Further, during ensuing plan period it has been planned to make gap filling plantation within safety zone area of lease boundary to achieve 2500 nos/ha of tree density.
10. **Water requirement:** The total water requirement for the mine as per approved mining plan will be around 236 KLD for environmental maintenance and drinking & domestic purpose. It will be sourced from Teherai Nalla.
11. **Power requirement:** The power requirement will be met through DG sets of capacity 500 KVA. Possibilities will be explored to procure electric power from State Electricity Board as and when required from the power line of 11 KVA that is passing through the lease area.
12. **Manpower :** The total manpower 140 numbers will be required for the project.
13. **Project Cost:** Capital cost of the project is estimated to be Rs. 157 Crores, and capital cost for EMP is Rs. 2.47 Crores and annual recurring cost is Rs. 0.76 Crores.
14. **Environment Consultant:** The proponent along with the consultant **M/s Centre for Envotech and Management Consultancy Pvt Ltd, Bhubaneswar**, made a detailed presentation before the SEAC.

Considering the information furnished and the presentation made by the consultant **M/s Centre for Envotech and Management Consultancy Pvt Ltd. (CEMC), Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – B** and following specific conditions. **However, the Environmental Clearance shall be issued by the SEIAA, Odisha after receipt of Stage-I Forest Clearance from the proponent as stipulated in MoEF&CC, Govt. of India office memorandum no. J-11013/41/2006-IA.II(I), dated 09.09.2011 and office memorandum no. J-11013/41/2006-IA.II(I), dated 18th May, 2012.**

- a) The proponent shall utilize different grades of iron ore (ROM) and waste generated according to IBM guidelines.
- b) The proponent shall carryout compensatory afforestation for the project site.
- c) The proponent shall adopt additional measures for dust suppression.
- d) Conversion of Gochar / Grazing land if involved in lease area shall be made before going for mining activity.
- e) Rainwater harvesting structures shall be implemented.
- f) The lessee shall take adequate safeguard measures to ensure the free flow of the nearby tributaries/nallahs if any.

- g) The EC is limited to secondary crushing and screening operations (dry process) as per approved mining plan. Under no circumstances, the lessee shall carry out any beneficiation activity (wet process) of low grade ore.
- h) All the ores (45-55) and +55 grades shall be used and ores & rejects shall be transported as per approved mining plan for their use. Only temporary stacks shall be operated. The mine shall avoid segregation & generation of fines and flow of silt during rainy session.
- i) Green processes like Controlled drilling, Environment friendly blasting, safe transportation and conveying, silt-management shall be followed as per guidelines.

### **ITEM NO. 03**

#### **PROPOSAL OF ENVIRONMENTAL CLERANCE FOR 'WORLDCLASS ALUMINIUM PARK' OF VENDANTA (SPECIAL PURPOSE OF VEDANTA LIMITED & IDCO,ODISHA) OVER 55.75ACRES OVER AN PROPOSED BUILT-UP AREA – 1,45,000 SQM. LAND IN AT-BHURKAMUNDA, PO-SRIPURA, DIST-JHARSUGUDA, ODISHA OF SRI SUNIL GUPTA-EC**

1. This proposal of environmental clearance for "WORLDCLASS ALUMINIUM PARK OF VEDANTA" (special purpose of Vedanta limited & IDCO, Odisha) over 55.75 acres over an proposed built-up area – 1,45,000 sqm. land in at - Bhurkamunda, PO - Sripura, Dist- Jharsuguda, Odisha of Sri Sunil Gupta.
2. The project falls under category "B" or activity 8 (a)-Building & Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. **Project Details:** The proposed built-up area is 1,45,000 m<sup>2</sup> and plot area - 225,612.2 m<sup>2</sup> or 55.75 acres or 22.56Ha. of land have been earmarked for development of the Proposed Aluminium Park. For this project: 15.35Acre of Govt. Land (Non-Forrest Land; Unhabitated barren land / Settlements) from IDCO and 40.40Acre Private Land (Semi Agriculture Land).
4. **Location and Connectivity:** The project site is located in Jharsuguda District, in Odisha. over 55.75 acres of contiguous land at Jharsuguda, Odisha. It is located on the northeastern side of Vedanta Ltd. existing smelting plant. Site co-ordinates are Latitude 21.81379 and Longitude 84.06779. At present access to the site is through an approach road which is also used by the Sterlite Technologies. It is a 2- lane road at a distance of ~ 3.5 km from NH49 & 9 km from SH10. A 4-lane approach road from proposed downstream aluminium park has been planned. The land parcel of the park falls about 3.5 km from NH 49, which runs from Bilaspur in Chhattisgarh to Kolkata in West Bengal. The State Highway (SH 10), which connects Sambalpur – Jharsuguda – Sundargarh – Rourkela in Odisha, is about 9 km from the Park.
5. **Seismic Zone:** The project falls under seismic zone-II as per IS1893 (Part-1):2002 indicating Moderate to lower damage risk zone. The buildings will be designed as earthquake resistant and comply with the required IS specifications.
6. **Water requirement:** The fresh water requirement is 575 KLD + recycled water requirement is 2142 KLD. Approximately 2182 KLD of wastewater will be generated during the operational phase from domestic as well as from Industrial use. This wastewater generated will be treated in a Common Effluent Treatment Plan having capacity of 3000 KLD and domestic waste water will be treated in a STP having capacity of 100 KLD (2X50 KLD).

7. **Power Requirement:** Power supply requirement of proposed Aluminium Park is around 30 MVA. Incoming power to the proposed project site can be tapped from the existing 4 x 600 MW of Vedanta
8. **Green belt:** The green belt will be developed 34.2 % of the total plot area. Total Green Belt measures 19.8 Ac (34.2 % of the Total Plot Area).
9. **Project Cost:** The project cost is around ` 150 Crores and EMP cost is around ` 188 lakhs & Recurring Cost is ` 5.55 lakhs.
10. The proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar**, made a detailed presentation before the SEAC.
11. The committee observed the following:
  - a) The proposed Aluminium park does not fall under item 7 (c) of schedule of EIA Notification, 2006 and amendment thereafter as the proposed Aluminium park would not be housing any project/activity falling under category A or B, and at the same time, the total area involved is less than 500 ha.
  - b) The MoEF&CC, Govt. of India EIA Notification 2006 and amendment thereafter also stipulates (as clarified by MoEF&CC, Govt. of India vide letter no. 21-139/2015-IA-III, dated 17.08.2016) that if the area of the proposed industrial park / estate is less than 500 ha., but involves building and construction projects more than 20,000 m<sup>2</sup> and/or development area more than 50 ha. the same would be covered under item 8 (a) and 8 (b) of the schedule to the Notification and thus requiring prior EC from the regulatory authority in the State.
  - c) The proposed aluminium park will be set up in an area of less than 500 ha. and not housing any industry of category 'A' or 'B'. But, since the construction area (i.e. 1,45,000 m<sup>2</sup>) is more than 20,000 m<sup>2</sup>, it will be treated as activity listed at Serial No. 8 (a) of Schedule of EIA notification, 2006 and amendment thereof. The committee also opined that public hearing is not required if the project is coming under serial no. 8 (a) and 8(b) of Schedule of EIA notification, 2006.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar**, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – C and following additional condition.**

- a. The developer shall develop and furnish SOP for management of secondary dross and SPV management for transporting hot metal for safety and submit the same to SPCB for compliance monitoring.

## ITEM NO. 04

### **PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR 2X 30 MW INDEPENDENT POWER PRODUCERS THERMAL POWER PLANT LOCATED AT VILLAGE– BAINCHUA, TEHSIL – TANGI, DISTRICT–CUTTACK, STATE-ODISHA BY M/S MAA DURGA THERMAL POWER COMPANY LIMITED OF SRI ANIMESH GUPTA-TOR**

1. The proposal was considered by the committee to determine the “Terms of Reference (ToR)” for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. M/s Maa Durga Thermal Power Company Ltd., for proposed for Terms of Reference for 2x 30 MW Independent Power Producers Thermal Power Plant located at Village– Bainchua, Tahasil – Tangi, District – Cuttack, State - Odisha of Sri Animesh Gupta.
3. As per the EIA notification dated 14th September, 2006, and amended thereafter, the proposal falls in category “B” & Activity 1(d) - Thermal Power Plants.
4. Earlier, Environment Clearance was obtained by M/s Maa Durga Thermal Power Company Limited, from SEIAA, Odisha Vide Ref No – SEIAA/337, dated: -04.07.2011 for 60 MW (2 x 30 MW) coal base power plant valid upto 03.07.2018 and Consent to Establish was valid upto 03.01.2016.
5. Company started the construction work for the project but due to financial condition they couldn't complete the construction of project. Approx. 85% work has been completed as per the earlier granted EC and plant is shutdown since 2018. Thereafter, National Company Law Tribunal (NCLT) initiated the public auction for current plant and M/s Radhe Ram Shaw, M/s Virajaa Power & Steels Pvt. Ltd. and M/s United Ferrocast Private Limited were successful bidder of the auction.
6. The proponent has applied afresh for ToRs for EIA study as they were not able to complete the project work as well as had not gone for operation during validity period of Environmental Clearance.
7. **Location and Connectivity:** The project site is located at Village – Bainchua, Tahasil – Tangi, District–Cuttack, State-Orissa. The site and study area falls in the survey of India, Topo Sheet No–F45U2 and bounded by Latitude: 20°34'34.48"N and Longitude: 86° 01'12.04"E. The location is in Seismic Zone-III. The project site is located at the distance of about 0.23 km towards South-East from NH-16, NH-55 is at 9.9 km towards WSW direction and SH - 9A is at 9.9 km in SW direction. The nearest village is Bainchua, which is located about 0.4 km towards NE direction. The nearest railway station is Kapilash Road Junction Railway Station which is located at about 3.3 km in SW direction and nearest AirPort is Biju Patnaik International Airport, Bhubaneswar, which is situated at about 41 km in SW direction. Nearest river is Birupa River at 3.0 km towards SSE direction and Lake is at 6.3 km towards NW direction from the project boundary. There are no Wildlife sanctuaries & National Park within 15 km radius. Nearest forest Panchbhya PF is at 2.6 km in NW direction.



8. **Land Use:** Total land is 32.13 Acre. The land area statement of proposed project is given as below:-

Sl. No.	Description	Area (ac.)
1.	Plant & Machinery	12.32
2.	Ash Pond Area	3.67
3.	Green belt area	10.60
4.	Water Reservoir	2.34
6.	Admin, Parking etc.	3.2
	Total	32.13

9. **Water Requirement:** Water Requirement is approx. 2237 KL/day for boilers, auxiliary units, domestic use, generator, BFWP and air compressor, cooling, drinking etc. Source of water will be surface water from Birupa river. Permission has been obtained from Department of water resources, Government of Odisha Vide Letter No-13741/WR, Irr-II-WRC-65/13, dated: 08.05.2013. The maximum demand of drinking water is assessed to be 5 KLD. No water will be discharged outside the project site.
10. **Power requirement:** The power requirement for the project is 3.0 MW and will be sourced from the Chandikhol Grid. One standby DG sets of 750KVA & 750 KVA D G sets will be provided.
11. **Waste Generation:** Ash generated due to combustion of coal will be the main industrial/solid waste generated from the project. With average daily coal requirement of 1728 TPD, it is estimated that about 864 MTPD (considering 50% ash) of ash shall be generated daily. Fly ash will be directly sold to the nearest cement plants like RAMCO, OCL etc. falls near to plant location. MoU is in the process with these plants. The project will have effluent treatment plant and various systems for recycle and reuse of treated effluents. Domestic solid waste will be disposed as per applicable norms.
12. **Green Belt:** The total land under the project is 32.13 acre of which 33.00% land has been earmarked for plantation and greenbelt as per standard norms. After expansion, total green belt & plantation area is 4.28ha. Number of Trees required to be planted =  $4.29 \times 2500 = 10725$  numbers & Number of Trees already planted = 1000 Nos.
13. **Sewerage System:** The project will involve about 70 people employment in three shift basis however around 50 people additionally may be visiting in project site as truck drivers or cleaners or visitors etc. thus considering 120 people daily disposing the domestic effluent, Domestic effluent collected through toilet blocks and other areas will be collected and will be treated in STP.
14. **Rehabilitation and resettlement (R & R) plan:** There is no displacement of any houses, habitation or livestock. Thus the project does not require any R & R plan.
15. **Baseline data** has already been collected in Pre Monsoon period i.e. 1st March, 2022 to 31st May 2022.

16. **Project Cost:** The overall estimated project cost for the proposed unit is 588.99Crores.

Sl. No.	Description	Total Cost (Cr.)
1	Plant & Machinery	200.98
2	Transmission Line Cost	43.89
3	Raw water Reservoir	29.36
4	Land, Building & Civil Construction	68.89
5	Other Misc. Cost	4.24
6	Total Hard Cost	347.36
7	Total Soft Cost	241.63
	Total	588.99

17. **Environment Consultancy:** The proponent along with the consultant **M/s Grass Roots Research & Creation India (P) Ltd., Noida**, made a detailed presentation before the SEAC.

18. The Consultant along with the proponent had requested during the presentation to issue Terms of Reference for EIA Study exempting public hearing as per MoEF&CC, Govt. of India amended EIA Notification vide S.O.1247 (E), dated 18th March 2021 as they have already completed construction work more than 50% during validity period of Environmental Clearance. The proponent had also requested to allow them for use of baseline data collected during March 2022 to May 2022 for EIA study.

19. The MoEF&CC, Govt. of India amended EIA Notification vide S.O.1247 (E), dated 18th March 2021 stipulates the following:

**“Notwithstanding anything contained above, the projects where construction and commissioning of proposed activities have not been completed within the validity period of the Environmental Clearance (EC) and a fresh application for EC has been submitted due to expiry of the said period of the EC, the concerned Expert Appraisal Committee or State Level Expert Committee, as the case may be, may exempt the requirement of public hearing subject to the condition that the project has been implemented not less than fifty percentage in its physical form or construction”**

Considering the information / documents furnished by the proponent and presentation made by the consultant **Grass Roots Research & Creation India (P) Ltd., Noida**, the SEAC recommended the following:

- The SEIAA may consider to exempt public hearing as per MoEF&CC, Govt. of India amended EIA Notification vide S.O.1247 (E), dated 18th March 2021 as they have already completed construction work more than 50% during validity period of Environmental Clearance.
- ToRs as per **Annexure – D** may be prescribed for conducting EIA Study. The proponent may be allowed to use baseline data collected during March 2022 to May 2022 for EIA study.

## **ITEM NO. 05**

### **PROPOSAL OF ENVIRONMENTAL CLEARANCE OF TALAB STONE QUARRY UNDER TOTAL CLUSTER AREA OF 12.606HA. CONSISTING OF 5 STONE QUARRIES I.E. TALAB STONE QUARRY-1(A)-(5.44ACRE/2.20HA.), TALAB STONE QUARRY - 2(A) (12.27ACRE/4.96 HA.) AND TALAB STONE QUARRY- 6 (6.05 ACRE/2.448 HA.)- LOCATED IN VILLAGE-TALAB OF TAHASIL - SAMBALPUR, DISTRICT-SAMBALPUR, STATE-ODISHA OF SRI NEERAJ AGRAWAL-EC**

1. This proposal is for environmental clearance of Talab stone quarries under total cluster area of 12.606 ha consisting of 5 stone quarries i.e. Talab stone quarry-1(A)-(5.44 acre/2.20 ha), Talab stone quarry-2(A) (12.27 acre/4.96 ha.) and Talab stone quarry-6 (6.05 acre/2.448 ha.)-Located in village-Talab of Tehsil- Sambalpur, District-Sambalpur, State-Odisha of Sri Neeraj Agrawal.
2. The project is categorized under Category-B1 as the lease area is more than 5 Ha and is present in Schedule under item 1(a) in the EIA notification, 2006 and its subsequent amendments thereto.
3. **Location & Connectivity** : Talab Stone Quarry Cluster (1, 1(A), 2, 2 (A) & 6) is located at village - Talab, Tahasil - Sambalpur, District - Sambalpur in Odisha. The area falls in Survey of India topo sheet No. F44R14. As per the 2002 Bureau of Indian Standards (BIS) map, Odisha the area falls in Seismic Zones III. The geo coordinates of area are Latitude: 21°32'33.43"N to 21°32'33.58"N and Longitude: 83°59'32.55"E to 83°59'22.25"E. The lease area is located at a distance of 1.4 km from Mouza Talab and at a distance of 8.5 km from Tahasil/District Sambalpur and 235 kms from the State Capital Bhubaneswar. Sambalpur Railway station is the nearest railway station located at a distance of 7.2 kms in SSW from the lease area. Nearest Road Bridge is at a distance of 6 km from the mining lease area. Metal road connecting to the lease area is at distance of 1.0 km. SH – 10 is the nearest State Highway at a distance of 3.2 km in SE. Major District road is at distance of 1.0 km. There is no National Park or Biosphere Reserve within 10 km distance from the lease area.
4. Details of Stone Quarries applied for Environmental Clearance submitted -

<b>Mine</b>	<b>Village</b>	<b>Khata No.</b>	<b>Plot No.</b>	<b>Area (Ha)</b>
Talab Stone Quarry 1	Talab	751	1443	2.209 ha
Talab Stone Quarry 1(A)			1443(P)	2.20 ha
Talab Stone Quarry 2			1437	0.789 ha
Talab Stone Quarry 2 (A)			1443(P)	4.96 ha
Talab Stone Quarry 6			1443(P)	2.448 ha
<b>Total</b>				<b>12.606 Ha</b>

5. The Terms of Reference (TOR) was issued for the preparation of the EIA Report vide letter no. 2310/SEIAA dated 26.08.2021.

6. Public hearing was conducted on dated 22.03.2022 in village - Talab, Tahasil - Sadar Sambalpur, District - Sambalpur, Odisha.
7. The Mining Plan of stone quarry has been approved by the approving authority, Office of the Joint Director of Geology, Zonal Survey, Sambalpur for period of 5 years.
8. **Mining Method:** Mining will be done by opencast semi-mechanized method with adoption of drilling & blasting. Mining will be done by deploying machines like jackhammer, drill compressor, rock breaker, excavator and tractors/trucks. Tipper trucks will be used for transporting stone and waste.
9. **Total Reserves and Production:** The average production from the mining is proposed to be 50,139.45 cum/year and total production will be 230662.7 cum during the valid lease period of 5 years. Talab Stone Quarry Cluster (1, 1(A), 2, 2 (A) & 6) (12.606 Ha) for proposed production of 50,139.45 cu.m/year of Stone.

#### Total Reserves of the Talab Stone Quarries

S no.	Name of the Quarry	Geological reserve (cum)	Mineable reserve (cum)
1	Talab Stone Quarry 1	477260	207212.4
2	Talab Stone Quarry 1A	300122	113459
3	Talab Stone Quarry 2	111100	26533.5
4	Talab Stone Quarry 2A	900647	480738.8
5	Talab Stone Quarry 6	444796	246344.1

#### Total Production of the Talab Stone Quarries

Year	Volume of rock mass (cu.m.)	Volume of soil mass (cu.m.)	Volume of waste rock mass (cu.m.)	Volume of usable rock mass (cu.m.)
<b>Talab Stone Quarry 1</b>				
1 <sup>st</sup>	6200	880	186	6014
2 <sup>nd</sup>	6200	560	186	6014
3 <sup>rd</sup>	6200	560	186	6014
<b>Total</b>	<b>18600</b>	<b>2000</b>	<b>558</b>	<b>18042</b>
<b>Talab Stone Quarry 1A</b>				
1 <sup>st</sup>	10368	0	311	10057
2 <sup>nd</sup>	10368	0	311	10057
3 <sup>rd</sup>	10368	972	311	10057
4 <sup>th</sup>	10368	864	311	10057
5 <sup>th</sup>	10368	864	311	10057
<b>Total</b>	<b>51840</b>	<b>2700</b>	<b>1555</b>	<b>50285</b>
<b>Talab Stone Quarry 2</b>				

1 <sup>st</sup>	4214	1470	210.7	4003.3
2 <sup>nd</sup>	4214	1372	210.7	4003.3
3 <sup>rd</sup>	4214	2254	210.7	4003.3
<b>Total</b>	<b>12642</b>	<b>5096</b>	<b>632.1</b>	<b>12009.9</b>
<b>Talab Stone Quarry 2A</b>				
1 <sup>st</sup>	15470	0	464.1	15005.9
2 <sup>nd</sup>	15470	0	464.1	15005.9
3 <sup>rd</sup>	15470	0	464.1	15005.9
4 <sup>th</sup>	15470	0	464.1	15005.9
5 <sup>th</sup>	15470		464.1	15005.9
<b>Total</b>	<b>77350</b>	<b>0</b>	<b>2320.5</b>	<b>75029.5</b>
<b>Talab Stone Quarry 6</b>				
1 <sup>st</sup>	15525	0	465.75	15059.25
2 <sup>nd</sup>	15525	0	465.75	15059.25
3 <sup>rd</sup>	15525	1440	465.75	15059.25
4 <sup>th</sup>	15525	1170	465.75	15059.25
5 <sup>th</sup>	15525	1215	465.75	15059.25
<b>Total</b>	<b>77625</b>	<b>3825</b>	<b>2328.75</b>	<b>75296.25</b>

- 10. Water requirement:** Total 12.0 KLD water will be required for cluster (1, 1(A), 2, 2 (A) & 6). The water will be supplied from available sources from nearby village. For Domestic & drinking-3.6KLD, Dust suppression-4.5KLD & for green belt development 4.0.
- 11. Power requirement:** Site services in the mining lease area will be electrified by power supply from Orissa Electricity board.
- 12. Manpower requirement:** The total manpower requirement is 80 persons and OMS has been assumed to be 0.5 cum. Indirect employment through creation of shops/ stalls, hired vehicles, etc. also can be generated to full fill the day to day requirements of the mining personals.
- 13. Waste management:** the total solid waste generated from the cluster area would be 7394.35cu.m. For dumping these waste materials, a proposed dump has been suggested in the Southern part of lease area of Quarry-1 covering an area of 0.007 ha., South- Eastern part of lease area of Quarry-1(A), Quarry-2 and Quarry-2(A) each covering an area of 0.007 ha., and Southern part of lease area of Quarry-6 covering an area of 0.007 ha.
- 14. Traffic study:** As per the Traffic study report, it can be concluded that V/C ratio is 0.124, will remain same at Sambalpur-Airport Road with LOS remain "A" "Excellent". So there is negligible impact on the road network as the proposed project is very small.
- 15. Green belt:** Green Belt in the lease area shall be developed over an area of 3.15 Ha and 3150 saplings will be planted during the valid plan period. The proposed afforestation programme with reclamation in progressive manner for entire life of mine is 10300 plants.
16. Baseline study has been conducted for winter season of 2020 i.e, from December, 2020 to Feb, 2021.

**17. Project cost:** The Cost of the project is 1.5 crore i.e. [Quarry 1- 30.0 lakhs, Quarry 2 – 30.0 lakh, Quarry 3 - 15 lakhs, Quarry 4 – 43 lakhs & Quarry 5 - 32 lakhs], the Cost for EMP Capital cost –11.80 Lakhs/annum, Recurring cost –10.45 Lakhs and the Cost of CER 2 % of proposed project cost.

18. The proponent along with the consultant **M/s P&M Solution, Noida**, made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P & M Solution, C-88, Sector 65, Noida** on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Talab stone quarries (Talab Stone Quarry 1, Talab Stone Quarry 1A, Talab Stone Quarry 2, Talab Stone Quarry 2A, Talab Stone Quarry 6) in cluster without referring to SEAC with specific conditions as per **Annexure – E** after receipt of individual applications from the lessee in cluster along with following documents.
  - i) Filled in form-I of individual lease
  - ii) Prefeasibility report of individual lease
  - iii) EMP of individual lease.
  - iv) Approved Mining Plan of individual lease.
  - v) Report on vibration study.
  - vi) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
  - vii) An Undertaking by the lessee not to use wagon drilling blasting to be submitted. Accordingly, specific condition to be stipulated in EC of individual lease.
  - viii) No storage and usage of blasting materials/explosives inside the lease area without license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983 shall be ensured by the lessee. An undertaking to this effect shall be submitted by the lessee. Accordingly, specific condition to be stipulated in EC of individual lease.
  - ix) An undertaking to obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water. Accordingly, specific condition to be stipulated in EC of individual lease.
  - x) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.

## **ITEM NO. 06**

**PROPOSAL OF AMENDMENT IN ENVIRONMENTAL CLEARANCE FOR CHANGE IN PRODUCTION CAPACITY FROM 94120CUM/ANNUM TO 57000CUM/ANNUM OVER BAIDESWAR SAND GHAT (ML AREA 13.355 HA), VILLAGE-PATUGADADHARPUR, TAHSIL-BANKI, DISTRICT- CUTTACK, ODISHA BY MRS. MINAKSHI PRADHAN, AT SAMANTARAPUR, KHURDA, ODISHA.**

1. This proposal is for Amendment in Environmental Clearance for Baideswar Sand Ghat (change in Production capacity from 94120Cum/annum to 57000Cum/annum) over an Mining Lease area 13.355 ha, Village - Patugadadharpur, Tahasil - Banki, District- Cuttack, Odisha of Mrs. Minakshi Pradhan.
2. The project falls under Category B1 of EIA Notification, 2006 and subsequent amendment thereafter.
3. The lease area "Baideswar Sand Ghat" is in river bed Mahanadi over an area of 33.00 Acres (13.355 ha) in village Patugadadharpur, Tahasil-Banki, District Cuttack, Odisha.
4. The lease was granted to Minakshi Pradhan, W/o Jagannath Pradhan at Samantarapur, PS/Dist Khurda being the successful bidder Vide .letter no 56 dated 06.01.2020 from Tahsildar cum-Competent Authority, Banki Odisha.
5. Mining Plan was approved in name of Tahsildar, Banki as per OMMC rule 2016 before the lease was taken to auction after completion of auction as per letter from Tahsildar, Banki Vide no-1758, dtd: 29.0.2020 environment clearance and all other documents to be issued in name of Minakshi Pradhan.
6. The project site is located at Khata No 1, Plot no 3(p) of village- Patugadadharpur, Tahasil-Banki, District-Cuttack, State – Odisha. The geo coordinates are Latitude - 20°21'33"N to 20°21'43"N and Longitude – 85°23'31"E to 85°23'54"E. It is falls under Survey of India Topo Sheet No : 23H/7
7. Environmental Clearance was granted by SEIAA vide letter No. 1944/SEIAA dated 29.07.2021 for the sand production 94120 Cum/year.
8. Consent to Operate was granted by SPCB, Odisha vide letter no. 2149/2324 dated 15.11.2021 for the sand production 94120 Cum/year.
9. During operation of quarry, replenishment survey also carried out it is found difficult to excavate below 1.7 meter due to seepage of water. So working depth limited to 1.7 meter only. As such Project Proponent was not able to produce as per approved quantity. As per the same report the 65706.6 cu.m Sand may be extracted during the Plan period.
10. In order to access the exact extractable sand quantity, Project proponent had requested Tahsildar , Banki to review the mining plan on 22.3.2022.
11. As per the joint verification carried out by Department of mining, Geology, & Revenue it was found that due to change in water course and water-logged condition of the lease area, there are very less deposits of sand in ML area. Quarry area was found to be very less in comparison to proposed excavated area approved in the mining plan Thus, the mining plan was modified as per the recommendation of the joint inspection report and the production of quantity envisaged to be 57000Cum/annum.

12. As per the Modified Mining Plan, revised geological reserve is 103076cum and Mineable reserve is 57000cum. Thus, the proposed sand mining during the plan period is as per the given table –

Year	Surface Area of Sand (m2)	Thickness of sand (m)	Volume of Sand (m3)
2022-23	51538	2.0	57000
2023-24	51538	2.0	57000
2024-25	51538	2.0	57000
2025-26	51538	2.0	57000
<b>Total</b>			2,28,000

13. EMP Cost: capital cost- ` 14.50 lakhs and recurring cost ` 7.45 lakhs

Considering the information / documents furnished and presentation made by the proponent, the SEAC recommended the following:

- a) The Environmental Clearance has been approved for higher capacity i.e. 94120 cum/annum. Now they have applied for modification of EC after conducting replenishment study for less capacity than the approved capacity i.e. 57000 cum/annum. The SEIAA, Odisha may decide whether such type of amendment in EC will be allowed as the quantity requested by the lessee is less than the approved capacity.

#### **ITEM NO. 07**

#### **PROPOSAL OF ENVIRONMENTAL CLEARANCE REMAL SAND BED OVER AN AREA OF 5.06 HECTARE ON RIVERBED OF REMAL RIVER AT VILLAGE-DARADIPAL, TAHASIL-GHASIPURA, DISTRICT-KEONJHAR, ODISHA OF HRUSHIKESH JENA-EC**

1. This proposal is for environmental clearance of Remal sand bed over an area of 5.06 hectare on river bed of Remal river located at Village - Daradipal, Tahasil - Ghasipura, District - Keonjhar, Odisha of Sri Hrushikesh Jena.
2. This project falls under category "B1" as per EIA notification, 2006 and its subsequent amendments.
3. **Location and Connectivity** : The mine lease area is located in Khata No. 335, 504 Plot no- 245, 892/1 & 550 village - Daradipal, Tahasil - Ghasipura, District - Keonjhar on Remal river. It is covered in the Survey of India Topo Sheet No – 73G/16 and is bounded between the Latitude -21°09'50.62"N to 21°10'11.62"N and Longitude – 85°59'14.57"E to 85°59'47.59"E. Nearest Railway Station - Tangiriapal Railway Station is approx 6.06 km towards SW direction. Nearest Airport - Biju Patnaik International Airport is approx 218 km towards SE direction. Nearest Highway - NH-224 is approx 6.40 km in NW direction. Rebana Reserve Forest at 5.5 Km NW. There are no Biosphere reserves or Wildlife Sanctuaries or National Parks or Important bird areas (IBAs) or other ecologically sensitive areas within a distance of 10 Km from the boundary of the project site. There are no known migratory routes or breeding grounds of any rare or endangered or threatened (RET) species either.
4. Sri Hrushikesh Jena, Director of M/s Jena Minerals Pvt. Ltd. is the applicant of the proposed Remal Sand Bed Mining Project.



5. The Government gave consent for mining in favor of Tahasildar of Ghasipura, vide Letter no. 2409 dated 01-07-2020 for a period of Five Years.
6. Mining Plan has been approved by Directorate of Geology, Keonjhar vide memo no. 2761/CZ, Dated- 15/09/2020.
7. The TOR was issued for this project vide letter No. 878/SEIAA on dated 09.03.2021.
8. Public hearing was conducted on 18.05. 2022 in Balipal (Near Balipal Hata, Khata No. 337(Rakhita), Plot no. 901, Kissam – Bagayat – II).
9. Baseline study has been conducted for winter season of 2020 i.e, from December, 2020 to February, 2021.
10. **Reserves and Production** – The total geological reserve is 35835cum and Mineable reserve is 11804cum. Thus, the proposed sand mining is 2361cum/ year.
11. **Mining method:** The sand will be excavated by open cast by manual method. Since the depth of sand deposit is 1.0m, excavator, handpicks, spade, hand shovel will be used by labourers for extracting & loading of sand. The surface mining will be done by manual method with the deployment of excavator. Mined out sand will be transported through to its destination point.
12. **Topography:** The topography of the area is a flat terrain which lies at an elevation of more than 1m from the level of flow of water. The gradient of flow of water in the river is gentle. So, in the lease area, the highest elevation is 63mRL & lowest elevation is 62.2mRL in sand.
13. **Greenbelt:** Plantation work will be carried out along the safety zone of the lease area 1480 number of saplings proposed during plan period will be planted on both side of haul road i.e., 120nos. Plantation shall be done with suitable local species like teak, mango, neem, jammun, jhaun etc. per year.
14. **Power requirement:** All the activities will be carried out manually i.e., loading the trucks/trolley/carrying vehicles manually by the working people. There is no power requirement for the project.
15. **Water requirement:** The total water requirement will be around 1.11KLD. This water will be supplied from the nearby area.
16. **Manpower requirement:** A total of 9 number of manpower are to be employed.
17. **Project cost:** The estimated project cost is Rs 35 Lakhs.
18. **Environment Consultant:** The proponent along with the consultant **M/s P&M Solution, Noida**, made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P&M Solution, Noida**, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – F** in addition to the following specific conditions.

- i) Revised mining plan shall be prepared based on essential physical criteria as per Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India enclosed as **Annexure - G**.
- ii) Regular replenishment study to be conducted and report to be submitted.
- iii) Provision of Bio-toilet shall be made at the site.
- iv) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.

- v) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

**ITEM NO. 08**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR REMAL SAND BED OVER AN AREA OF 5.06 HECTARE ON RIVER BED OF REMAL RIVER AT VILLAGE-KHAILO, TEHSIL: GHASIPURA, DISTRICT:KEONJHAR, ODISHA OF SRI HRUSIKESH JENA- EC**

1. This proposal is for environmental clearance for Remal Sand bed over an area of 5.06 Ha. on river bed of Remal river at village - Khailo, Tahasil - Ghasipura, District: Keonjhar, Odisha of Sri Hrusikesh Jena.
2. As per MoEF&CC, New Delhi Gazette dated 14th September 2006 and amended thereof, the proposed mining project is categorized as Category 'B1' project.
3. **Location and connectivity:** The mine lease area is located at Khailo, Tehsil: Ghasipura, District: Keonjhar, is on Khata No. 216, Plot no- 420&358 of Remal river covered in the Survey of India Topo Sheet No – 73G/16. It is bounded between the Latitude - 21°10'13.67"N to 21°10'28.57"N and Longitude – 85°57'14.34"E to 85°57'34.43"E. The mining lease area is approachable following NH-224 which is about 3.40 km away towards NW. Nearest Railway Station: Tangiriapal Railway Station is approx 3.06 km towards SW direction. Nearest Airport: Biju Patnaik International Airport is approx 218 km towards SE direction. Nearest Highway: NH-224 is approx. 3.40 km in NW direction. Rebana Reserve Forest is at 2.37 Km.
4. Sri Hrushikesh Jena, Director of M/s Jena Minerals Pvt. Ltd. is the applicant of the proposed Remal Sand Bed Mining Project.
5. The Government gave consent for mining in favor of Tahasildar of Ghasipura. Vide Letter of intent no 2407 dated 01-07-2020 for a period of Five Years.
6. Mining Plan has been approved by Directorate of Geology, Keonjhar vide letter no. 2751/CZ, Dated- 15/09/2020
7. Public hearing was successfully executed on date 20.06.2022, near Community Centre, (Khata No. 215 (A), Plot no. 475, Kissam- Biali, Area 5.06 ha, at village- Khailo, Tehsil- Ghasipura, District- Keonjhar, Odisha.
8. The Terms of Reference (TOR) was prescribed vide Reference No: 876/SEIAA dated 09-03-2021.
9. Baseline study has been conducted for winter season of 2020 i.e, from December, 2020 to February, 2021.
10. **Reserves and Production** – The total geological reserve is 101172cum and Mineable reserve is 46702cum. Thus, the proposed sand mining is 9340cum/ year and total production is 46700cum during the plan period. The sand will be excavated by open cast semi mechanized method and by manual method also. The sand will be excavated by open cast semi mechanized method without deploying heavy machinery. Mining will be carried out by using handpicks, spade, hand shovel will be used by laborers for extracting & loading of sand. There is a road bridge in mining lease area. Mining will be carried out after leaving safety barrier of approx. 200 m upstream & downstream of the bridge. No mining zone of

approx. 1.17 ha will be left. Mining will be carried out by scientific method as per approved Mining Plan, only up to 1 m depth.

11. **Green belt:** Plantation will be done in mining lease haul road. About 1660 numbers of trees will be planted along approach road in the first year & at other place after consultation with the local authorities at 2-2 meters. Plantation shall be done with suitable local species like teak, mango, neem, jammun, jhaun etc. per year
12. **Water Requirement:** A total of 10.5 KLD water will be required for the proposed project.
13. **Power requirement:** All the activities will be carried out manually i.e. loading the trucks/trolley/carrying vehicles manually by the working people. There is no power requirement for the project.
14. **Manpower:** The number of working people is 16.
15. **Project cost:** The estimated cost of project is around Rs.84 lakhs.
16. **Consultancy:** The proponent along with the consultant **M/s P&M Solution, Noida**, made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P&M Solution, Noida**, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – F** in addition to the following specific conditions.

- i) Revised mining plan shall be prepared based on essential physical criteria as per Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India enclosed as **Annexure - G**.
- ii) Regular replenishment study to be conducted and report to be submitted.
- iii) Provision of Bio-toilet shall be made at the site.
- iv) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- v) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

#### **ITEM NO. 9**

#### **A. CONSIDERATION OF MINOR MINERAL PROPOSALS – B2 (NEW):02 NOS**


The committee verified 02 nos. of minor mineral proposals forwarded by the SEIAA, Odisha on the basis of MoEF&CC, Govt. of India OM no. F. No. L-I 1011/175/2018-IA-II (M), dated 12.12.2018. The case-wise proceedings and observations of the committee are detailed in Table as per **Annexure – H**. The proposals of following categories are:

<b>Total no. of proposals</b>	<b>Type of proposals</b>	<b>No. of proposal</b>	<b>Decisions of the committee</b>
02	Stone Quarries and other (02)	01	The SEAC considered the proposals as B2 category and recommended for Environmental Clearance.
		01	Clarification to be sought from the concerned Tahasildar.

**B. CONSIDERATION OF MINOR MINERAL PROPOSALS (COMPLIANCE RECEIVED): 02 NOS**

The committee verified 02 no. of minor mineral proposals (compliance received) on the basis of MoEF&CC, Govt. of India OM no. F. No. L-I 1011/175/2018-IA-II (M), dated 12.12.2018. The case-wise proceedings and observations of the committee are detailed in Table as per Annexure – I. The proposals of following categories are:

Total no. of proposals	Type of proposals	No. of proposal	Decisions of the committee
02	Stone Quarries and other (02)	02	Clarification to be sought from the concerned Tahasildar.

  
Member Secretary, SEAC

  
Chairman, SEAC

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR CHANDIPOSHI IRON ORE BLOCK (OPENCAST MECHANIZED) (CAPACITY:1.0 MILLION TONS PER ANNUM (ROM) IRON ORE, TOTAL EXCAVATION 1.0945 MTPA INCLUDING 0.0945 MTPA WASTE 2X 250 TPH MOBILE CRUSHING AND 3X350 TPH MOBILE SCREENING PLANTS, ML AREA: 131.580 HECTARE) AT VILLAGE: BADAINDUPUR, SANUA, SARGIGARH & TEHREI TEHSIL KOIRA, DISTRICT SUNDARGARH, ODISHA FOR M/S. RUNGTA MINES LTD OF SRI HIRAK MAZUMDER- EC**

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**(I) Statutory compliance**

- (i) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- (ii) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- (iii) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, 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 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
- (iv) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,
- (v) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.
- (vi) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.
- (vii) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- (viii) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made thereunder in respect of lands which are not owned by it.
- (ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-I1013/57/2014-IA.II (M), dated 29<sup>th</sup> October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine

lease areas or Habitations and villages are surrounded by the mine lease area”.

- (x) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- (xi) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- (xii) State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- (xiii) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change ([www.environmentclearance.nic.in](http://www.environmentclearance.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.
- (xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

## **(II) Air quality monitoring and preservation**

- (i) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, CO and SO<sub>2</sub> etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
- (ii) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM<sub>10</sub> and PM<sub>2.5</sub> are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble

chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

**(III) Water quality monitoring and preservation**

- (i) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
- (ii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (iii) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (iv) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC / SEIAA, Odisha. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground

Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

- (v) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- (vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernatant after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.
- (vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.
- (viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.
- (ix) An area of 3.40Ha shall be kept for public use as pond and road. Hence, remaining 52.956Ha shall be planted during life of the mine in a phased manner i.e. within a period of 20 years.
- (x) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF&CC annually.
- (xi) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- (xii) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board.



**(IV) Noise and vibration monitoring and prevention**

- (i) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- (ii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
- (iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

**(V) Mining Plan**

- (i) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
- (ii) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
- (iii) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The

compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

**(VI) Land reclamation**

- (i) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- (ii) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
- (iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- (iv) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- (v) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.
- (vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- (vii) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at

the comers of the garland drains.

- (viii) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.
- (ix) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

**(VII) Transportation**

- (i) No Transportation of the minerals shall be allowed in case of roads passing through transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.
- (ii) The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
- (iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.
- (iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

**(VIII) Green Belt**

- (i) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to

arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

- (ii) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- (iii) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- (iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- (v) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

**(IX) Public hearing and human health issues**

- (i) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.
- (ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.

- (iii) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- (iv) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x 14 inches and of good quality).
- (v) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

- (vi) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- (vii) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
- (viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.
- (ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.

**(X) Corporate Environment Responsibility (CER)**

- (i) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- (ii) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

**(XI) Miscellaneous**

- (i) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
- (ii) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

- (iv) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.
- (v) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
- (vi) The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.
- (vii) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- (viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.
- (ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.
- (x) Fe grade -55 and +45 to be attempted to use by blending with higher grade.
- (xi) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
- (xii) Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S RUNGTA MINES LTD FOR PURHEIBAHAL IRON ORE BLOCK OVER AN AREA OF 64.337 HA FOR PRODUCTION OF 1.0MTPA OF IRON ORE WITH TOTAL EXCAVATION-1.064 MTPA. (ROM IRON ORE - 1.0 MTPA + OVERBURDEN 0.064 MTPA) LOCATED AT VILLAGES - BADAINDUPUR & SANINDUPUR, TAHASIL- KOIRA, DISTRICT-SUNDERGARH OF SRI HIRAK MAZUMDER-EC**

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**(I) Statutory compliance**

- (i) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- (ii) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- (iii) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, 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 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
- (iv) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,
- (v) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.
- (vi) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.
- (vii) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- (viii) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made thereunder in respect of lands which are not owned by it.
- (ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29<sup>th</sup> October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease



area”.

- (x) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- (xi) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- (xii) State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector’s office/ Tehsildar’s Office for 30 days.
- (xiii) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change ([www.environmentclearance.nic.in](http://www.environmentclearance.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.
- (xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

**(II) Air quality monitoring and preservation**

- (i) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, CO and SO<sub>2</sub> etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
- (ii) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM<sub>10</sub> and PM<sub>2.5</sub> are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of

dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

**(III) Water quality monitoring and preservation**

- (i) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
- (ii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (iii) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (iv) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC / SEIAA, Odisha. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground Water Authority and Regional Director, Central Ground Water Board, State

Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

- (v) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- (vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernatant after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.
- (vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.
- (viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.
- (ix) An area of 3.40Ha shall be kept for public use as pond and road. Hence, remaining 52.956Ha shall be planted during life of the mine in a phased manner i.e. within a period of 20 years.
- (x) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF&CC annually.
- (xi) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- (xii) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board.

**(IV) Noise and vibration monitoring and prevention**

- (i) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- (ii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
- (iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

**(V) Mining Plan**

- (i) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
- (ii) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
- (iii) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The

compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

**(VI) Land reclamation**

- (i) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- (ii) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
- (iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- (iv) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- (v) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.
- (vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- (vii) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at

the comers of the garland drains.

- (viii) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.
- (ix) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

**(VII) Transportation**

- (i) No Transportation of the minerals shall be allowed in case of roads passing through transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.
- (ii) The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
- (iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.
- (iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

**(VIII) Green Belt**

- (i) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to

arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

- (ii) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- (iii) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- (iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- (v) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

**(IX) Public hearing and human health issues**

- (i) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.
- (ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.

- (iii) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- (iv) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x 14 inches and of good quality).
- (v) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.



- (vi) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- (vii) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
- (viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.
- (ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.

**(X) Corporate Environment Responsibility (CER)**

- (i) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- (ii) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

**(XI) Miscellaneous**

- (i) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
- (ii) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

- (iv) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.
- (v) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
- (vi) The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.
- (vii) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- (viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.
- (ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.
- (x) Fe grade -55 and +45 to be attempted to use by blending with higher grade.
- (xi) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
- (xii) Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR 'WORLDCLASS ALUMINIUM PARK' OF VENDANTA (SPECIAL PURPOSE OF VEDANTA LIMITED & IDCO, ODISHA) OVER 55.75 ACRES OVER AN PROPOSED BUILT-UP AREA – 1,45,000 SQM. LAND IN AT-BHURKAMUNDA, PO-SRIPURA, DIST-JHARSUGUDA, ODISHA OF SRI SUNIL GUPTA-EC.**

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**(I) Statutory Compliance:**

1. This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project
2. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
3. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
4. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board.
5. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
6. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
7. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.
8. This environmental clearance is only for the Aluminium Park. Any other activity within the Aluminium Park would require separate Environmental Clearance, as applicable under EIA Notification, 2006 as amended from time to time. For all the individual units, Environmental Clearances, as applicable, shall be obtained from the respective regulatory authorities.
9. The buildings shall have adequate distance (as per local building bye laws) between them to allow movement of fresh air and passage of natural light, air and ventilation in accordance with guidelines of local authorities.
10. The developer shall obtain permission from the concerned authority for disposal of treated effluents and submit the same to SEIAA, Odisha before commissioning of the individual plant.

**(II) Air Quality Monitoring and Preservation**

1. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>25</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the Industrial area at least at four locations (one within and three outside the plant area at an angle of 12<sup>0</sup> each), covering upwind and downwind directions.

2. The D.G. sets to be used during development/ construction phase shall be in conformity to Environment (Protection) Rules prescribed for air and noise emission standards. Storage of diesel shall be made underground and necessary approvals/permissions from Chief control of explosives to be obtained.
3. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking, loading and unloading shall be fully internalized and no public space shall be utilized.
4. Vehicles hired for bringing construction material! to the site should have a Pollution Under Control (PUC) certificate and shall conform to applicable air and noise emission standards and shall be operated only during non-peak hours.

**(III) Water Quality Monitoring and Preservation**

1. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986.
2. Construction of storm water drains for collection, storage and its re-use as per guidelines of Central Ground Water Authority (CGWA).
3. The project proponent shall report to the State Pollution Control Board about the compliance of the prescribed standards for all discharges from the Industrial Area.
4. Fixtures for showers, toilet flushing and drinking shall be of low flow either by use of aerators or pressure reducing devices or sensor based control.
5. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured/recorded to ensure the water balance as projected by the project proponent. The record shall be submitted to the concerned Regional Office of the MoEF&CC, Govt. of India as well as to SEIAA, Odisha along with six monthly monitoring reports.
6. Water demand during development/construction shall be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
7. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
8. The project proponent shall make efforts to minimize water consumption in the industrial complex by segregation of used water, practicing cascade use and by recycling treated water.
9. Member industries shall treat the effluent to meet the prescribed CETP inlet norms.
10. The Developer shall provide Common Effluent Treatment Plant (CETP) of capacity 3000 KLD for treatment of waste water generated from individual units and shall take responsibility for not to discharge any un-treated water outside the Aluminium Park.
11. The member units shall provide RCC tanks for storage of effluent for monitoring the characteristics of effluent before taking into the Common Effluent Treatment Plant (CETP) for further treatment.
12. Proper flow meters along with online monitoring facilities shall be provided to monitor the effluent quality and quantity sent from member industries to CETP and from CETP to the final disposal/re-use on a continuous basis.

13. Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
14. To achieve the Zero Liquid Discharge, waste water generated from different industrial operations shall be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.
15. The domestic wastewater generated from the industry shall be treated in Sewage Treatment Plant of capacity 100 KLD (2x50 KLD) to meet the following standards as notified by the MoEF&CC, Govt. of India vide G.S.R. 1265 (E), dated 13.10.2017. The treated effluent from Sewage Treatment Plant shall be used for landscaping, flushing and DG set cooling, Road washing etc. Under no circumstances there shall be any discharge of treated waste water to outside the Aluminium Park.

Sl. No.	Parameters	Standards
1.	pH	6.5-9.0
2.	BOD (mg/l)	30
3.	TSS (mg/l)	<100
4.	Fecal Coliform (MPN/100ml)	< 1000

16. The project should not amend or alter the pathways of the natural streams or creeks/nallah flowing, if any.
17. Rain water harvesting for roof run-off and surface run-off, as plan submitted shall be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The bore well for rainwater recharging shall be kept at least 4 m above the highest ground water table.

**(IV) Noise monitoring and prevention**

1. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the MoEF&CC, Govt. of India as well as to SEIAA, Odisha as a part of six-monthly compliance report.
2. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

**(V) Energy Conservation measures**

1. Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.
2. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly. Use of renewable energy including solar (atleast 5%) shall be done for the project.
3. Provide LED lights in their offices and residential areas.

**(VI) Waste management**

1. Disposal of muck during development/construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority. The ground water quality of the adjacent to dumping area should be

monitored and report should be submitted to the Regional Office, MoEF&CC, Govt. of India as well as to SEIAA, Odisha.

2. Fly ash bricks should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003 and 25<sup>th</sup> January, 2016.
3. All hazardous waste generated during development/ construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the Central Pollution Control Board / State Pollution Control Board.
4. Used LEDs shall be properly collected and disposed off / sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible. Energy conservation measures should be as per Bureau of Energy Efficiency (BEE) standards.
5. Air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.
6. The solid waste generated shall be properly collected and segregated in accordance with the Solid Waste Management Rules, 2016. Wet garbage shall be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material. No municipal waste shall be disposed off outside the Aluminium Park.

**(VII) Green Belt**

1. The green belt of the adequate width and density preferably with local species along the periphery of the park shall be raised so as to provide protection against particulates and noise. The developer shall ensure plantation (greenbelt) in the minimum area of 34.2% (as proposed) in the park. The time bound action plan for green belt/plantation be submitted to the Regional Office, MoEF&CC, Govt. of India as well as to SEIAA, Odisha within three months of issue of this letter.
2. Cutting of plants/trees are to be totally avoided by the construction labours. The contractor has to maintain log book for the purchase and distribution of fuel wood.
3. All the topsoil excavated during development/construction activities should be stored for use in horticulture/landscape development within the project site. Report should be submitted to the Regional Office, MoEF&CC, Govt. of India as well as to SEIAA, Odisha.
4. For monitoring of land use pattern, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to the Regional Office, MoEF&CC, Govt. of India as well as to SEIAA, Odisha.

**(VIII) Human Health Issues**

1. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
2. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

**(IX) Corporate Environment Responsibility**

1. The project proponent shall comply with the provisions contained in the MoEF&CC, Govt. of India OM vide F.No. 22-65/2017-1 A.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
2. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental / forest / wildlife norms / conditions. The company shall have a defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. The copy of the board resolution in this regard shall be submitted to the SEIAA, Odisha as a part of six-monthly report.
3. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
4. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Regional Office, MoEF&CC, Govt. of India as well as to SEIAA, Odisha along with the Six Monthly Compliance Report.
5. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
6. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) regarding plants located in the industrial estates / park shall be implemented.
7. Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards.

**(X) Miscellaneous**

1. Green building concept may be explored in the construction.
2. The kism of land area proposed for the park shall be converted for industrial use before going for construction activity
3. Construction material has to be brought from approved / authorized places.
4. Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms.
5. The Developer shall acquire land for development of road exclusively for transportation of molten metal from M/s Vedanta Ltd. to Aluminium Park.
6. Special purpose vehicle shall be established for implementation monitoring and compliance of the environmental safeguards.
7. The Developer shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.

8. The Developer shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
9. Common facilities such as repair shops, rest rooms for drivers and attendants shall be provided.
10. All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
11. Member units shall contribute for CSR activities and the Developer shall manage the fund collected from the member units for implementation of CSR activities in the area.
12. The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.
13. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
14. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
15. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
16. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
17. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
18. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
19. The project proponent shall inform the Regional Office, MoEF&CC, Govt. of India as well as to SEIAA, Odisha, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
20. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
21. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during their presentation to the State Level Expert Appraisal Committee (SEAC).



22. No further expansion or modifications in the park shall be carried out without prior approval of the SEIAA, Odisha.
23. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
24. The SEIAA, Odisha may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
25. The SEIAA, Odisha reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
26. The Regional Office of MoEF&CC, Govt. of India shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office, MoEF&CC, Govt. of India by furnishing the requisite data / information / monitoring reports.
27. The above conditions shall be enforced, inter-aha under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
28. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR 2X 30 MW INDEPENDENT POWER PRODUCERS THERMAL POWER PLANT LOCATED AT VILLAGE– BAINCHUA, TEHSIL – TANGI, DISTRICT–CUTTACK, STATE-ODISHA BY M/S MAA DURGA THERMAL POWER COMPANY LIMITED OF SRI ANIMESH GUPTA-TOR**

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1. The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.
2. Vision document specifying prospective long term plan of the project shall be formulated and submitted.
3. Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.
4. The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.
5. Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
6. Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.
7. The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
8. Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
9. Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
10. Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.

11. If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
12. The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
13. Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
14. Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
15. Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.
16. A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
17. A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
18. Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash.
19. The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents.
20. Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
21. It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.

22. Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.
23. Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
24. Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
25. Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.
26. Feasibility of near zero discharge concept shall be critically examined and its details submitted.
27. Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.
28. Plan for recirculation of ash pond water and its implementation shall be submitted.
29. Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
30. Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
31. Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
32. If the area has tribal population it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
33. A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. Separate budget for community development activities and income generating programmes shall be specified.

34. While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CSR details done in the past should be clearly spelt out in case of expansion projects.
35. R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
36. Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
37. Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.
38. One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
39. In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
40. A list of industries existing and proposed in the study area shall be furnished.
41. Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.

42. Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
43. Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
44. Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted
45. Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
46. For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
47. Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
48. EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
49. A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be carried out. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Mock drills shall be suitably carried out from time to time to check the efficiency of the plans drawn.
50. The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.
51. Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees per ha with a good survival rate of around 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO<sub>2</sub> and other gaseous pollutants and hence a stratified green belt should be developed.

52. Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.

53. Corporate Environment Policy

- a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- b) 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.
- c) 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.
- d) Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.

54. Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.

**55. Additional TOR for Coastal Based Thermal Power Plants Projects (TPPs):**

Over and above the TOR mentioned in Thermal Power Plants Projects, the following shall be strictly followed (as applicable):

- a) Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site.
- b) If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted.
- c) The soil leveling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their embankments should be strengthened and desilted.
- d) Additional soil required for leveling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved.

- e) Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed.
  - f) No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution.
  - g) Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time bound implementation shall be specified, if mangroves are present in Study Area.
  - h) A common Green Endowment Fund should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area.
  - i) Impact on fisheries at various socio economic level shall be assessed.
  - j) An endowment Fishermen Welfare Fund should be created out of CSR grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc.
  - k) Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work.
  - l) There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation.
- 56. The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report.**



**SPECIFIC CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF INDIVIDUAL MINING LEASE OF TALAB STONE QUARRY UNDER TOTAL CLUSTER AREA OF 12.606HA. CONSISTING OF 5 STONE QUARRIES I.E. TALAB STONE QUARRY-1(A)-(5.44ACRE/2.20HA.), TALAB STONE QUARRY - 2(A) (12.27ACRE/4.96 HA.) AND TALAB STONE QUARRY- 6 (6.05 ACRE/2.448 HA.)- LOCATED IN VILLAGE-TALAB OF TAHASIL - SAMBALPUR, DISTRICT-SAMBALPUR, STATE-ODISHA OF SRI NEERAJ AGRAWAL-EC.**

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1. This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Odisha, Hon'ble NGT and any other Court of Law, if any, as may be applicable to the quarry lease.
2. The Environmental Clearance is subject to obtaining requisite NBWL Clearance, if any, from the Standing Committee of National Board for Wildlife for Mining project.
3. The lessee shall implement the Pollution Control Measures and safeguards as proposed in the approved EIA/Environment Management Plan (EMP) in the cluster approach.
4. The lessee shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
5. Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass through the villages. The lessee shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
6. The lessee shall obtain NOC from concerned Block Development Officer (BDO) for usage of haulage road/Panchayat Road.
7. The lessee shall ensure safety of human life and livestock from accidents in case village / any habitation is very nearby the mining lease area.
8. The lessee shall ensure the safeguard and wellbeing of villagers and school, regular health monitoring of all residents in the area and the compliance Report shall be submitted to the regional office of the MOEF & CC and SEIAA, Odisha.
9. The lessee/concerned Tahasildar shall follow the detailed procedure for De-reservation of Gochar kissam land if involve in the lease area before going for mining activity.
10. Under no circumstances, the lessee shall use wagon drilling blasting during mining activity.
11. The lessee shall not store and use blasting materials/explosives inside the lease area without obtaining license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983.

12. The lessee shall obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water.
13. The lessee shall complete the rejuvenation of ponds if any within lease area on priority basis after obtaining Environment Clearance.
14. No mining activities shall be allowed in forest area, if any, for which the Forest Clearance is not available.
15. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
16. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
17. Mining shall be carried out as per the provisions outlined in the approved mining plan.
18. Protection of vegetation in the surrounding areas, and proper storage of solid waste, subgrade ore and their use have to be given priority during mining operation.
19. The illumination and sound at night at the lease area disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponents must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
20. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
21. The soil to be generated during mining activity shall be stacked in the earmarked temporary soil stack and shall be utilized for the plantation purpose to be undertaken around the respective hill/patch and adjacent to haul roads of the same in lease area.
22. The abandoned mine pit shall be converted to rain water storage tank and the rain water stored in pit shall be utilized for plantation as well as dust suppression.
23. Total Plantation shall be carried out within 2-3 years of mining activity and maintenance shall be continued in remaining years. Trees present in mining area shall be uprooted & transplanted in safety zone.
24. All the lease holders in a cluster to join hand through a registered MOU on cluster to cluster basis for laying of permanent pipeline by the side (one side) of the main haulage road with half-moon automatic sprinklers system for suppression of dust during movement of vehicles.
25. All the lease holders in a cluster should join hand for grading of the main haulage road to maintain the gradient facilitating smooth movement of vehicles.
26. The same cluster approach to be taken for development of green belt all around the cluster area baring catch dams for flow of runoff water during rainy season. These activities may be coordinated by the leadership in the cluster leases or RQP for the cluster with help from Revenue Inspector of the area for better results.

27. The SEIAA, Odisha may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
28. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
29. The above-mentioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

**STANDARD ENVIRONMENTAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING**

**Stipulated Conditions:**

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. Project proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.
13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.
14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.
16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1<sup>st</sup> day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.
19. Since NH200, Kuccha Road and temple are only at a distance of 800 mtr, 570 mtr and 500 mtr respectively, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. As raised during public Hearing and committed by PP, Loknathpur Sasan village road shall not be used for transportation of sand.
22. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.
23. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
24. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
25. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.
26. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
27. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.
28. Project proponent shall obtain Consent to Operate from the OSPCB and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the State Pollution Control Board.
29. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
30. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

31. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.
32. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.
33. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
34. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

**ESSENTIAL PHYSICAL CRITERIA AS PER ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING, JANUARY 2020 OF MOEF&CC, GOVT. OF INDIA**

<b>Sl. No.</b>	<b>Essential Criteria</b>	<b>Reference</b>
1.	"No Mining Zone": 1/4th the part of the river width (excluding 3/4th the central part of the river width) on both sides of the river towards the river bank	4.1.1 (Para - e) Page - 16
2.	a) Distance between two clusters : $\geq 2.5$ km b) Area of mining lease area in a cluster: $\leq 10$ ha.	4.1.1 (Para - k) Page - 19
3.	Concave River Bank : No extraction of sand	
4.	No mining if a) Upstream: Lease is 1 km from major Bridge and high ways or $5(x)$ of the Bridge / public civil structure / water intakes point subject to lease is located at a minimum 250 meter distance. Where $x$ = Span of the bridge. b) Downstream side: Lease is 1 km from the major bridge and Highways Or $10x$ of the bridge / public civil structure / water intake point Subject to lease is located at a minimum distance of 500 meter where $x$ = span of the bridge	4.3 (Para - h) Page - 23
5.	Mining depth : $\leq 3$ meter (maximum 3 meter)	4.3 (Para - m) Page - 24
6.	Mining distance from river bank: $1/4^{\text{th}}$ of the river width, But subject to not less than 7.5 meter	4.31 (Para - m) Page - 24
7.	Area for removal of minerals : $\leq 60\%$ of mine lease area	4.3 (Para - s) Page - 25
8.	Minable sand per ha. Available for actual mining : $\leq 60,000$ MT/Annum	
9.	Regular replenishment study and replenishment rate	



**TABLE**  
**DECISION ON MINOR MINERAL PROJECTS WITH LEASE AREA LESS THAN 5 HA. ON 05.11.2022**

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
1.	SIA/OR/MIN/402927/2022	Sri Raj Kishor Deo (Lessee) M/s. Laigura Stone Quarry At- Gochhara , Po- Ullunda  Dist – Sambalpur  Pin: 768222  Email: deolaxmi70@gmail.com	Sambalpur	Stone	Proposal of Environmental Clearance for Laigura Stone Quarry over an area of 4.81 Acres or 1.95 ha at village Laigura Tahasil Kuchinda District Sambalpur of Sri Raj Kishor Deo - EC	5 Years	Nil (As per checklist)	<ol style="list-style-type: none"> <li>1. Furnished filled in Form-I, pre-feasibility report and check list as endorsed / submitted by the Tahasildar.</li> <li>2. Final DSR has been submitted.</li> <li>3. Topo sheet indicating location of the mine has been furnished.</li> <li>4. EMP has been submitted.</li> <li>5. Mining Plan has been approved.</li> <li>6. No forest land involved in lease area</li> <li>7. There is no protected areas</li> </ol>	NO	960	The SEAC decided to take decision on the proposal after receipt of the following from the concerned Tahasildar:  i) Certificate from Tahasildar that there is no other mines located within 500m from the periphery of the proposed mine lease area as per

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
								<p>i.e. National Park, Sanctuary, Habitat for Migratory Birds, Tiger Reserve, Protected Monuments, Inter-State boundary and critically polluted area as identified by CPCB etc. located within 5 km radius of the mine lease area.</p> <p>8. <b>The application for Laigura stone quarry was rejected for Environment Clearance vide letter no.9803/SEIAA dated 26.11.2020 as per the information submitted by</b></p>			<p>DSR report in the area</p> <p>ii) Location map / Trace map from Tahasildar of all leases (existing &amp; operating) around 1 km area of the project site.</p> <p>iii) Scrutiny fee payment details.</p> <p>iv) Distance from the nearest Eco-sensitive Zone in map.</p> <p>v) Google map showing the present lease</p>

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
								<p>DFO, Bamara vide letter no. 4207 dated 16.10.2020 regarding status of DLC land for the proposed quarry.</p> <p>9. Now, as per the judgement dated 20.06.2022 of the Hon'ble High Court passed in W.P. (c) No.37866 of 2020 filed by Raj Kishore Deo Vrs. State of Odisha and others specify that plot no. 692, 692/3087 and 692/3237 and 692/3236 of Khata no. 121/70, 43, 121/67 and</p>			hold area with all sairat source within 500 meter boundary of the lease hold area.

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
								121/69 of mouza – Laigura are the royati plot of the petitioner Sri Raj Kishore Deo of Villlage – Gochhara. 10. DFO, Bamara vide letter no. 5119 dated 01.10.2022 has certified that the plots proposed in this quarry doesn't come under DLC land.			
2.	SIA/OR/M IN/400290 /2022	Sri Umesh Sharma (Successfull Bidder) M/s. Mansurkota Stone Quarry Tata Steel Special	Ganjam	Stone	Proposal of Environmental Clearance for Mansurkota Stone Quarry over an area of 12.00 Acres or 4.856 Ha. in Village- Mansurkota	5 Years	Nil (As per checklist)	1. Furnished filled in Form-I, pre-feasibility report and check list as endorsed / submitted by the Tahasildar. 2. Final DSR has been submitted. 3. Topo sheet indicating location	NO	50050	The SEAC recommended to grant EC valid from the date of EC accorded up to the lease period with following additional

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
		Economic Zone Ltd. Project Office, Near Hanuman Temple, Mandiapalli, Brahmapur, Dist:Ganjam Pin: 761103 Email: mansurkotaston equarry@yahoo .com			under Konisi Tahasil of Ganjam District of Sri Umesh Sharma - EC			of the mine has been furnished. 4. EMP has been submitted. 5. Mining Plan has been approved. 6. No forest land involved in lease area 7. There is no protected areas i.e. National Park, Sanctuary, Habitat for Migratory Birds, Tiger Reserve, Protected Monuments, Inter-State boundary and critically polluted area as identified by CPCB etc. located within 5 km radius of the mine lease area. 8. There is no court			conditions. i) Consent / NoC shall be obtained from the concerned authority if village road is to be used for transportation. The said road shall also be maintained by the lessee. ii) In view of likely revision of DSR the mention of this deposit with final coordinates is to be ensured iii) Plantation

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
								<p>case / litigation pending.</p> <p>9. The concerned Tahasildar has furnished DLC report. DLC report of concerned Tahasildar reveals that the lease area is not included in the DLC list.</p> <p>10. The Tahasildar has furnished Cluster certificate. The Cluster certificate reveals that there is no other mine located within 500 meter from the boundary of the mine.</p>			<p>programme to be completed within first two years and to be maintained in remaining years.</p> <p>iv) Depth of Mining as proposed should not be beyond 6m from the ground level.</p> <p>v) Mitigation measures for flying Rock for safety be put in place.</p>

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Mining lease period	Details of other mines including lease area located within 500 m from the periphery of the proposed mine lease area	Observation of SEAC based on Form-I, Pre-feasibility report, approved mining plan and checklist	Whether general condition apply	Maximum annual production capacity (in m <sup>3</sup> )	Recommendation of the SEAC
								<p>report. DLC report of concerned Tahasildar reveals that the lease area is not included in the DLC list.</p> <p>10. The Tahasildar has furnished Cluster certificate. The Cluster certificate reveals that there is no other mine located within 500 meter from the boundary of the mine.</p>			<p>Mining as proposed should not be beyond 6m from the ground level.</p> <p>v) Mitigation measures for flying Rock for safety be put in place.</p>



Member Secretary, SEAC

**TABLE  
DECISION ON MINOR MINERAL PROJECTS WITH LEASE AREA LESS THAN 5 HA. ON 05.11.2022  
(CLARIFICATION RECEIVED)**

SI. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Clarification sought by the SEAC		Whether compliance furnished by the Tahasildar (Yes / No) With Remarks if any	Recommendation of the SEAC
						Date of meeting	Clarification		
1.	SIA/OR/MIN/246853/2021	Tahasildar, Hindol (Lessee) M/s. Tarkabeda Black Stone Quarry- 03 O/o. Hindol Tahasildar At: Hindol Dist : Dhenkanal Pin: 759022	Dhenkanal	Stone	Proposal for grant of Environmental Clearance for Tarkabeda Black Stone Quarry- 03 over an area of 2.023ha under Hindol Tahasil of Dhenkanal District of Tahasildar, Hindol - <b>EC</b>	<b>02.09.2022</b>	i) Exact distance in table form of proposed quarry i.e. Tarkabeda Black Stone Quarry from following quarries - Tarkabeda Black Stone Quarry (Plot no - 3494), Tarkabeda Black Stone Quarry (plot no - 3494/1), Tarkabeda Black Stone Quarry (Plot no -3494/2) and Tarkabeda Black Stone Quarry (Plot no -3494/4) with geo coordinates and all quarries to be shown in google	The Tahasildar has clarified that Tarkabeda Black Stone Quarry - 01 is 720m from the nearest quarry, Tarkabeda Black Stone Quarry – 2 and other stone quarries (Tarkabeda Black Stone Quarry – 2, 3, 4, 5, 6) are situated within 500m from each other, google map of the site attached.	Google map was not found as mentioned in compliance report. Moreover the compliance replied finds no table format for geo coordinates of all quarries as asked for. Therefore, the SEAC decided to take decision on the proposal after receipt of the following from the concerned Tahasildar:  i) Exact distance

Proceedings of SEAC meeting (Minor Mineral – Clarification received) held on 05.11.2022

Environmental Scientist, SEAC



Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Clarification sought by the SEAC		Whether compliance furnished by the Tahasildar (Yes / No) With Remarks if any	Recommendation of the SEAC
						Date of meeting	Clarification		
							map.		in table form of proposed quarry i.e. Tarkabeda Black Stone Quarry from following quarries - Tarkabeda Black Stone Quarry (Plot no - 3494), Tarkabeda Black Stone Quarry (plot no - 3494/1), Tarkabeda Black Stone Quarry (Plot no -3494/2) and Tarkabeda Black Stone Quarry (Plot no - 3494/4) with geo coordinates and all quarries to be shown in google map.

Proceedings of SEAC meeting (Minor Mineral – Clarification received) held on 05.11.2022

Environmental Scientist, SEAC

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Clarification sought by the SEAC		Whether compliance furnished by the Tahasildar (Yes / No) With Remarks if any	Recommendation of the SEAC
						Date of meeting	Clarification		
2.	SIA/OR/MIN/246795/2021	Tahasildar Hindol (Lessee) M/s. Tarkabeda Black Stone O/o. Tahasildar Hindol At – Hindol Dist – Dhenkanal PIN - 759022	Dhenkanal	Stone	Proposal of Environmental Clearance for Tarkabeda Black Stone Quarry over an area of 2.428 ha under Hindol Tahasil of Dhenkanal District of Tahasildar Hindol - <b>EC</b>	20.08.2022	i) Exact distance in table form of proposed quarry i.e. Tarkabeda Black Stone Quarry from following quarries - Tarkabeda Black Stone Quarry (Plot no - 3494), Tarkabeda Black Stone Quarry (plot no - 3494/1), Tarkabeda Black Stone Quarry (Plot no -3494/2) and Tarkabeda Black Stone Quarry (Plot no -3494/4) with geo coordinates and all quarries to be shown in google map.	The Tahasildar has clarified that Tarkabeda Black Stone Quarry - 01 is 720m from the nearest quarry, Tarkabeda Black Stone Quarry – 2 and other stone quarries (Tarkabeda Black Stone Quarry – 2, 3, 4, 5, 6) are situated within 500m from each other, google map of the site attached.	Google map was not found as mentioned in compliance report. Moreover the compliance replied finds no table format for geo coordinates of all quarries as asked for. Therefore, the SEAC decided to take decision on the proposal after receipt of the following from the concerned Tahasildar:  i) Exact distance in table form of proposed quarry i.e. Tarkabeda Black Stone Quarry from

Proceedings of SEAC meeting (Minor Mineral – Clarification received) held on 05.11.2022

Sl. No	SEIAA File No.	Name & Address of the proponent	District	Type of Mineral	Name of the project	Clarification sought by the SEAC		Whether compliance furnished by the Tahasildar (Yes / No) With Remarks if any	Recommendation of the SEAC
						Date of meeting	Clarification		
									following quarries - Tarkabeda Black Stone Quarry (Plot no - 3494), Tarkabeda Black Stone Quarry (plot no - 3494/1), Tarkabeda Black Stone Quarry (Plot no -3494/2) and Tarkabeda Black Stone Quarry (Plot no - 3494/4) with geo coordinates and all quarries to be shown in google map.



MEMBER SECRETARY, SEAC

Proceedings of SEAC meeting (Minor Mineral – Clarification received) held on 05.11.2022

*Jwajak*  
Environmental Scientist, SEAC