

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 29<sup>TH</sup> DECEMBER, 2023**

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The SEAC met on 29<sup>th</sup> December, 2023 at 03:30 PM by Virtual mode (VC) through video conferencing in Google Meet under the Chairmanship of Sri Shashi Paul. The following members were present in the meeting.

- |                               |   |                       |
|-------------------------------|---|-----------------------|
| 1. Sri Shashi Paul            | - | Chairman (through VC) |
| 2. Dr. K. Murugesan           | - | Member Secretary      |
| 3. Dr. Chittaranjan Panda     | - | Member (through VC)   |
| 4. Prof. (Dr.) H.B. Sahu      | - | Member (through VC)   |
| 5. Sri Jayant Das             | - | Member (through VC)   |
| 6. Er. Fakir Mohan Panigrahi  | - | Member (through VC)   |
| 7. Prof. (Dr.) B.K. Satapathy | - | Member (through VC)   |
| 8. Dr. K.C.S Panigrahi        | - | Member (through VC)   |
| 9. Prof. (Dr.) Abanti Sahoo   | - | Member (through VC)   |
| 10. Dr. Ashok Kumar Sahu      | - | Member (through VC)   |
| 11. Dr. Rabinarayan Patra     | - | Member (through VC)   |
| 12. Er. Kumud Ranjan Acharya  | - | Member (through VC)   |

**CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):**

The compliances furnished by the proponents were verified by the members through e-mail and also proceedings of the meeting were confirmed by the members through e-mail. The decision of the committee on case-to-case basis as follows:

**ITEM NO. 01**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR RENGITIPALLI - A,B,C,D & E STONE QUARRIES CLUSTER OVER AN AREA OF 170.249 ACRES OR 68.899 HECTARES IN THE VILLAGE RENGITIPALLI UNDER TAHASIL KODALA IN DISTRICT GANJAM OF SRI JUTI KRUSHNA PANDI - 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. **Category:** As per EIA Notification 2006, and its subsequent amendments, the proposed project falls under B category in item 1(a) - Mining of Minerals.
3. This proposal is for Terms of Reference for obtaining Environmental Clearance for Rengitipalli - A, B, C, D & E Stone Quarries Cluster over an area of 170.249 acres or 68.899 hectares in the village Rengitipalli under Tahasil Kodala in District Ganjam of Sri Juti Krushna Pandi.
4. The mining plan was approved by Sri S.P. Nanda vide letter no. 714,716,718 & 720 on dated 27.05.2022.

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Environmental Scientist, SEAC

5. Mining lease is an identified sairat source in the DSR Ganjam in Para no 14 - Rengitipalli-A, 13 - Rengitipalli-B, 26 - Rengitipalli-C, 27 - Rengitipalli-D, 28 - Rengitipalli-E in Page no.65,67.
6. The proposed project is a 5 stone quarries cluster mines Rengitipalli A & B were existing mines and the Rengitipalli C,D,E are new mines.

Sl. No.	Quarry name	Name of Lessee
01	Rengitipalli - A	Sri Juti Krushna Pandi
02	Rengitipalli - B	Sri Juti Krushna Pandi
03	Rengitipalli - C	Not Auctioned
04	Rengitipalli - D	Sri Bhagaban Parida
05	Rengitipalli - E	Sri Bhagaban Parida

7. **Location and connectivity:** The quarries are located in SE Part of village Rengitipalli, under Kodala Tahasil of Ganjam district in Odisha State. District headquarters Chatrapur is at a distance of 28.00 Km and is covered in the Survey of India Topo Sheet No – E45A14. The geo-coordinates of the quarry cluster are: Latitude - 19°35'54.52"N to 19°36'25.49" N Longitude - 84°54'01.95"E to 84°55'12.95"E. Nearest National Highway is NH-16 is at a distance of 20.20 Km in SE. The quarry is of 1.30 Km in NE away from the state highway is SH-30. The Nearest Airport is Biju Patnaik International Airport which is at a distance of approx. 160 km towards NE direction. Nearest Dam is Luhakote dam at a distance of 8.00 Km in NW. Nearest reserve forest is Karishinagiri hill Reserve Forest is at a distance of 4.85 Km in SE. Nearest road bridge is Makundapur bridge over Rushikulya River at a distance of 11.00 Km. in SW. Nearest river embankment is Makundapur bridge over Rushikulya River at a distance of 11.00 Km. in SW. Nearest Electric transmission line is 0.20 Km from the Lease area. The Nearest Habitation is 0.20 Km in the North direction.
8. **Baseline study:** Baseline Study has been conducted during the period March, 2023 to May, 2023.
9. **Reserves and total production:** The total Geological reserve of cluster area is 12167027 Cum and Mineable reserve is 6739940 Cum and the total production for the Proposed Project is 11,900 cum/year.

Name of Sources	Vol. of Stone in (m <sup>3</sup> )
Rengetipalli - A	4200
Rengetipalli - B	3500
Rengetipalli - C	---
Rengetipalli - D	2000
Rengetipalli - E	2200
<b>TOTAL</b>	<b>11900</b>

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**10. Mining method:** The Method of Mining will be opencast Semi-mechanized Method. Extraction and loading into truck & Tractor will be done by Machinery. The transportation of Stone from Quarry site to destination shall be achieved by dumper/tractor.

**11. Waste generation and management:** During plan period 2975 cum per annum of waste will be generated from the total cluster area and the waste will be used in maintenance of haulage road and back filling.

Plan Period	Name of Quarry	Maximum Production (cum)	Waste (cum)
5 Years	Rengitipalli - A Stone Quarry	4200	1050
5 Years	Rengitipalli - B Stone Quarry	3500	875
5 Years	Rengitipalli - D Stone Quarry	2000	500
5 Years	Rengitipalli - E Stone Quarry	2200	550
Total		11900	2975

**12. Water requirement:** Total Water Requirement for the proposed project will be 33 KLD.

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10 lpcd per labor $39 * 10 / 1000 = 0.39$ KLD	0.39
Dust suppression	Total haulage road to be water sprinkled = 2528 m $2528 * 6m * 1.0 \text{ ltr} * 2 \text{ times} / 1000 = 30336$ LPD 30.336 KLD	30.336
Plantation	1000 plant in five year @ 2 L/per plant = $1000 * 2 = 2000 / 1000 = 2.0$ KLD	2.0
<b>Total</b>		<b>32.726 KLD ~ 33 KLD</b>

**13. Greenbelt development:** The plantation proposal has been given to plant around 1000 saplings over an area of 0.40 ha. in the auctioned area. Species likely to be planted are Chakunda, Neem etc. as per the availability. Spacing between the saplings will be kept 2.5 meters x 2.5 meters only.

**14. Manpower:** Total number of persons that will be required for the proposed project is 39 numbers.

**15. Project Cost:** The estimated cost of the proposed project is Rs 1 crore.

Sl. No.	Activity	Capital Cost (in Rs.)
1	Health check-ups Facility in Rengitipalli village.	1,00,000
2	Distribution of Sanitizer and Mask to the villagers of Rengitipalli village	40,000
3	Water Storage tank in village Rengitipalli	20,000
4	Distribution of educational kits & books in schools (@ Rs. 2,000/ kit)	40,000
<b>TOTAL (in life time)</b>		<b>2,00,000</b>

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Environmental Scientist, SEAC

16. **Environment Consultant:** The Environment consultant M/s **Cognizance Research India Pvt. Ltd.**, along with the proponent made a presentation on the proposal before the Committee.

17. The SEAC in its meeting held on dated **01-09-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Previous Environmental clearance copies along with its compliance report of existing mines.	Copy of Previous Environmental clearance Copies along with its compliance report of existing mines is attached herewith.	Existing mines Rengetipalli – A & B previous EC and previous EC compliance reports has been submitted.
2.	Include Quarry C in the EIA report which is not auctioned yet, as reported by PP. Submit the revised KML file including all quarries present in the cluster.	Yes, the Quarry C is included in the EIA report and the revised KML is prepared.	Google map showing all quarries has been submitted.
3.	Copy of agreement/letter of authorization from all the lease holders present in the cluster to take the lead and carry out the EIA study prior to recommendation of TOR.	Copy of authorization letter is attached herewith.	Authorization letter on behalf of all lease holders has been submitted.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s **Cognizance Research India Pvt. Ltd.**, the SEAC prescribed the following specific ToRs in addition to standard ToRs in cluster approach as per **Annexure – A** for conducting detailed EIA study.

- i) Installation of STP of adequate capacity and requisite design.
- ii) Copies of Previous obtained EC which SEIAA has granted as informed by the proponent.
- iii) Traffic study duly vetted by reputed institution.
- iv) Green belt in safety zone of each mine and all-round the clusters to be confirmed with details.
- v) Arrangement of pipeline sprinkling (permanent water line) to be explored and confirmed.
- vi) Silt management and SoP for the same to arrest /remedy of silt ingress to surrounding agricultural lands.
- vii) Kisam of land to be submitted.
- viii) Safety measures during blasting including provision of warning to be submitted.
- ix) Map showing ESZ, Sanctuary boundary and lease boundary.
- x) Distance of nearest elephant corridor from cluster.
- xi) Site photographs along with the consultant.

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 Environmental Scientist, SEAC

- xii) Individual mining plan for each quarry/mine in the cluster as the proponent has submitted cluster mining plan.
- xiii) Standard Operating Procedures (SOP) for Blasting of all the quarries along with blasting management.
- xiv) Dust Management.
- xv) Details of any court case if any pending for the cluster or any of leases under it.

**ITEM NO. 02**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR KALINGADOLA SAND BED, OVER AN AREA 6.639 HA, KHATA NO- 270, PLOT NO- 575 AT- KALINGADOLA, TAHASIL-DIGAPAHANDI, DIST- GANJAM OF SRI PRAVA RANJAN MISHRA - EC**

1. The Project Proponent didn't attend the meeting. The project proponent via E-mail on dated 11/11/2023 has informed that as per the decision of SEAC committee, the proposal shall be considered after submission of Replenishment Study Report. Since EDS has not been raised, the Project Proponent has requested to facilitate uploading of the Replenishment Study Report in the portal as discussed in last meeting. The SEAC in its meeting held on dated 20-11-2023 decided to take decision on the proposal after receipt of Replenishment Study Report. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	The proposal shall be considered after submission of Replenishment Study Report. Since EDS has not been raised, the Project Proponent has requested to facilitate uploading of the Replenishment Study Report in the portal as discussed in last meeting. The SEAC decided to take decision on the proposal after receipt of Replenishment Study Report.	Replenishment study report submitted	The replenishment of Sand has been calculated by volumetric survey method and amount of sand deposited in the post monsoon season was calculated to be 41827 cum.

2. The Committee observed the following:

- a) **Measurement error:** 100 m X 100 m grid has been used for the volumetric survey and no details are given regarding accuracy of the measurement. The RLs of the grid points based on which the replenishment levels have been reported are also not mentioned.
- b) Satellite coordinates of the ML area boundary based on DGPS survey has not been reported.
- c) The riverbed sand replenishment study report is prepared by M/s Earth & Environment, Bhubaneswar. As per the above-mentioned report field data for pre and post monsoon periods have been collected in May and November respectively. There is no mention of the

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dates as well as year of collection of these field data. No information is available regarding surveying instruments used and the process of carrying out the survey.

- d) As per the "Standard operating procedure (SOP) for study of rate of replenishment of sand using drone survey" submitted by ORSAC vide letter No. ORSAC/PR/0951/21/2588 dated 02<sup>nd</sup> June 2023 the RLs of the center points of 10 m X 10m of the ML area measured for replenishment study is to be reported. (Paragraph 4 page 7).

After detailed discussion, the SEAC decided that the proponent shall be called for a detailed presentation for consideration of EC and also to clarify the observation of SEAC at para 2.

**ITEM NO. 03**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SHREE RAM SPONGE AND STEELS PRIVATE LIMITED FOR PROJECT IS FOR THE REGULARIZATION OF THE EXISTING PROJECT OF ROLLING MILL HAVING CAPACITY OF PENCIL / M.S. INGOTS (INDUCTION FURNACE - ONE NO EACH OF 2, 4 & 6 MT/HEAT)-1700 MT/MONTH. ROD, FLATS, ANGLE & CHANNEL-2000 MT/MONTH & PRODUCER GAS - 4200 NCUM / HR OVER AN AREA 10.25 ACRES AT BILAIGARH, PO-LAING, TEHSIL- RAJGANGPUR, DIST-SUNDERGARH OF SRI UMESH SHARMA - 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 EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for environmental clearance of M/s. Shree Ram Sponge and Steels Private Limited for the Regularization of the existing project of Rolling Mill having capacity of Pencil / M.S. Ingots (Induction Furnace -one no. each of 2, 4 & 6 MT/heat) - 1700 MT/Month. Rod, Flats, Angle & Channel-2000 MT/Month & Producer gas - 4200 NCum / hr over an area 10.25 acres at Bilaigarh, Po-Laing, Tehsil - Rajgangpur, Dist – Sundergarh.
3. **Category:** This is a Category – B project which falls under schedule 3(a), Metallurgical Industries (ferrous & nonferrous) as per the EIA Notification 2006 and amendments thereafter. Proposed project is Regularization of Re-Rolling Mill, in compliance to the MoEF&CC Notification dated 20th July 2022, all Cold Rolled Stainless Steel Manufacturing Industries require prior environment clearance as per EIA notification 2006.
4. CTE for Expansion proposal for 3<sup>rd</sup> IF of 6 T capacity for manufacture of M.S Ingot 800 MT/Month & MS Rods, Flats, Angle & Channel 2000 MT/Month issued by OSPCB on 20-06-2006. Existing Industry operated on the basis of CTO obtained from SPCB Odisha vide letter no. 724/CT-0043 dated 26.03.2021 which is valid up to 31-03-2026.
5. **Location and Connectivity:** M/s Shree Ram Sponge & Steel Pvt Ltd is located at Bilaigarh, PO-Laing, Tehsil- Rajgangapur, Dist - Sundergarh, Odisha. The coordinates of the plant area are Latitudes 22°14'3.44"N to 22°14'11.78"N & Longitudes 84°39'22.11"E to 84°39'26.26"E. The nearest railway station is the Kanshbahal Railway Station (2.7KM, S) from the site. The nearest airport is at Rourkela Airport (15.6Km, E) from the site. The site is approx. 8.3 Km away from nearest town Rajgangpur Town. Barjore Nala is at 0.02 km East from the project site. Sankh River is at 1.0 Km ENE from the project site. The nearest State Highway i.e., SH 10 which runs at adjacent to the project site toward south direction.

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6. **Topography:** The topography of the plant area is flat in and the slope is downward towards the east direction. The average elevation of site is 195 m AMSL. Range between 194 m AMSL to 196 m AMSL. The perennial river Sankh flows about 1.0 km in the ENE direction of the project site area and forms the main drainage system of the vicinity.

7. **Seismicity:** The project is under very feeble to Zone – III (moderate damage risk zone) [as per IS 1893 (Part-I): 2002]

8. **Project details:**

S. No.	Product	Existing capacity/Quantity	production	Total Regularization	after
1	Pencil/M.S. Ingots (Induction Furnace: One no each of 2,4 & 6 MT/Heat)	1700 MT/Month		1700 MT/Month	
2	M.S Rod, Flats, Angle & Channel	2000 MT/Month		2000 MT/Month	
3	Producer Gas	4200 Ncum/hr		4200 N cum/hr	
	Area	10.25 Acres			

**Proposed:** It is proposed to the addition of Coal Pulverizer of 1 & 2 within the existing project site.

Sr No	Particulars	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Pulverizer No.1	Closed system	Bag Filter
2	Pulverizer No.2	Closed system	Bag Filter

9. **The land utilization plan:** In total 10.25 Acres of land will be adequate to accommodate the entire planned facilities. The land utilization plan is given below:

S. No.	Land Use	Area (Acres)	Proposed Area	Total area (Acres)	Percentage
1.	Plant Area	5.0	None	5.0	48.78
2.	Internal Road, corridor other, parking, raw material storage, product storage office building etc)	0.86	None	0.86	8.39
3.	Greenbelt	3.39	-	3.39	33.07
4.	Open space	1.0	None	1.0	9.76
	<b>Total</b>	<b>10.25</b>	<b>-</b>	<b>10.25</b>	<b>100</b>

10. **Production and Waste Generation details:**

Sr. No.	INPUT	OUTPUT
<b>Material Balance for Induction Furnaces (Ingots)</b>		
	<b>TPA</b>	<b>TPA</b>
1.	Sponge Iron	M.S Ingot
	17952	20,400
2.	Scrap	Slag
	2244	1020
3.	Cast iron/Ferro Alloy	Gases & Fumes
	2244	1020
	<b>Total</b>	<b>Total</b>
	<b>22440</b>	<b>22440</b>

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Description	Input	Output
<b>Material balance for Rolled Product</b>		
Ingots/Billets	24686	-
M.S Rod, Flats, Angle & Channel	-	24000
Mill scale	-	343
End Cutting	-	343
<b>Total</b>	<b>24686</b>	<b>24686</b>

11. **Manufacturing process:** Scrap & Sponge Iron form the major raw materials for Pencil/M.S. Ingots making in the induction furnace route. Rolling Mill is being used for Production of Rolled products (M.S Rod, Flats, Angle & Channel). Rolling is a process used to shape metal into a thin long layer by passing it through a gap of two rollers rotating in different directions. At first Pencil/M.S. Ingots from yard send it to reheating furnace where Producer Gas from Coal gasifier is used for heating and then processed to roughing mill than it passes to intermediate mill and finishing mill respectively. From there it will send it to QTB system for pinch roll & dividing shear and then to cutting with cold shear and bundle it for final dispatch. Now it is proposed to addition of coal pulveriser 1 & 2.

**12. Waste Generation and Management:**

Particulars	Type of waste	Existing (TPA)	Total (TPA)	Treatment/ disposal
-	STP Sludge	0.5 Kg/Day	0.5 Kg/Day	Will be used as manure for gardening
Municipal Solid Waste	Biodegradable	10	10	It is being Send to Municipal corporation, Sundergarh
Industrial waste	Mill scale	343	343	Reused in SMS
Industrial waste	End Cutting	343	343	Reused in SMS
Industrial waste	Slag	1020	1020	Slag will be crushed and metal part will be recovered by magnetic separator and rest part will be used for road construction.

S.No	Type of Solid waste	Quantity (TPA)	Disposal Proposed
1.	Bottom Ash	1400	Will be used in land filling.
2.	Tar residue	0.2	Sold to Authorized Coal tar processing units
<b>Hazardous Waste</b>			
1.	Used oil	1.5	Storage in containers over impervious floor under well-ventilated covered shed followed by disposal through actual users having valid authorization from SPCB, Odisha.

13. **Water requirement:** Total one-time water requirement is 111 KLD. Total daily fresh water requirement will be 45 KLD. Recycled water 66 KLD. The source of water is Ground water. CGWA NOC has been renewed from CGWA vide letter no.- CGWA/NOC/IND/ORIG/2021/12270 dated 15.10.2020 valid up to 14.10.2023 to tune of 93 KLD. The source of water will be Ground water.

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14. **Wastewater management:** The sewage & sanitary wastewater from toilets, washrooms and canteen shall be treated in STP and treated water will be used for greenbelt development. Blow-down water from cooling systems will be utilized for the plant through closed circuit cooling system. Wastewater from the CCM and rolling mills are likely to contain scale and oil & grease. This water will be collected in settling tank fitted with an oil & grease skimmer. The clarified water will be re-used in the plant. Oil & Grease shall be collected in drums and sold to secondary market for recycling.
15. **Power Requirement:** Total power requirement for proposed project is 5000 kVA and it is being sourced from State Electricity Board.
16. **Green belt:** Green belt is being developed at least in 33.07% of total plant area in and around the plant premises for environmental protection as per CPCB/OPCB guidelines. In the existing project 3.39 Acres of land i.e., 33.07% of total land plant area of 10.25 Acres has been provided a natural barrier for attenuation of noise and air pollution.
17. **Baseline study details:** Baseline data to be collected during post monsoon from October to December 2023.
18. **Manpower:** The existing employment is around 175 persons and contractual labours -140 Nos.
19. **Project Cost:** The expected cost of the project is Rs.5.45 crores. EMP cost includes a capital cost of 80.0 Lakhs and a recurring cost of 30 Lakhs/Annum.

S. No.	Particulars	Amount in INR, Lakhs	
		Capital Cost	Recurring Cost
1	Air Pollution Control System	30	7
2	Noise Control System	5.72	2
3	Green Belt Development	11.28	2
4	Environment Monitoring and Management	8	6
5	Water Pollution Control System	20	8
6	Occupational Health & Safety	5	5
Total		80	30

20. **Environment Consultant:** The Environment consultant M/s Parivesh Environmental Engineering Services, Lucknow along with the proponent made a presentation on the proposal before the Committee.

21. The SEAC in its meeting dated 28-08-2023 recommended the following:

- A. The proponent may be asked to submit the following for further processing of EC application:
- Air Pollution Control Measures adopted at present.
  - Copy of permission from water resource department for using ground water.
  - Details of spent refractions in terms of generation and permission for its disposal/selling to authorized vendors as they are hazardous.
  - Details of supporting documents/NOC from concerned authority for landfill of hazardous waste products and specify the area with layout.

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- e) Details of fly/bottom ash generation and its management with material balance from Producer Gas Plant.
- f) All copies of Consent to Establish, Consent to Operate and Authorization granted by the Board to different units such as Induction Furnace, Producer Gas Plant, Rolling Mill and other units if any.

**B. The proposed site shall be visited by Sub-Committee of SEAC to verify the followings**

- a) Environmental settings of the project site.
- b) Extent of construction activity and operational status of all the units.
- c) Road connectivity to the project site.
- d) Drainage network at the site.
- e) Greenbelt development in the existing plant.
- f) Solid waste management practice of the existing plant.
- g) Vacant land available.
- h) Any other issues including local issues.

22. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent				Views of SEAC
		Particular	Control equipment	Max Emission at the outlet	Monitoring	
i.	Air Pollution Control Measures adopted at present.	Reheating Furnace	Wet Scrubber with Chimney of 30 m	PM<150 mg/Nm <sup>3</sup>	Periodically Stack monitoring is being done.	
		Induction Furnace	Adequate Stack hight, bag house, Fume Extraction system with bag filters, 30 m stack height	PM<150 mg/Nm <sup>3</sup>		
		Coal Gasifier	Tar control system with Electrostatic Tar Seperator			
		Roads	Roads are Paved inside the plant premises	-		
		Vehicles	completely Covered	-		

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent				Views of SEAC																									
			Trucks & PUC Certified Vehicles is being/will be used																												
ii.	Copy of permission from water resource department for using ground water.	Copy of permission obtained from CGWA is enclosed as Annexure 1				NOC from CGWA for 93KLD has been taken valid till 14-10-2023. Permission from Water Resource department, Odisha for using ground water has not been submitted.																									
iii.	Details of spent refractories in terms of generation and permission for its disposal/selling to authorized vendors as they are hazardous.	150 TPA Spent refractories is being generated <b>Management:</b> Spent refractories have been used largely in open-loop recycling applications such as roadbed aggregates.				-																									
		<table border="1"> <thead> <tr> <th>Furnace Operation / Area of Application</th> <th>Refractory Specifications (Std. Specfn)</th> </tr> </thead> <tbody> <tr> <td>Melting Mild Steel, Stainless Steel, Manganese Steel &amp; Alloy Steels</td> <td>Type= Mag-Chrome R/M, MgO%= 70- 85, Cr2O3%= 8-10, Sintering Temp (ST)= 800OC, Application Temp (AT)= 1750OC, Grading= 0-5 mm</td> </tr> </tbody> </table>		Furnace Operation / Area of Application	Refractory Specifications (Std. Specfn)	Melting Mild Steel, Stainless Steel, Manganese Steel & Alloy Steels	Type= Mag-Chrome R/M, MgO%= 70- 85, Cr2O3%= 8-10, Sintering Temp (ST)= 800OC, Application Temp (AT)= 1750OC, Grading= 0-5 mm																								
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Melting Mild Steel, Stainless Steel, Manganese Steel & Alloy Steels	Type= Mag-Chrome R/M, MgO%= 70- 85, Cr2O3%= 8-10, Sintering Temp (ST)= 800OC, Application Temp (AT)= 1750OC, Grading= 0-5 mm																														
iv.	Details of supporting documents/NOC from concerned authority for landfill of hazardous waste products and specify the area with layout.	Used oil of 0.5 KL/Annum is generated. <b>Management:</b> Storage in containers over impervious floor under well-ventilated covered shed followed by disposal through actual users having valid authorization from SPCB, Odisha. The storage area for used oil is specified in layout plan and enclosed as Annexure-2.				-																									
v.	Details of fly/bottom ash generation and its management with material balance from Producer Gas Plant.	<table border="1"> <thead> <tr> <th colspan="3">INPUTS</th> <th colspan="2">OUTPUTS</th> </tr> <tr> <th>S.No.</th> <th>Item</th> <th>Quantity (TPA)</th> <th>Item</th> <th>Quantity (TPA)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Coal</td> <td>4800</td> <td>Producer Gas</td> <td>4200 N cum/hr</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Tar (KL/Annum)</td> <td>3</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Bottom Ash</td> <td>1400</td> </tr> </tbody> </table>		INPUTS			OUTPUTS		S.No.	Item	Quantity (TPA)	Item	Quantity (TPA)	1.	Coal	4800	Producer Gas	4200 N cum/hr				Tar (KL/Annum)	3				Bottom Ash	1400	Bottom Ash is being used for land filling		-
INPUTS			OUTPUTS																												
S.No.	Item	Quantity (TPA)	Item	Quantity (TPA)																											
1.	Coal	4800	Producer Gas	4200 N cum/hr																											
			Tar (KL/Annum)	3																											
			Bottom Ash	1400																											
vi.	All copies of Consent to Establish, Consent to Operate and Authorization granted by	Copies of all CTO and CTE is enclosed as Annexure-3				CTE obtained on 20-06-2006 and latest CTO is																									

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*Trayak*  
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	the Board to different units such as Induction Furnace, Producer Gas Plant, Rolling Mill and other units if any.		valid till 31-03-2026.

After detailed discussion, the SEAC decided to take decision on the proposal after site visit of Sub-Committee of SEAC.

**ITEM NO. 04**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. SUBHLABH CEMENTS PRIVATE LIMITED FOR REGULARIZATION OF THE EXISTING PROJECT OF SUBHLABH CEMENT PVT. LTD. HAVING CAPACITY OF 90,000 MT/ANNUM, (TMT BAR, ANGLE, CHANNEL, FLATS, SQUARE BAR AND ROUNDS, MS PLATE, MS STRIPS, MS PIPES, MS SHEETS ETC.) OVER AN AREA 5 ACRES LOCATED AT MANDIAKUDAR, TEHSIL-RAJGANGPUR, DIST.- SUNDARGARH OF SRI SANJOJ KUMAR AGARWAL - 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 EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for environmental clearance of M/s. Subhlabh Cements Private Limited for Regularization of the existing project of Subhlabh Cement Pvt. Ltd. having capacity of 90,000 MT/Annum, (TMT Bar, Angle, Channel, Flats, Square Bar and Rounds, MS Plate, MS Strips, MS Pipes, MS Sheets etc.) over an area 5 Acres located at Mandiakudar, Tehsil-Rajgangpur, Dist.- Sundargarh of Sri Sanjoj Kumar Agarwal.
3. **Category:** This is a Category – B project which falls under schedule 3(a), Metallurgical Industries (ferrous & nonferrous) as per the EIA Notification 2006 and amendments thereafter.
4. **Location and Connectivity:** M/s Subhlabh Cement Pvt. Ltd is located at Khata No.- 124/285, Plot No.-1212/1740, Village-Mandiakudar, Tehsil-Rajgangpur, Dist.-Sundargarh, Odisha. The coordinates of the plant area are 22°13'45.37"N to 22°13'48.95"N & 84°41'36.41"E to 84°41'45.26"E. The nearest railway station is the Kalunga Railway Station (4.0 KM, ESE) from the site. The nearest airport is at Rourkela Airport (12 Km, E) from the site. The site is approx. 12 Km away from nearest town Rajgangpur Town. Sankh River is flowing at a distance of 0.85 Km North from the project site. The State Highway (SH-10) runs at a distance 0.15 Km to the project site toward south direction.
5. **Topography:** The topography of the plant area is flat in and the slope is downward towards the east direction. The average elevation of site is 192 m AMSL. Range between: 192 m AMSL to 194 m AMSL. The perennial river Sankh forms the main drainage system of the vicinity.
6. **Seismicity:** The project is under very feeble to Zone – III (moderate damage risk zone) [as per IS 1893 (Part-I): 2002]

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*J. Nayak*  
Environmental Scientist, SEAC

7. Project details:

Sr. No	Name of product	Existing capacity (Ton/Annum)	After regularization Total Capacity (Ton/Annum)
1	TMT Bar, Angle, Channel, Flats, Square Bar and Rounds	36,000	36,000
2	MS Plate, MS Trips, MS Pipe, and MS Sheet	54,000	54,000
	<b>Total capacity</b>	<b>90,000</b>	<b>90,000</b>

Sr No	Particulars	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Pulverizer No.1	Closed system	Bag Filter

8. The land utilization plan: In total 5 Acres (20234.28 Sqm.) of land will be adequate to accommodate the entire planned facilities. The land utilization plan is given below:

Land Use	Area (Sqm)	Expansion as per CTO dated 03.06.2022	Area (Sqm)	Percentage (%)
	Existing		After Regularization	
TMT MILL - 15 TPH & MACHINE SHOP	2520	-	2520	12.454
MS HOT STRIP MILL -15 TPH	-	2000	2000	9.884
MS TUBE MILL -15 TPH	-	1800	1800	8.895
ANCILARY UNITS	200	200	400	1.976
WATER TREATMENT PLANT	-	350	350	1.73
GREENBELT	6880	-	6880	34
INTERNAL ROAD	2500	1150	3650	18
WASTE HANDLING AREA	4	-	4	0.02
PLASTIC WASTE STORAGE SHED	4	-	4	0.02
<b>OPEN AREA</b>	<b>8126.28</b>	<b>-</b>	<b>2626.28</b>	<b>12.98</b>
<b>Total Land Area</b>	<b>20234.28</b>		<b>20234.28</b>	<b>100</b>

9. Production and Waste Generation details:

Sr. No.	INPUT		OUTPUT	
		TPA		TPA

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1.	MS Billets/ Ingot	96000	TMT Bar, Angle, Channel, Flats, Square Bar and Rounds	36000
2.			MS Plate, MS Trips, MS Pipe, and MS Sheet	54000
3.			End Cutting /Mill scale	6000
<b>Total</b>		<b>96000</b>	<b>Total</b>	<b>96000</b>

10. **Manufacturing process:** Rolling Mill is being used for Production of Rolled products (MS Plate, MS Trips, MS Pipe, and MS Sheet, TMT Bar, Angle, Channel, Flats, Square Bar and Round). Rolling is a process used to shape metal into a thin long layer by passing it through a gap of two rollers rotating in different directions. M.S. Ingots from the yard is taken to reheating furnace where pulverized coal is used as fuel for heating and then processed to roughing mill than it passes to intermediate mill and finishing mill respectively. From there it will send it to QTB system for pinch roll & dividing shear and then to cutting with cold shear and bundle it for final dispatch.

11. **Waste Generation and Management:**

Sr. No.	Type/Name of waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity (MT/Annum)		Management of HW
				Existing	Total	
<b>INDUSTRIAL SOLID WASTE</b>						
1	End Cutting /Mill scale	End Cutting	-	6000	6000	End cutting are being given to nearby IF Unit
4	Municipal Solid Waste (Kg/ day) @0.20kg/person	-	-	15	15	It is being Send to Municipal corporation, Rourkela

Sr. No.	Type/Name of waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity (MT/Annum)		Management of HW
				Existing	Total	
<b>HAZARDOUS WASTE</b>						
1	Used oil	Machinery	5.1	0.5	0.5	Collection, storage, Reuse within premises OR transportation, disposal by selling to registered recycler
2	Dust from Bag filter	Pulverizer	35.1	36	36	Collection, storage and sold to brick manufacturers

12. **Water requirement:** Total one-time water requirement is 43.5 KLD. Total daily fresh water

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requirement will be 30 KLD. Recycled water 13.5 KLD. The source of water is Ground water.

13. **Wastewater management:** The domestic wastewater from toilets, washrooms and canteen will be treated in STP and treated water will be used for greenbelt development. Waste water from the rolling mills is likely to contain scale and oil & grease. This waste water will be treated in treatment system consists of settling tank fitted with an oil & grease skimmer. The clarified water is being re-used in the plant. Oil & Grease is being collected in drums and sold to Authorized recycler for recycling.
14. **Power Requirement:** Total power requirement for proposed project is 3500 KVA and it is being sourced from State Electricity Board.
15. **Green belt:** In the existing project 6880 Sqm of land i.e., 34% of total land plant area of 20234.28 Sqm has been provided a natural barrier for attenuation of noise and air pollution
16. **Baseline study details:** Baseline data to be collected during post monsoon from October 2023 to December 2023
17. **Manpower:** The existing employment is around 77 Persons and contractual labour-140 Nos.
18. **Project Cost:** The expected cost of the project is Rs.985 Lakhs. EMP cost includes a capital cost of 68 Lakhs and a recurring cost of 20 Lakhs/Annum.
19. **Environment Consultant:** The Environment consultant M/s Parivesh Environmental Engineering Services, along with the proponent made a presentation on the proposal before the Committee.
20. The SEAC in its meeting held on dated **20-10-2023** recommended the following:
  - A. **The proponent may be asked to submit the following for further processing of EC application:**
    - i) Copy of company registration certificate, Consent to Establish and Consent to Operate order of existing and expansion project.
    - ii) Details of Air Pollution Control measures provided in the existing reheating furnaces.
    - iii) Comparison statement of present plant and machineries with its capacity vs proposed plant and machineries with capacity.
    - iv) Justification why this will be not considered as violation case.
  - B. **Following specific ToRs may be prescribed while issue of Terms of References.**
    - i) Revised layout map indicating location details, name of the species to be planted and to carry out the plantation in all the sides of the project site as the project proponent has submitted layout of greenbelt showing the plantation area only on two sides of the site
    - ii) Copy of permission obtained from CGWA for drawl of ground water.
    - iii) Detailed note on generation and quantity of disposal of end cuttings along with specific disposal method of end cuttings and agreements made with the end users thereof supported with documentation.
    - iv) Include provision of Rainwater harvesting Pits.

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- v) Include provision for installation of STP for treatment of domestic effluent and submit the detailed specification.
- vi) Details of ash management, quantity of coal burnt and provision of dust control system for handling pulverized coal and coal grinding unit.
- vii) Details of ash management such as quantity sold to dealers and disposal methods.
- viii) Detailed note on coal stock yard and coal handling management.
- ix) Details of storage of used oil and fire safety/ management.
- x) Explore possibility to include provision for use of Solar power and cleaner fuel (CNG)/producer gas instead of coal.
- xi) Include the provision of cyclone and heat exchanger to reduce the temperature of flue gas before the Bag filter.

**C. The proposed site shall be visited by local members of SEAC along with officer of Regional office of State Pollution Control Board to verify the followings:**

- a) Environmental settings of the project site.
- b) Extent of construction activity and operational status of all the units.
- c) Road connectivity to the project site.
- d) Drainage network at the site.
- e) Greenbelt development in the existing plant.
- f) Solid waste management practice of the existing plant.
- g) Vacant land available.
- h) Any other issues including local issues.

21. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent						Views of SEAC
i.	Copy of company registration certificate, Consent to Establish and Consent to Operate order of existing and expansion project.	Copy of company registration certificate is enclosed as Annexure-I.						Copies submitted
		Sr. No	Particular	Product	Date of issue	Validity	Capacity	
		1.	CTE vide no 1186 dated 16.04.2018	TMT Bar, Angle, Channel, Flats, Square Bar and Rounds	16.04.2018	-	36000 Metric Ton/Annum	
2.	CTO order no 0678/SPCB/RKL (APC & WPC) (2865)	TMT Bar, Angle, Channel, Flats, Square	02.11.2018	31.03.2020	36000 Metric Ton/Annum			

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent					Views of SEAC
				Bar and Rounds			
		3.	CTO order no 0678/SPCB/RKL (APC & WPC) (353)	TMT Bar, Angle, Channel, Flats, Square Bar and Rounds	05.02.2020	31.03.2025	36000 Metric Ton/Annum
		4.	CTE for enhancement of production capacity vide letter no 1676/CTO-1152	MS Plate, MS Strips, MS Pipe and MS Sheets	03.06.2022	31.03.2026	54,000 TPA
		Consent to establish and consent to operate order of existing and expansion project is enclosed as Annexure-II.					
ii.	Details of Air Pollution Control measures provided in the existing reheating furnaces.	<b>Sr. no.</b>	<b>Source of emission With Capacity</b>	<b>Stack Height (meter)</b>	<b>Type of emissions i.e., Air Pollutants</b>	<b>Air Pollution Control Measures (APCM)</b>	
		1.	Reheating Furnace	30	Particulate matter SO2 NOx	Primary and Secondary fume Extraction system+ Bag Filter +Settling chamber	
iii.	Comparison statement of present plant and machineries with its capacity vs proposed plant and machineries with capacity.	<b>Sr. no</b>	<b>Existing</b>	<b>Proposed expansion as per vide letter no 1676/CTO-1152</b>			
		1.	TMT mill 15 TPH & Machine shop	-			
		2.	-	MS hot strip mill 15 TPH			
		3.	-	MS tube mill 15 TPH			
		4.	-	Water Treatment plant			
		5.	Transformer	-			
		6.	Weigh bridge	-			
		7.	Charging table with pusher	-			
		8.	Pulveriser	-			
		9.	Reheating Furnace	-			
		10.	Roughing mill	-			
		11.	Overhead Crane	-			
		12.	Intermediate mill	-			
		13.	Finishing mill	-			
		14.	Roller Table with coolingbed	-			
		15.	-	Producer gas plant			
		16.	-	Cooling tower			
		17.	-	Transformer 5000 kVA circuit breaker room			

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent			Views of SEAC
		18.	-	DG set 250 kVA	
		19.	-	Finishing mill 5 NOS	
		20.	-	Vetical mill stand 2 Nos	
		21.	-	Overhead crane 15 & 5 Ton	
		22.	-	Coil shifter conveyor 2 Nos	
		23.	-	Twister and pinch roller 2 Nos each	
		24.	-	Tube mill Uncoiler -4 Nos Profiling mill with guide Online robotic welding machine End trimming Finishing mill Shear Fished pipe bed Overhead crane 10 & 5 Ton	
iv.	Justification why this will be not considered as violation case.	➤ The unit is Standalone rolling/ re-rolling units and not covered under purview of EIA notification. However, the industry has obtained CTE and CTO from state pollution control Board. ➤ Further in compliance to the MoEF&CC Notification dated 20 <sup>th</sup> July2022 the application has been made for Regularization of existing rolling/ re-rolling units.			-

After detailed discussion, the SEAC decided to take decision on the proposal after site visit of Sub-Committee of SEAC.

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

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF BADAOLMA SAND MINING CLUSTER CONSISTING OF 3 SAND QUARRIES ON RIVER ANGI OVER AN AREA OF 9.383 HA. OR 23.20 ACRES IN BADAOLMA MOUZA, TAHASIL DABUGAON, DISTRICT NABARANGAPUR OF TAHASILDAR DABUGAON (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 3 SAND QUARRIES)-EC**

1. This proposal is for Environmental Clearance of Badaoolma Sand Mining Cluster consisting of 3 Sand Quarries on river Angi over an area of 9.383 ha. or 23.20 acres in Badaoolma mouza, Tahasil Dabugaon, District Nabarangapur of Tahasildar Dabugaon (submitted under cluster approach with consisting of 3 Sand Quarries).
2. **Category:** As per EIA notification 2016 and subsequent amendments, the project is coming under category 'B' (B1) under Schedule of activity 1(a)-Mining of Minerals.
3. **Project details:** The cluster include three mining lease area i.e., Badaoolma I sand bed over an area of 4.01 Ha or 9.91Acres in favour of successful bidder Niranjan Swain(LOI letter no.885/2020, dated 26.06.2020) Badaoolma II Sand bed over an area of 2.553Ha or 6.31 Acres in the favour of successful bidder Soumya Ranjan Mishra(LOI letter no 1402/2020,dated 21.09.2020).and Badaoolma III sand bed over an area of 2.82 Ha, 6.98 Acres in favour of Sri Prem Chand Gupta(LOI letter no 1397/2020,dated 21.09,2020). All the three mines located within 500m radius from each other forming a cluster of sand bed. The Quarry lease of

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Badaoolma-I, II, III has been granted by Tahasildar Dabugaon to the successful bidders for excavation of minor mineral (River Sand) for five years.

4. Mine plan for Badaoolma Sand Quarry – I, II, III has been approved by Joint director, Geology, Koraput vide letter no 1102 dated 08.06.2020; letter no 2228 dated 21.07.2020; letter no 2190 dated 20.07.20 respectively.
5. These are new mines in cluster as per DSR, Nabarangpur.
6. **TOR details:** Terms of Reference (TORs) has been granted by SEIAA- Odisha vide the Reference No: 649/SEIAA dated 26-02-2021.
7. **Public hearing details:** Public hearing was successfully executed on date 20.07.2022 at Gram Panchyat office premises of Badaoolama village under Dabugaon Tahasil in Nabarangpur District per the guidelines given in EIA Notification 14th September' 2006 and its subsequent amendment. Issues raised during public hearing of the Sand mining from the river bed, widening of roads as plying of vehicles will be more, road maintenance, plantation, dust suppression measure, protection of environment, peripheral development. CER budget proposed is Rs.120000.

**Table-CER Budget**

Sl. No.	Activity	Capital Cost (in Rs./annum)
1.	Financial aid for medical camp in Badaoolma village.	60,000
2.	Skill development program camps like computer learning, sewing etc. in Badaoolma village.	60,000
<b>TOTAL</b>		<b>1,20,000</b>

8. **Location and connectivity:** The proposed River Bed Sand Mining will be carried out on Angi River located at village: Badaoolma , under Tahasil: Dabugaon, Dist Nabarangpur, Odisha. The Lease Cluster over an area of 9.383 Ha bearing Khata No.326. Plot No: 778,855,760,449,518,855,803,916 Kisam- Nadi. The project site is located in survey of India toposheet no (73G/4, 65I/7) (Badaoolma I falls between latitude of Latitude: 31°17'02.23"N to 31°27'54.68"N Longitude: 82°18'55.23"E to 82°19'10.23"E.and Badaoolma II falls between Latitude: 31°17'02.23"N to 31°27'54.68"N Longitude: 82°18'55.23"E to 82°19'10.23"E. Badaoolma III falls between latitude of 19°23'32.92"N to 19°23'45.33"N and longitudes of 82°18'47.38"E to 82°18'57.05"E. Nearest road is village road which is located the distance of 100 meter from cluster area. The site is well connected to NH-130 CD & SH-39 at the distance of 11.00 Km in NE direction. Nearest Railway Station is Ambagaon Railway Station which is located on distance of 39.00 Kms in SW direction from the lease area.
9. **Topography and drainage:** The topography of the area is a flat terrain which lies at an elevation of more than 2m 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 115mRL & lowest elevation is 113mRL in sand. The lease area here is a river sand quarry. Drainage system in the region is dendritic. General flow direction of river is from North to South. Work will continue only during summer months when there is no water in the leasehold. Mining will be restricted to a depth above the ground water level.

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#### 10. Baseline study:

- a) Ambient air quality: Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM10 for all the 7 AQ monitoring stations were found to be 58.7 µg/m<sup>3</sup> at AQ3 and 88.20 µg/m<sup>3</sup> at AQ1, respectively. Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM2.5 for all the 7 AQ monitoring stations were found to be 23.21 µg/m<sup>3</sup> at AQ3 and 49.95 µg/m<sup>3</sup> at AQ1, respectively. As far as the gaseous pollutants SO<sub>2</sub> and NO<sub>x</sub> are concerned, the prescribed CPCB limit of 80µg/m<sup>3</sup> for residential and rural areas has never surpassed at any station. The minimum & maximum concentrations of SO<sub>2</sub> were found to be 5.69 µg/m<sup>3</sup> at AQ3 & 15.94 µg/m<sup>3</sup> at AQ1, respectively. The minimum & maximum concentrations of NO<sub>x</sub> were found to be 9.83 µg/m<sup>3</sup> at AQ3 & 26.48 µg/m<sup>3</sup> at AQ1, respectively.
  - b) Groundwater analysis: pH varies from 7.19 to 7.73 during study period. Total hardness varies from 280.34 mg/l to 329.4mg/l . Total dissolved solids vary from 846 mg/l to 1238 mg/l.
  - c) Surface water analysis: The analysis results indicate that the pH ranges between 7.32 and 7.72. Dissolved Oxygen (DO) was observed in the range of 6.8 to 7.4 mg/l against the minimum requirement of 4 mg/l. BOD values were observed to be in the range of 3.62 – 4.3 mg/l. The chlorides and Sulphates were found to be in the range. Bacteriological examination of surface water samples revealed the presence of total coliform in range of 1.8×10<sup>3</sup> MPN/100 ml to 2.0×10<sup>3</sup> MPN/100 ml.
  - d) Soil analysis: Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.25 to 8.02, which shows that the soil is alkaline in nature. Potassium is found to be from 234.20mg/kg to 253.56mg/kg. The water holding capacity is found in between 26.94 % to 32.09%.
  - e) Noise level study: Noise monitoring reveals that the maximum & minimum noise levels at day time were recorded as 59.4 Leq. dB (A) at NQ3 & 50.6 dB (A) at NQ5, respectively. The maximum & minimum noise levels at night time were found to be 48.2 dB (A) at NQ3 & 38.8 dB (A) at NQ5. There are several other sources in the 10 km radius of study area, which contributes to the local noise level of the area. Traffic activities as well as activities in nearby villages and agricultural fields add to the ambient noise level of the area.
11. **Replenishment study:** For the said project replenishment study has been done by UAV/Drone survey (volumetric survey) method. The first survey has been carried out in the month of May/June before closing of mines for monsoon season. The second survey is carried out in the Month of Nov/Dec after the monsoon.
12. The volume of sand available in Badaoolma-I sand quarry after post monsoon study is around 22168.25 m<sup>3</sup>, which can be treated as safe extractable within the framework of the study after arrival of river level. As it is a new mine no excavation has done in this year. So, total mineable reserve available for mining is 30360 + 22168.25 = 52,528.25 m<sup>3</sup> whereas, approved production capacity for the year is 6072 m<sup>3</sup>. Reported replenished volume of sand as per the study is 16057 cum. 0.95 m is the reported difference in level of sand during pre and post monsoon periods multiplied by the water free minable area of 16903 m<sup>2</sup>.
13. The volume of sand available in Badaoolma-II sand quarry after post monsoon study is around 8088.6 m<sup>3</sup>, which can be treated as safe extractable within the framework of the study after

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arrival of river level. As it is a new mine no excavation has done in this year. So, total mineable reserve available for mining is  $33430 + 8088.6 = 41,518.6$  m<sup>3</sup> whereas, approved production capacity for the year is 6670 m<sup>3</sup>. Reported replenished volume of sand as per the study is 5148 cum. 0.65 m is the reported difference in level of sand during pre and post monsoon periods multiplied by the water free minable area of 7921 m<sup>2</sup>.

14. The volume of sand available in Badaoolma-III sand quarry after post monsoon study is around 12977.94 m<sup>3</sup>, which can be treated as safe extractable within the framework of the study after arrival of river level. As it is a new mine no excavation has done in this year. So, total mineable reserve available for mining is  $16000 + 12977.94 = 28977.94$  m<sup>3</sup> whereas, approved production capacity for the year is 3200 m<sup>3</sup>. Reported replenished volume of sand as per the study is 16057 cum. 0.73 m is the reported difference in level of sand during pre and post monsoon periods multiplied by the water free minable area of 17778 m<sup>2</sup>.

15. **Total production and reserves:** It has been proposed to collect approximately 12040 m<sup>3</sup> Year /annum of river bed material annually. Yearly production for Badaoolma Sand Quarry I, Badaoolma Sand Quarry II and Badaoolma Sand Quarry III is 6720 cum/annum(33600 cum for 5 years), 2120cum/annum (10,600cum for 5 years) and 3200cum/annum (16000 cum for 5 years) respectively. As estimated, Geological reserve for Badaoolma Sand Quarry I, Badaoolma Sand Quarry II and Badaoolma Sand Quarry III is 72252cum, 22982cum and 25423 cum respectively. Mineable Reserves for Badaoolma Sand Quarry I, Badaoolma Sand Quarry II and Badaoolma Sand Quarry III is 33602cum, 11200cum and 16000 cum respectively.

S. No.	Year	Badaoolma Sand Quarry I	Badaoolma Sand Quarry II	Badaoolma Sand Quarry III	Total Production in m <sup>3</sup>
1	1st	6720	2120	3200	12040
2	2nd	6720	2120	3200	12040
3	3rd	6720	2120	3200	12040
4	4th	6720	2120	3200	12040
5	5th	6720	2120	3200	12040
<b>Total</b>		<b>33600</b>	<b>10600</b>	<b>16000</b>	<b>60200</b>

16. **Mining method:** The sand will be excavated by open cast manual method. Since the depth of sand deposit is 1.0m, excavator, handpicks, spade, hand shovel will be used by laborers for extracting & loading of sand. Keeping in view of the market demand and resource availability in respect of reserves, proposed sand quarry is scheduled to produce @ 12040 cum/year (maximum) for the plan period.

17. **Water requirement:** For the Badaoolma sand cluster 8.0 KLD of water will be required. For drinking & domestic purpose, water requirement will be 0.20 KLD, water requirement for Green belt development and dust suppression will be 7.86 KLD as per following heads given in the Table for each quarry.

Activity	Calculation	KLD
Drinking	@ 10 lpcd per labor $10 \times 20 / 1000 = 0.20$ KLD	0.20 KLD
Dust Suppression	<b>Total approach road to be</b>	5.76 KLD

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*J. Nayak*  
Environmental Scientist, SEAC

	<b>water sprinkled = 960 m</b> 960 m*6m*0.5 *2 times/1000= 5.76 KLD	
Plantation	950 plant (during plan period) @ 2 L/per plant= 950*2lts= 1900/1000= 1.90 KLD	1.90 KLD
<b>Total</b>		<b>7.86 KLD</b>

18. **Traffic details:** The V/C ratio for Cluster will change from 0.075 to 0.080 with LOS remain "A" i.e "Excellent". So the additional load on the carrying capacity will be affected to a minimum level.

19. **Greenbelt:** About 950 number of trees will be planted along approach road & in village during the first year (Approach Road – 580 nos – along both sides of approach road at spacing of 2 m. Village area - 370 nos. In village area like school premises, Anganwadi, Panchayat Bhawan). Plantation will be done with suitable local species like Teak, Mango, Neem, Jamun, Jhaun etc after consultation with the local authorities. (Badaoolma Sand Quarry – I-400 trees; Badaoolma Sand Quarry – II- 260 trees and Badaoolma Sand Quarry – III- 290 trees).

Year	No. of plants along both side of approach road	No. of plants in Buffer Zone consulting local authorities	Location	Species
1 <sup>st</sup>	580	370	Approach road – 580 nos – along both sides of approach road at spacing of 2 m. Village area - 370 nos. In village area like school premises, Anganwadi, Panchayat Bhawan	Guava, mango, Jamun, jhaun, neem etc
2 <sup>nd</sup>	Maintenance	Maintenance		
3 <sup>rd</sup>				
4 <sup>th</sup>				
5 <sup>th</sup>				
<b>Total</b>	<b>580</b>	<b>370</b>		
<b>Total</b>	<b>950</b>			

20. **Manpower requirement:** Due to the proposed sand mining, there will be generation of employment for 20 persons in Badaoolma Sand Cluster. Out of which 10 personnel will be engaged with Badaoolma I; 4 persons will be engaged in Badaoolma II and 6 persons in Badaoolma III sand quarry.

21. **Project cost:** As per EIA submitted - Budget for Corporate Environmental Responsibility (CER) for Badaoolma Sand Quarry I, II & III (For Cluster) is Rs. 1,20,000(CER Cost for Badaoolma Sand Quarry - I , Badaoolma Sand Quarry – II, Badaoolma Sand Quarry – III is Rs 60,000, Rs 30,000 and Rs 30,000 respectively).Budget for occupational health is Rs.1,30,000. Budget allotted for the Environmental Management Plan of Badaoolma Sand Quarry I, II & III (For Cluster) incurs capital cost of Rs.4,30,000 and recurring cost of Rs 9,60,000. (For Badaoolma Sand Quarry I, capital cost is Rs. 1,75,000 and recurring cost is Rs. 3,20,000; Badaoolma Sand Quarry – II, capital cost is Rs. 1,02,000and recurring cost is Rs. 3,20,000 and Badaoolma Sand Quarry – III, capital cost is Rs. 1,53,000 and recurring cost is Rs. 3,20,000).

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Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1.	Pollution Control Dust Suppression /Water Sprinkling	--	3,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	--	50,000 40,000 10,000 10,000
3.	Green belt development	1,90,000	1,50,000
4.	Maintenance of haul road	2,40,000	1,80,000
<b>Total</b>		<b>4,30,000</b>	<b>7,40,000</b>

22. **Environment Consultant:** The Environment consultant **M/s P and M Solution, Noida** along with the proponent made a presentation on the proposal before the Committee.

23. The SEAC in its meeting dated **12-06-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a.	Total length/Span of the bridge leaving the safety zone area along with layout showing distance from safety zone and mining area.	Total length of the bridge is 80 meter and a map showing the distance from safety zone and mining area is attached as <b>Annexure - I</b> .	-
b.	Clarification for mismatch of quantity given in Mining Plan and replenishment study.	Due to some clerical error the mismatch of quantity in the proposed production given in mining plan and in replenishment report was occur but the replenishment report is revised and submitted herewith as <b>Annexure - II</b> .	-
c.	Permission for use of Revenue road from the Concerned Tahasildar.	A copy of NOC from Tahasildar is attached herewith as <b>Annexure - III</b> .	-
d.	Give justification for extraction of less quantity of sand while sand availability in the proposed lease is much more than the proposed extraction.	Detail Justification is given in <b>Annexure - IV</b> .	-
e.	Revised replenishment study for third quarry after leaving the safety zone.	Revised replenishment study report is attached as <b>Annexure - II</b> .	-
f.	EMP budget given in EIA for cluster and during presentation has different Recurring cost. Correct EMP budget for cluster to be submitted.	The EMP budget has been corrected and now in both the EIA as well as in the presentation , the Recurring costs are compatible with each other A copy of EMP budget is attached herewith as <b>Annexure - V</b> .	-
g.	Revised Mining Plan for Badaoolma Sand Quarry – III after leaving non mining safety zone from Bridge, which is at 100meters as per the Sand Mining guidelines of MoEF&CC, 2020.	The revised mining plan is prepared with leaving 250 mtr from upstream and 500 mtr from downstream is proposed as per Sand Mining guidelines of MoEF& CC, 2020.	-

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P & M Solution, Noida** on behalf of the proponent, the SEAC approved the EIA/EMP

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*Trayak*  
Environmental Scientist, SEAC

report in cluster approach and recommended the following:

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Badaoolma Sand Mining Cluster without referring to SEAC with stipulated conditions as per **Annexure – B** 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) Previous production details of individual lease duly certified by Tahasildar.
  - vi) Replenishment Study Report of individual lease.
- b) Following specific conditions may be stipulated in individual Environmental Clearance.
  - i) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure – C**.
  - ii) Sand extraction shall be limited to quantity and depth as per replenishment study report. Regular replenishment study as per guidelines 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. 06**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF UPPALADA STONE QUARRY - I, IV, VIII, IX (UNDER CLUSTER APPROACH OF UPPALADA STONE QUARRY - I, II, III, IV, V, VIII, IX) IS A STONE MINING PROJECT OVER AN AREA OF 20.478 HA. AND TOTAL CLUSTER AREA OF 39.811 HA. LOCATED IN VILLAGE - UPPALADA, TAHASIL - PARALAKHEMUNDI IN DISTRICT – GAJAPATI OF TAHASILDAR PARALAKHEMUNDI - EC**

1. This proposal is for Environmental Clearance of Uppalada Stone Quarry - I, IV, VIII, IX (under cluster approach of Uppalada Stone Quarry - I, II, III, IV, V, VIII, IX) is a stone mining project over an area of 20.478 Ha. and Total Cluster area of 39.811 Ha. located in village - Uppalada, Tahasil - Paralakhemundi in District – Gajapati of Tahsildar Paralakhemundi.
2. **Category:** As per EIA Notification 2006 and its subsequent amendments, the proposed project falls under Category B in the Schedule of Item 1(a) - Mining of Minerals.
3. The Mining Lease has been granted for Uppalada Stone Quarry – I vide letter no 7325/Sairat, date 31.12.2019; Uppalada Stone Quarry – IV vide letter no 5705, date 19.08.2021; Uppalada

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Stone Quarry –VIII vide letter no2783/Sairat, date 17.07.2020; Uppalada Stone Quarry – IX vide letter no 286/ Sairat, date 20.01.2021.

4. The Successful Bidder for Uppalada Stone Quarry – I is Gaddi. Venkata Ramana, S/o G. Laxminarayana, Seri Street, Paralakhemundi. The Successful Bidder for Uppalada Stone Quarry – IV, Anni Gopal Rao, AT/ PO- Paralakhemundi. The Successful Bidder for Uppalada Stone Quarry – VIII Gunna Komali, W/o G. Koteswar Rao, Vill- Tekeli, Andhra Pradesh. The Successful Bidder for Uppalada Stone Quarry – IX, J. Jagan Babu, S/o J. Rama Rao, At/Po- Big Brahmin Street, Paralakhemundi. Gajapati.
5. The Mining Plan of Uppalada Stone Quarry – I has been approved by Deputy Director of Geology, O/o The Joint Director of Geology,(S.Z.), Berhampur on dated 01.07.2020. The Mining Plan of Uppalada Stone Quarry – IV has been approved by Deputy Director of Geology, O/o The Joint Director of Geology,(S.Z.), Berhampur on dated 25.08.2021. The Mining Plan of Uppalada Stone Quarry – VIII has been approved by Deputy Director of Geology, O/o The Joint Director of Geology,(S.Z.), Berhampur on dated 06.10.2020.The Mining Plan of Uppalada Stone Quarry – IX has been approved by Deputy Director of Geology, O/o The Joint Director of Geology,(S.Z.), Berhampur on dated 20.07.2021.
6. This is a new mine in cluster approach. Mining lease is an identified sairat source in the DSR Uppalada Stone Quarry – I - Annexure II, SI No 03; Uppalada Stone Quarry – IV - Annexure III, SI No11; Uppalada Stone Quarry – VIII - Annexure II, SI No 02; Uppalada Stone Quarry – IX- Annexure I, SI No 06.
7. The TOR has been granted by SEIAA, Odisha for Uppalada Stone Quarry – I , vide letter no. 5338/SEIAA Dt. 02.09.2022; Uppalada Stone Quarry – IV , vide letter no. 5340/SEIAA Dt. 02.09.2022; Uppalada Stone Quarry – VIII , vide letter no - 5342/SEIAA Dt. 02.09.2022; Uppalada Stone Quarry – IX , vide letter no - 5344/SEIAA Dt. 02.09.2022.

Mine	Mining Plan Approval	TOR Granted Date
Uppalada-I Stone Quarry	Date. 01.07.2020	vide letter no. 5338/SEIAA Dt. 02.09.2022
Uppalada-IV Stone Quarry	Date. 25.08.2021	vide letter no. 5340/SEIAA Dt. 02.09.2022
Uppalada-VIII Stone Quarry	Date. 06.10.2020	vide letter no - 5342/SEIAA Dt. 02.09.2022
Uppalada-IX Stone Quarry	Date. 20.07.2021	vide letter no - 5344/SEIAA Dt. 02.09.2022.

8. **Location and connectivity:** Uppalada Stone Quarry- I, IV, VIII, IX (Under Cluster) is located at village Uppalada, Tahasil - Paralakhemundi, District Gajapati in Odisha. The area falls in Survey of India Topo sheet No. E45G1.The Nearest distance of approach road is 2430 m. The nearest NH/SH is National Highway is NH- 326A at a distance of 0.85 km towards West direction; State Highway is SH- 4 at a distance of 5.0 km towards South direction. Nearest Airport is Swami Vivekanand International Airport is approx. 93 km towards NW direction. Nearest Waterbody is Mahendra Tanaya Dam, approx.5.4 km from the Lease Area. Nearest road bridge is at a distance of approx. 1.0 km from Uppalada Stone Quarry – I, IV, VIII and IX. The Nearest River Embankment is at a distance of 1.0 Km from Uppalada Stone Quarry – I, IV, VIII and IX. The

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Nearest Electric Transmission Line Pole is at a distance of 0.95 Km from Uppalada Stone Quarry – I, IV, VIII and IX.

Sl. No.	Name of Quarry	Lease Area	Land Schedule	Kissam	Status Mine
i)	Uppalada-I Stone Quarry	4.90 Ha.	Khata No- 376 Plot No - 1370, 1372	Parbat-II	EC applied
ii)	Uppalada-IV Stone Quarry	4.928 Ha.	Khata No- 376 Plot No - 1724	Parbat-II	EC applied
iii)	Uppalada-VIII Stone Quarry	5.90 Ha.	Khata No- 376 Plot No - 1725	Parbat-II	EC applied
iv)	Uppalada-IX Stone Quarry	4.75 Ha.	Khata No- 376 Plot No - 1726/1	Parbat-II	EC applied

9. **Total reserves and production:** The total Geological Reserves for the cluster is 4702038 cum, Mineable Reserves for the cluster is 2979131 cum, and the Proposed Production for the cluster is 15354 cum/year the details are given below

**Table: Year wise production**

Year	Vol. of Sand in (m <sup>3</sup> )			
	Uppalada Stone Quarry- I	Uppalada Stone Quarry- IV	Uppalada Stone Quarry- VIII	Uppalada Stone Quarry- IX
1 <sup>st</sup>	3294	4500	2160	4050
2 <sup>nd</sup>	3294	4770	2160	4050
3 <sup>rd</sup>	3294	5220	2160	4050
4 <sup>th</sup>	3294	5580	2160	4050
5 <sup>th</sup>	3294	5850	2160	4050
<b>TOTAL</b>	<b>16470</b>	<b>25920</b>	<b>10800</b>	<b>20250</b>

**Table: Total reserves**

S. No.	Name of the Quarry	Geological Reserves (cum)	Mineable Reserves (cum)	Production (Cum/annum)
i)	Uppalada-I Stone Quarry	1180710	746773	3294
ii)	Uppalada-IV Stone Quarry	919620	512784	5850
iii)	Uppalada-VIII	1872789	1265506	2160

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	Stone Quarry			
iv)	Uppalada-IX Stone Quarry	728919	454068	4050
	<b>Total</b>	<b>4702038</b>	<b>2979131</b>	<b>15354</b>

10. **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. The Proposed depth of mining is as per approved mining plan.

Mine	Depth(m RL)
Uppalada Stone Quarry- I	Upto 100 RL
Uppalada Stone Quarry- IV	Upto 126.80 RL
Uppalada Stone Quarry-VIII	Upto 158 RL
Uppalada Stone Quarry- IX	Upto 82 RL

11. **Waste generation:**

Mine	Waste (cu.m.)
Uppalada-I Stone Quarry	1,830
Uppalada-IV Stone Quarry	2,880
Uppalada-VIII Stone Quarry	1,200
Uppalada-IX Stone Quarry	2,250
<b>Total</b>	<b>8,160</b>

12. **Water requirement:** Total Water Requirement for the proposed cluster project is 28.43 ~ 28.50 KLD.

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10 lpcd per labor $10 \times 55 / 1000 = 0.55$ KLD	0.55
Dust Suppression	<b>Total approach road to be water sprinkled = 2430 m</b> $2430 \text{ m} \times 6 \text{ m} \times 0.5 \times 2 \text{ times} / 1000 = 14.58$ KLD	14.58
Plantation	6632 plant (during plan period) @ 2L/per plant = $6632 \times 2 \text{ lts} = 13264 / 1000 = 13.264 \sim 13.30$ KLD	13.30
	<b>Total</b>	<b>28.43 = 28.50 KLD</b>

13. **Public hearing** was conducted on 16.12.2022 at 11.00 PM at Gram Panchayat Office of Uppalada village in Gajapati District. Issues raised during public hearing are vibrational impact due to drilling and blasting, impacts on agriculture, dust in the environment, noise impact; environment protection, provision of guard wall in the ML area, peripheral development, road maintenance, plantation and employment.

14. **Baseline study details:** Baseline Study of the proposed project was conducted during March, 2022 to May, 2022. Results of the study are as below:

**Air Quality Monitoring Results**

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PM <sub>10</sub>	50.23 µg/m <sup>3</sup> to 77.38 µg/m <sup>3</sup> .
PM <sub>2.5</sub>	25.23 µg/m <sup>3</sup> to 44.15 µg/m <sup>3</sup> .
SO <sub>2</sub>	6.15 µg/m <sup>3</sup> to 11.82 µg/m <sup>3</sup> .
NO <sub>x</sub>	8.03 µg/m <sup>3</sup> to 20.4 µg/m <sup>3</sup> .
<b>Ground Water Monitoring Results</b>	
pH	pH varies from 6.78 to 7.51 during study period.
Total hardness	Total hardness varies from 123 mg/l to 169 mg/l at during study period.
Total dissolved solids	Total dissolved solids vary from 269 mg/l to 360 mg/l during study period.
<b>Surface Water Monitoring Results</b>	
pH	The analysis results indicate that the pH ranges between 7.25 to 7.62.
Dissolved Oxygen	Dissolved Oxygen (DO) was observed in the range of 5.4 to 7.4 mg/l against the minimum requirement of 4 mg/l.
BOD	BOD values were observed to be in the range of 8.0 – 15.3 mg/l.
<b>Soil Quality Monitoring Results</b>	
pH	pH value ranging from 6.78 to 7.81.
Potassium	Potassium is found to be from 72.20 mg/kg to 259.0 mg/kg.
Water holding capacity	The water holding capacity is found in between 26.2 % to 35.80 %.
<b>Noise Quality Monitoring Results</b>	
Day time	The minimum & maximum noise levels at day time were recorded as 50.8 Leq. dB (A) & 59.6 dB (A).
Night time	The minimum & maximum noise levels at night time were found to be 37.9 dB (A) & 44.0 dB (A).

15. **Greenbelt development:** 6632 Plants are proposed to be planted for the proposed cluster.

**Table: Plantation for proposed quarries(ppt)**

S. No.	Quarry	No. of Plants in Safety zone, along approach road and at other places in village after consulting local authorities
i)	Uppalada Stone Quarry - I	490
ii)	Uppalada Stone Quarry - IV	495
iii)	Uppalada Stone Quarry - VIII	590
iv)	Uppalada Stone Quarry - IX	475
<b>Total</b>		<b>2050</b>

16. **Manpower:** 55 nos of persons are required for the manpower of the proposed project.

17. **Project cost:** The estimated project cost for the Cluster is 260 lakhs. Budget for environmental protection includes capital cost of Rs 26,97,000 and recurring cost includes Rs. 27,41,000 for cluster.

**Table: BUDGET FOR ENVIRONMENTAL PROTECTION (Cluster)**

S. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
i)	Pollution Control Dust Suppression /Water Sprinkling	--	14,00,000

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S. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
ii)	Garland Drain and Settling Tank	7,00,000	3,50,000
iii)	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	--	50,000 40,000 10,000 10,000
iv)	Green belt development	7,97,000	3,50,000
v)	Maintenance of approach road	12,00,000	5,31,000
<b>Total</b>		<b>26,97,000</b>	<b>27,41,000</b>

Table: CER BUDGET IN CLUSTER

S. No.	Activity	Capital Cost (in Rs.)/annum
i)	Financial aid for Medical Facilities in village Uppalada.	3,50,000
ii)	Installation of 2 Solar Lights in Schools of Uppalada Village.	40,000
iii)	Skill development Program Camps like computer learning, sewing etc. in village Uppalada.	1,50,000
iv)	Construction of Separate Toilet for Boys & Girls at Schools in village Uppalada.	2,00,000
<b>TOTAL</b>		<b>7,40,000</b>

18. **Environment Consultant:** The Environment consultant M/s P & M Solution, Noida along with the proponent made a presentation on the proposal before the Committee.
19. The SEAC in its meeting dated 22-09-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	Communication letter from the Tahasildar that the other quarries were not identified earlier.	As per our record all the quarries were identified on dated 27.03.2012 and granted lease on short-term basis till 25.04.2015. After that the sources are granted lease on long-term basis (i.e., for 5 years) following the action process as per Odisha minor mineral act.	-
b)	Chronological record of each quarry in the Cluster duly certified by Tahasildar.	Chronological data of each quarry present in the cluster has submitted by Tahasildar, Paralakhemundi for your reference as <b>Annexure-I</b> .	Copy submitted
c)	Clarification on distance of the project site from the nearest habitation from the Tahasildar. Further submit a detailed report for relocation of the local habitation or an action plan to make the nearby areas free from encroachments.	The distance certified from the project site to the nearest habitation has been submitted for your reference as <b>Annexure-II</b> .	Distance of nearest habitation is 100 meter and PP has left another 100 meter as no mining zone. Now, total comes to be 200 meters to fulfill the minimum distance guideline of NGT.

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
d)	Submit Standard Operating Procedures (SOP) for Flying rocks and elaborate how controlled blasting will be adopted for management for flying rocks.	Standard Operation Procedure (SOP) for flying rocks and control blasting management has been submitted for your reference as Annexure-III.	Copy submitted
e)	Provide a complete note on total mineral available, complete mineralization zone. Further in between the lease areas, find out the availability of mineralization. Thereafter prepare a plan so as proper mineral conservation can be done.	Total mineral reserve and its conservation management plan have been submitted for your reference as Annexure-IV.	Copy submitted
f)	Already Environmental Clearance (EC) granted to earlier 3 quarries i.e. quarry no. II, III & V and are under operation. How EC has been granted when 4 other mines (i.e. quarry no. I, IV, VIII & IX) are in cluster.	The EC of Uppalada Stone Quarry – I & VIII has not obtained earlier. Both the quarries are new mines and not operated yet. On dated 01.12.2016 only Uppalada Stone Quarry-IV has obtained EC from DEIAA, Gajapati and on dated 11.01.2016 Uppalada Stone Quarry-IX has obtained EC from SEIAA, Odisha.	-
g)	Whether, EC has been granted to quarry II, III & V without following cluster approach and if so, why?	At that time period for Uppalada Stone Quarry - II,III& IX, EC have been granted by SEIAA, Odisha and Uppalada Stone Quarry - IV & V are granted by DEIAA, Gajapati. In this context there may be a little confusion by our previous officials regarding the cluster approach of the proposals due to which cluster approach has not followed.	-
h)	Copy of Environmental Clearance of quarry no. II, III & V.	EC copy of Uppalada Stone Quarry - II, III & V has been submitted for your reference as Annexure-V.	Copies submitted
i)	Consultant has not visited the site and they need to visit the site and incorporate the same in the modified EMP if any.	The site has been visited by the field executive of the consultancy and there is no requirement of modified EMP.	-
j)	Habitation is 100 meter away from the mining site. So, the mining activity should be restricted to the minimum distance from the habitation area as per order of the Hon'ble NGT.	As the habitation is 100 meter away from mining site the plan of revised mining activity has submitted for your reference as Annexure-II.	-
k)	Who has taken responsibility to apply for cluster approach and copy of consent letter of other lessees to be submitted.	The ToR of Uppalada Stone Quarry-I,IV,VIII& IX has been granted by SEIAA, Odisha on dated 02.09.2022 in favor of the successful bidders as applied before. We had completed the public hearing for all 7 quarries of 39.811 Ha. area, But, EC have been applied for the Uppalada Stone Quarry – I, IV, VIII & IX. After the recommendation of the Hon'ble committee of SEAC, Odisha we have applied again for the total cluster proposal of all 7 quarries in favor of Tahasildar, Paralakhemundi. He will be the sole authority on behalf of the successful bidders of the quarries. The consent letter of Tahasilda,	-

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		Paralakhemundi has been submitted as <b>Annexure-VI</b> .	
l)	Project proponent to provide RLs of ground water in the ML area during summer and rainy seasons along with RL of the surfaces surrounding the ML area.	RLs of ground water and surface water in the ML area during summer and rainy seasons have been attached for your reference as <b>Annexure-VII</b> .	-

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P & M Solution, 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 **Uppalada Stone Quarry - I, IV, VIII, IX (under cluster approach of Uppalada Stone Quarry - I, II, III, IV, V, VIII, IX)** without referring to SEAC with specific conditions as per **Annexure – D** 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.
  - xi) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.
  - xii) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the **Annexure – E**.

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*J Nayak*  
Environmental Scientist, SEAC

xiii) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.

**ITEM NO. 07**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR HAZARIDANGA STONE QUARRY (I TO VIII) OVER A CLUSTER AREA OF 11.938HECTARES/ 29.49ACRES (CONSISTING OF 8 NOS. QUARRIES) LOCATED AT VILLAGE- HAZARIDANGA, TAHASIL- KOLNARA, DISTRICT- RAYAGADA OF TAHASILDAR, KOLNARA – EC**

1. The proposal is for Environmental Clearance for Hazaridanga Stone Quarry (I to VIII) over a cluster area of 11.938 hectares/ 29.49acres (consisting of 8 nos. quarries) located at Village - Hazaridanga, Tahasil - Kolnara, District - Rayagada of Tahasildar, Kolnara.
2. The project falls under category "B" or activity 1 (a) - Mining of Minerals under EIA Notification dated 14th September 2006 as amended from time to time.
3. Hazaridanga Stone Quarry (I to VIII, cluster of 8 Quarries) is located at village Hazaridanga, Tehsil Kolnara, District Rayagada of Odisha. The project is proposed by the Tahasildar, Kolnara, Rayagada. The proposed project is in cluster situation as 8 leases are within 500 m radius & total lease area becomes greater than 5 ha. The total cluster area granted under QL is 11.938 ha within 500m.
4. Details of 8 Stone Quarries under total cluster area of 11.938Ha. is given in Table:

Sl no.	Name of Quarry	Lease area (Ha.)	Land Schedule	Kissam
a)	Hazaridanga Stone Quarry I	1.011	Khata No-6 Plot No -37	Pahad
b)	Hazaridanga Stone Quarry II	2.024	Khata No-6 Plot No -37	Pahad
c)	Hazaridanga Stone Quarry III	2.024	Khata No-6 Plot No -99	Pahad
d)	Hazaridanga Stone Quarry IV	1.214	Khata No-6 Plot No - 84	Pahad
e)	Hazaridanga Stone Quarry V	1.214	Khata No-6 Plot No -84(p)	Pahad
f)	Hazaridanga Stone Quarry VI	2.023	Khata No-6 Plot No -98(p)	Pahad
g)	Hazaridanga Stone Quarry VII	1.214	Khata No-6 Plot No -98(p)	Pahad
h)	Hazaridanga Stone Quarry VIII	1.214	Khata No-6 Plot No -84	Pahad
Total		11.938		

5. The Hazaridanga Stone Quarry (I to VIII) is proposed on Khata no- 6, Plot no- 84, 37, 99, 84, 98(p), 84(p), 98(p) of Pahad Kissam in village - Hazaridanga in Tahasil Kolnara in Rayagada District of Odisha. The mining lease area is identified and listed in the DSR of stone and is mentioned in the DSR page no – 25, 26, 32 &34, Serial no – 1,8,2,3,6,7 & 8 of the Rayagada district . Hazaridanga Stone Quarry (I to VIII) is a minor mineral extraction project for exploitation of stone. The average production from the cluster is proposed to be 27650 cum/year and total production from the cluster will be 133332 cum during the valid lease period of 5 years.

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6. **Location and Connectivity** - The area under discussion is featured in Survey of India Topo Sheet No – 65M/7, 65M/8, 65M/11 & 65M/12 and is bounded between the Latitude -19° 14' 50.00" N to 19° 15' 22.17" N , Longitude – 83° 29' 46.66" E to 83° 30' 14.85" E. The lease area is located at a distance of 0.4km from village Hazaridanga and at a distance of 04 kms from Kolnara, 13.0 kms from the District Headquarters Rayagada and 495.0 kms from the State Capital Bhubaneswar. Rayagada Railway station is the nearest railway station located at a distance of 13 kms from the lease area. Nearest Road bridge is at a distance of 4.2 km from the mining lease area. Metal road connecting to the lease area and with the village – Hazaridanga is at distance of 0.1 km. SH – 4 is the nearest State Highway at a distance of 1.1kms. Major district road is at distance of 1.1 km. NH-43 is the nearest National Highway which is at a distance of 87 km.
7. The Mining Plan of each stone quarry (8Nos.) has been approved by the approving authority, Office of the Joint Director of Geology, Zonal Survey, Koraput.
8. TOR has been granted from SEIAA vide letter no 880/SEIAA dated 09.03.2021 for Hazaridanga Stone Quarry (I to VIII) over an Cluster area of 11.938 ha/29.49 Acre of stone in village- Hazaridanga, Tehsil - Kolnara, District- Rayagada, Odisha.
9. The public hearing was conducted on 21st September, 2021 at 11.00A.M in RMC Godown at Padalekapai village (Near Hazaridanga village) under Kolnara Tehsil, District Rayagada.
10. Baseline Study was conducted during period for post monsoon season of 2020 i.e, from October to December, 2020.
11. **Geological and Mineable Reserve:** -Reserve is calculated basing on the existing quarry/surface exposures and cross sectional area method has been taken suitably for reserve estimation. The cross sectional area of the road metal is computed for each section by graphical method. For the purpose of estimation of quantity of the road, railway and building materials, recovery factor is taken as 90% of total rock mass while remaining 10% is assumed to be waste consists of weathered rock and soil.

S no.	Name of the Quarry	Geological reserve (cum)	Mineable reserve (cum)
a)	Hazaridanga Stone Quarry I	2,19,745	84,625
b)	Hazaridanga Stone Quarry II	2,87,562	1,77,973
c)	Hazaridanga Stone Quarry III	1,34,078	93,252
d)	Hazaridanga Stone Quarry IV	2,73,167	1,15,684
e)	Hazaridanga Stone Quarry V	3,15,057	1,12,417
f)	Hazaridanga Stone Quarry VI	5,16,684	2,55,888
g)	Hazaridanga Stone Quarry VII	3,19,938	1,48,230
h)	Hazaridanga Stone Quarry VIII	1,47,735	88,717
	8 nos.	22,13,966	10,76,786

12. **Method of Mining** - Mining will be done by Opencast semi-mechanized method with adopted of drilling & blasting. There is practically no OB at proposed site as it is already broken. The

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excavation in ore zone will be carried out by HEMM. In order to prevent haphazard excavation of pits and suitable blending of ore, the excavation has been proposed at one place. Sorting and sizing will be done manually also. The working has been proposed bench will be of height 6m and width 6m.

13. Total Production of the Hazaridanga Stone Quarry (I to VIII) Under Cluster Approach

Sl.No.	Name of Quarry	Useable Rock (cum)	Waste (cum)
a)	Hazaridanga Stone Quarry	13034	686
b)	Hazaridanga Stone Quarry II	24348	2704
c)	Hazaridanga Stone Quarry III	24402	2704
d)	Hazaridanga Stone Quarry IV	10854	1205
e)	Hazaridanga Stone Quarry V	22842	2538
f)	Hazaridanga Stone Quarry VI	11360	2840
g)	Hazaridanga Stone Quarry VII	11372	599
h)	Hazaridanga Stone Quarry VIII	15120	1680
<b>Total</b>	<b>8 Nos.</b>	<b>133332</b>	<b>14956</b>

14. The waste generated from the cluster is expected to be 14956 Cu.m. and volume of top soil is 19090 Cum. during the plan period are not useable for construction purpose, so these materials will be dumped in the temporary dump of 3 – 8 m height which will be utilized for approach road developers and maintenance purposes. The top soil available will be used for plantation activity and the waste material, which is normally in the form of weathered material, is used for filling, road making and maintenance within the lease hold area only.
15. **Employment Potential** - Total number of employments will be around 101 numbers. including Management, Supervisory personnel, Skilled, Semiskilled and Unskilled.
16. **Water Requirement** - 87 KLD of water will be required for drinking, domestic purpose and for dust suppression. Water will be withdrawn from tube wells from nearby village through water tankers.
17. **Plantation** - Green belt shall be developed along the Safety zone of the lease area with the native tree species. The plantation proposal has been given to plant around 9870 saplings over safety zone of whole cluster and both sides of approach road. Species likely to be planted are Teak, Acasia Neem, Jamun etc as per the availability. Spacing between the saplings will be kept 2.5 meters x 2.5 meters only. (Plantation has been given 2500 Plants/hac.).
18. The estimated project cost is ₹ 2.4 crores and EMP cost is Rs. 57,54,000 lakhs and recurring cost is Rs. 56,80,000.
19. The project proponent along with the consultant M/s P&M Solution., Noida -201301 – U.P made a detailed presentation on the proposal on 05.08.2022.
20. The SEAC in its meeting held on 05.08.2022 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by site visit of Sub-Committee of SEAC.
21. The proponent has furnished the compliance and the SEAC verified the same as follows:

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
a)	Installation of STP of adequate capacity and requisite design.	This is not applicable as the domestic waste water will be treated by septic tank.
b)	Proposed mitigation measures/ SOP for flying rock.	Mitigation measures for the fly rock during blasting have been given below: <ul style="list-style-type: none"> <li>• Parking all vehicles and equipment a safe distance from the blasting area whenever possible.</li> <li>• Staying behind a blast shield or blast mats for fly rock protection during blasting</li> <li>• Making sure everyone has evacuated the blast area before proceeding.</li> <li>• Always following the supervisor's instructions.</li> <li>• Scrupulously guarding the access roads to the blast area and otherwise maintaining good blast site control.</li> </ul>
c)	Sketch map showing Dump management, garland drain and silt management and photographs of that area.	Detail has been attached as <b>Annexure I</b> .
d)	Risk involved and measures to be taken for Dump stabilization and dump management.	Retaining wall will be provided all along the perimeter of the dump to prevent hazardous situation and wash up of the dump and garland drain will be constructed side by side of the retaining wall for proper drainage of rain water, so that dump floor area should not be damaged by the rain water. Before letting the garland drain water outside the lease, it will be passed through the settling tank for settlement of the mud carried from the dump area.
e)	Green belt in safety zone of each mine and all-round the clusters to be confirmed with details.	Plantation will be done all along the safety zone of each mine site and all around the clusters. Detail has been given in <b>Annexure II</b> .
f)	Arrangement of pipeline sprinkling (permanent water line) to be explored and confirmed.	Undertaking has been attached as <b>Annexure III</b> .
g)	Silt management and detailed plan for the same to arrest /remedy of silt ingress to surrounding agricultural lands.	Management of silt management will be managed by the construction of settling tank and garland drain at a direction of water flow from the mining lease area (Settling tank and Garland Drain detail has been attached as <b>Annexure I</b> .
h)	Safety measures during blasting including provision of warning to be submitted.	Preparation of charging and stemming of holes will be done by a qualified blaster.  Before a shot is charged, stemmed or fired, sufficient warnings by signal is given over the entire area falling within the danger zone and ensure that all persons within such area have taken proper shelter.

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*J Nayak*  
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<ul style="list-style-type: none"> <li>During blasting, controlled blasting will be done to prevent flying fragments which may cause injury to local inhabitants within danger zone.</li> </ul> <p>Proper inspection after shot firing will be done by the blaster.</p> <p>The number of shots which exploded shall be counted by the blaster to assess misfire. All necessary precautions as enumerated under 106(2) (b) of MMR 1961 will be followed.</p>

22. The SEAC in its meeting held on 05.08.2022 decided to take decision on the proposal after site visit of the Sub-Committee of SEAC. The SEAC opined that the proposed area is far and possibility for site visit to the place by SEAC Members is not possible.

23. The SEAC in its meeting held on dated 11-09-2023 decided to take decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	Video showing the cluster lease area with geo coordinates, transportation road of the cluster, Mine area of all quarries present in cluster and previous mining activity.	The video of the above mentioned quarries have been sent to the mail id <a href="mailto:seac.odisha.2019@gmail.com">seac.odisha.2019@gmail.com</a> showing the cluster area transportation road and mining area of all quarries present in cluster and their mining activity. Photographs have been attached for your reference as <b>Annexure - I.</b>	Video submitted
b)	Fresh KML file.	The fresh KML file has been sent to the mail.id <a href="mailto:seac.odisha.2019@gmail.com">seac.odisha.2019@gmail.com</a> and the PDF format of KML file has been attached for your reference as <b>Annexure - II.</b>	Kml file submitted

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P & M Solution, 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 **Hazaridanga Stone Quarry (I to VIII) cluster** without referring to SEAC with specific conditions as per **Annexure – D** 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.

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- 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.
- xi) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.
- xii) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the **Annexure – E**.
- xiii) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.

**ITEM NO. 08**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S UTKAL HEALTHCARE PVT. LTD FOR REGULARIZATION OF EXISTING LOWER BASEMENT + UPPER BASEMENT + GROUND+ 5<sup>TH</sup> STORIED MULTI SPECIALTY HOSPITAL & ONE GROUND + 6<sup>TH</sup> STORIED DIAGNOSTIC CENTER OVER AN BUILT-UP AREA 30046.75 SQM PROJECT LOCATED AT PLOT NO-C/3, NILADRI VIHAR, CHANDRADEKHARPUR, BHUBANESWAR, DIST: KHORDHA OF SRI SAILENDRA NARAYANA PANDA - EC**

1. This proposal is for Environmental Clearance of M/s Utkal Healthcare Pvt. Ltd for Regularization of existing Lower Basement + Upper Basement + Ground+ 5<sup>th</sup> storied Multi specialty Hospital & one Ground + 6<sup>th</sup> storied Diagnostic Center over an built-up area 30046.75 sqm project located at at Plot No-C/3, Niladri Vihar, Chandradekharapur, Bhubaneswar, Dist: Khordha of Sri Sailendra Narayana Panda.
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. **Violation Justification** - The proponent has already constructed the total project with built-up area 30046.75 m<sup>2</sup> without obtaining Environmental Clearance. Hence, this is a violation case. The EIA/EMP report has been prepared in conformity with all issues brought out in the detailed Violation ToR issued by SEIAA, Odisha vide letter No. SIA/OR/MIS/77289/2022, dated 19.01.2023.

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*Trayak*  
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4. **Location and Connectivity** - The proposed site of 2.47 Acres of land is located at Plot No.: Plot No-C/3, Near NH-16 Road, Niladri Vihar, Bhubaneswar, Khurda district in the state of Odisha. The Geographical co-ordinates of the project site are: latitude 20° 19' 15.88" N and longitude 85° 48' 01.90" E and the area comes under Survey of India Toposheet No- F45T11, F45T12, F45T15, F45T16. The total Plot Area is 10015.104 sqm and Built up area – 30046.75 sqm. The Kisam of Land is Gharabari. The project site is well connected with National Highway-16. The nearest railway station is Mancheswar Railway station at a distance of approx 4.7 Km in East Direction. The nearest airport is Biju Pattnaik International Airport Bhubaneswar at a distance of approx. 7.7 Km in South direction from project site. The site is located adjacent to the local landmarks such as Trident Academy of Technology, Akash Institution Chandrasekharpur, DAV School Campus-II Etc. There is no structure or encroachments on the site. The site is easily accessible from NH-16 Road. Nearest river is Kuakhai River at a distance of 6.8 km from project site.
5. The site is coming under Bhubaneswar Development Authority (BDA).
6. The total plot area is 10015.104 sq.mt. with total built-up area 30046.75 sq.mt.
7. The Building Details of The Project:

Particular	Proposed
Project Name	Regularization of existing Lower Basement + Upper Basement + Ground+ 5 <sup>th</sup> storied Multi specialty Hospital & one Ground + 6 <sup>th</sup> storied Diagnostic Center
Plot Area	10015.104 sqm
Ground Coverage	3208.64 sqm
Built up Area	30046.75 sqm
Road Area	4796.46 sqm
Parking Area(% hospital area)	12197.64 sqm
Green Belt Area	2010.00 sqm(20.07 %)
Power/Electricity Requirement & Sources	2727 KW
No. of DG sets	2 DG sets of 1010 KVA and one 750 KVA
Water requirement & Sources	240 KLD (Fresh)
Sewage Treatment & Disposal	STP Capacity 300 KLD ETP Capacity= 30 KLD
Estimated Population- Residential, Commercial, Floating/visitors	Hospital Beds-350 Floating Population-2050

8. **Statutory clearances obtained are -**

- BDA Approval vide letter No- 1641/BDA, Bhubaneswar, dated 12/01/2021.
- Fire Safety Clearance Certificate from office of deputy fire officer vide letter no – 108/2017-

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- iii. Ground Water application submitted to CGWA vide application no. 21-4(413)/SER/CGWA/2012-3375, dated 07/05/2012.
  - iv. Grant consent to Operate vide letter No- 10554/IND-I-CON-6809 , dated 18.06.2022.
  - v. Authorization of Biomedical Waste vide letter No- 14111/SPCB/Authorization(Biomedical Waste) IND-IV-BM-2686 dated 24/10/2017.
9. **Power requirement:** The daily power requirement for the proposed project is preliminarily assessed as 2727 KW source from TPCODL. In order to meet emergency power requirements during the grid failure, for this purpose diesel generator having 2x1010 KVA & 1x750 KVA capacities for power back up in the proposed Project. DG set stack height is 27.35m.
10. **Solar Power Generation** - Total 170.6 KW Solar Power Generation which is 6.2% of total power required in project. (5.04KW to be generated from 70 nos of Solar Lighting poles (@72 Watt) which has been proposed for Street lighting and solar energy generated from 120 nos. of PV solar panels per day = 165.6 KW).
11. **Water requirement:** Fresh make up of 240 m<sup>3</sup>/day will be required for the project which will be sourced from WATCO. Total waste water generated from the hospital is 240.33 KLD which is treated in STP & ETP. Capacity of STP is 300 KLD & Capacity of ETP is 30 KLD. Treated water discharge to drain in Non Monsoon Period is 45.7KLD and in Monsoon Period is 75.33KLD.

Total Water requirement						
Sl. No.	Total Population		Per Capita Consumption (Ltr/day)	Water Requirement (KLD)		
				Fresh	Flushing	Total
i)	350 Patient Beds	350	450 (Fresh Water- 405liters/day and Flushing Water- 45 liters/day)	141.75	15.75	157.5
ii)	Staff (Permanent)	300	135 (Fresh Water- 90 liters/day and Flushing Water- 45 liters/day)	27.0	13.5	40.5
iii)	Staff (Day Shift)	250	45 (Fresh Water- 20 liters/day and Flushing Water- 25 liters/day)	5.0	6.25	11.25
iv)	Visitor/ OPD	1500	15 (Fresh Water-6 liters/day Flushing Water-9 liters/day)	9.0	13.5	22.5
v)	Kitchen	1		10.000	0	10.000
vi)	Laundry	1		30.000		30.000
vii)	Water Treatment plant back wash, regeneration	1		9.000		9.000
viii)	Misc. – Water features	1		7.750		7.750
<b>TOTAL</b>				<b>239.5</b>	<b>49</b>	<b>288.5</b>

12. **Rain Water harvested** 137 cum through 8 nos. of Rain Water recharging pits.
13. **Firefighting Installations:** Firefighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4).
14. **Parking** - Total parking area provided is 12197.64 Sq.mt. and total 382 nos. of ECS and location of parking area is Basement.

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Parking Area Provided			
Basement Parking			12197.64 sqm
<b>Total Parking</b>	--	--	<b>12197.64 sqm</b>
Equivalent Car Space Provided			
	Area(sqm)	Area/ECS	
Basement Parking	12197.64	32	381 ECS
<b>Total Parking Provided</b>			<b>382 ECS</b>
Total Hospital Beds			350 Nos.

15. **Green Belt Development:** Green belt is developed over an area of 2010.0 sqm which is 20.07% of the total plot area. Total 1230.0 nos. of plants to be planted and 3 tier plantation.

16. **Solid Waste Management:** Solid waste generated from floating population Such as hospital staffs (including doctors, Nurses etc.) and miscellaneous waste will be generated @ 0.45 kg/capita/day, which will be about 247.5 kg/day. The generated solid waste from the Super-Specialty hospital complex will be collected into a garbage bin located at a suitable location inside the complex. Bio-medical waste generation from 350 beds will be 525 Kg/day.

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)	Management
i)	Staff Employee	550 @ 0.45 kg/day/person	247.5 kg/day	Handover to approved vendor
ii)	Visitors/OPD	1500 @ 0.15 kg/day/person	225 kg/day	Handover to approved vendor
iii)	STP Sludge	--	120 Kg/day	Landscaping
<b>Total Waste Generated</b>			<b>592.5 kg/day</b>	

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)	Management
i)	Patient 350 beds	350 @ 1.5 kg/day/bed	525 kg/day	Handover to M/s Sani Clean
<b>Total Waste Generated</b>			<b>525 kg/day</b>	

17. **Details of Court cases, if any** – Case No. (2).C No- 93/2017, dated 18.01.2018 (U/s 15 of The Environment (Protection) Act, 1986).

18. **The cost estimated towards Violation as follows** - The summary of budgetary allocation with respect to violation activity and remediation/ EMP measures suggested/recommended and community resource augmentation are as per the table:

Sr. No.	Description	Estimated Cost (Rs.)
1.	Estimated cost of damage / remediation with respect to ecological aspects	24,50,000.00
2.	Community resource augmentation plan	1,50,000.00
	<b>Net Expenditure:</b>	<b>26,00,000.00</b>

**CSR Expenditure FY-2023**

Sr. No.	Description	Estimated Cost (Rs.)
1.	Contributed to PM's National Relief Fund	25,000.00
2.	Expenditure towards development & maintenance of (BMC) Hospital front Garden	6,89,538.00
3.	Expenditure on Free Health Camp	1,72,538.00
	<b>Net Expenditure:</b>	<b>8,87,076.00</b>

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*T. Jayak*  
Environmental Scientist, SEAC



19. **Penalty cost for Violation:** The Penalty Provisions as per Notification F. No. 22-21/2020-IA.III, dated 07.07.2021 is 1% of the total project cost. The cost of the project is Rs. 30.06 Crores. So total penalty of this project is Rs. 3,25,00,000/- which is 1% of the total project cost.

20. The estimated project cost is 30.06 Crores and cost for EMP is 4.17 Crores.

21. **Baseline study:** The primary Environmental and Marine baseline data monitored near project site and study area of 10 km radius from 01<sup>st</sup> October 2022 to 31<sup>st</sup> October 2022.

a) **Ambient air quality:** Ambient Air Quality Monitoring reveals that the concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> found between 62.3 to 70.6 µg/m<sup>3</sup> and 26.1 to 32.4 µg/m<sup>3</sup> respectively. The concentrations of SO<sub>2</sub>, NO<sub>x</sub> and CO were found to be in range of 10.4 to 15.1 µg/m<sup>3</sup>, 14.1 to 19.4 µg/m<sup>3</sup>, <0.1 µg/m<sup>3</sup> respectively.

b) **Ground water quality:** pH varies from to 6.5 to 8.5. Total Hardness varies from 102 to 121 mg/L. Total Dissolved Solids varies from 138.7 to 187 mg/L.

Sl. No	Parameter	Unit of measurement	Standard as per IS: 10500, 2012		GW1	GW2	GW3	GW4	GW5
			Acceptable Limit	Permissible Limit					
i)	Colour	Hazen	5	15	<5	<5	<5	<5	<5
ii)	Odour	--	UO	UO	UO	UO	UO	UO	UO
iii)	Taste	--	AL	AL	AL	AL	AL	AL	AL
iv)	Turbidity	NTU	1	5	2	<1	<1	<1	2
v)	pH Value @ 25°C	--	6.5-8.5	No Relaxation	7.11	7.08	7.16	7.05	7.13
vi)	Total Hardness (as CaCO <sub>3</sub> )	mg/l	200	600	112	102	121	109	107
vii)	Iron (as Fe)	mg/l	0.3	No Relaxation	0.12	0.06	0.21	0.16	0.18
viii)	Chloride (as Cl)	mg/l	250	1000	64	59	61	53	57
ix)	Residual, free Chlorine	mg/l	0.2	1.0	ND	ND	ND	ND	ND
x)	Total Dissolved Solids	mg/l	500	2000	138.7	145.2	186.4	187	144
xi)	Calcium (as Ca)	mg/l	75	200	26.1	25.7	26.5	25.2	26.3
xii)	Magnesium (as Mg)	mg/l	30	100	9.1	11.4	12.6	10.9	10.3
xiii)	Copper (as Cu)	mg/l	0.05	1.5	<0.03	<0.03	<0.03	<0.03	<0.03
xiv)	Manganese (as Mn)	mg/l	0.1	0.3	<0.05	<0.05	<0.05	<0.05	<0.05
xv)	Sulphate (as SO <sub>4</sub> )	mg/l	200	400	16.3	18.4	17.2	16.6	15.8

c) **Surface water quality:** pH varies from to 6.5 to 8.5. Total Dissolved Solids varies from 243 to 251 mg/L.

Sl. No	Test Parameters	Unit	Standard as per IS 2296	SW1	SW2	SW3
a)	Colour, Max.	Hazen	300	22	17	15
b)	pH	--	6.5 to 8.5	6.89	6.76	6.81

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Sl. No	Test Parameters	Unit	Standard as per IS 2296	SW1	SW2	SW3
c)	Iron as Fe, Max.	mg/l	50	0.16	0.19	0.22
d)	Chloride as Cl, Max.	mg/l	600	35	27	31
e)	Dissolved Solids, Max.	mg/l	1500	251	246	243
f)	Dissolved Oxygen, Min.	mg/l	4	6.2	6.7	6.4
g)	BOD: 3 days at 27 °C, Max.	mg/l	3	2.7	2.2	2.3
h)	Oil & Grease, Max.	mg/l	0.1	ND	ND	ND
i)	Copper as Cu, Max.	mg/l	1.5	<0.03	<0.03	<0.03
j)	Sulphate as SO <sub>4</sub> , Max.	mg/l	400	12.2	10.6	11.4
k)	Nitrate as NO <sub>3</sub> , Max.	mg/l	50	2.9	2.3	2.6
l)	Fluoride as F, Max.	mg/l	1.5	0.05	0.05	0.05
m)	Anionic detergent	mg/l	1	ND	ND	ND
n)	Cadmium as Cd, Max.	mg/l	0.01	<0.003	<0.003	<0.003
o)	Selenium as Se, Max.	mg/l	0.05	<0.001	<0.001	<0.001
p)	Arsenic as As, Max.	mg/l	0.2	<0.001	<0.001	<0.001
q)	Cyanide as CN, Max.	mg/l	0.05	ND	ND	ND
r)	Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH, Max.	mg/l	0.005	ND	ND	ND
s)	Lead as Pb, Max.	mg/l	0.1	<0.05	<0.05	<0.05
t)	Zinc as Zn, Max.	mg/l	15	<0.05	<0.05	<0.05
u)	Hexavalent Chromium as Cr <sup>+6</sup> , Max.	mg/l	0.05	<0.05	<0.05	<0.05
v)	Total Coliform, Max.	MPN/100ml	5000 MPN/100ml	321	578	589
w)	Faecal Coliform	MPN/100ml	--	47	41	45

d) **Noise quality:** The day Noise levels have been monitored during 6 am to 10 pm and the night levels during 10 pm to 6 am. Ambient noise levels were compared with the Noise Pollution (Regulation & Control) Rules, 2000. The Leq values at this location for day and night time was observed to be varied between 50.9-54.3 and 41.7 - 43.5 dB(A).

e) **Soil quality :** The results of soil quality monitoring data as follows:

Sl. No.	Test Parameters	S1	S2	S3	S4	S5
a)	pH value (1:10) at 25°C	7.17	7.23	6.89	7.11	7.09
b)	Electro Conductivity at 25 °C (µmho/cm)	88	91	98	123	117
c)	Moisture content in %	10.1	9.7	9.9	10.7	11.1
d)	Sodium (as Na) in mg/Kg	33.2	32.5	32.8	35.2	34.7
e)	Bulk Density in g/cc	1.23	1.09	1.11	1.25	1.23
f)	Sand in %(W/W)	63.12	65.42	61.11	63.28	66.43
g)	Silt in % (W/W)	15.09	15.87	20.31	19.78	20.12

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Sl. No.	Test Parameters	S1	S2	S3	S4	S5
h)	Clay in %(W/W)	21.79	18.71	18.58	16.97	13.45
i)	Texture in %(W/W)	sandy	sandy	sandy	sandy	sandy
j)	Nitrogen as N in mg/kg	168.2	164.7	167.2	171.3	178.6
k)	Phosphorus as P in mg/Kg	2.11	2.41	2.13	1.89	1.93
l)	Potassium as K in mg/Kg	31.26	18.63	22.61	21.74	20.82
m)	Sodium absorption ratio (SAR)	1.67	1.74	2.21	2.03	2.46
n)	Cation Exchange Capacity (meq/100g)	5.5	4.9	7.6	6.9	8.7
o)	Organic Matter in %	0.04	0.07	0.12	0.14	0.16

22. The project proponent along with the consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar made a detailed presentation on the proposal.

23. The SEAC in its meeting held on dated 01-09-2023 decided to take the decision on the proposal after receipt of the following from the proponent followed by site visit by the sub-committee of SEAC.

24. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	License copy/certified documents from the concerned authority Atomic Energy Regulatory Board for the usage, storage, handling and management of radioactive materials such as radio isotopes used for patient diagnostic purpose and radiopharmaceuticals for treatment of patients.	NoC from Atomic Regulatory Board, Radiologic for handling of Radioactive Materials is attached in Annexure-1.	Copies submitted
b)	Detailed write up on present handling of radioactive materials (usage, storage and its disposal).	Brief write up for handling of radioactive materials is attached in Annexure-2.	complied
c)	Traffic study report duly vetted by institute of repute.	Traffic Study Report has been vetted by IIT Bhubaneswar. Vetted Traffic Study Report is attached in Annexure-3.	As per traffic study report the LOS is "C"
d)	Obtain Fresh permission from DFO of the Chandaka Forest division.	Permission has been obtained from Divisional Forest Officer & Wildlife Warden, Chandaka Wildlife Division regarding boundary of the project is outside from Eco Sensitive Zone of Chandaka-Dampara Wildlife Sanctuary. Fresh permission from DFO is attached in Annexure-4.	complied
e)	Total cost of the project & total turnover cost duly certified by Govt. authorised CA firm for calculation of penalty.	Total cost of the project is Rs. 30.06 Crores. CA certificate is attached in Annexure-5.	KSP & Associates Chartered Accountants certified Gross Investment towards land and building is Rs.30,06,25,340 as on 31 <sup>st</sup> March 2021.
f)	Details of case registered under violation.	The case has been registered on 18.01.2018 vide case no. 2(C)C.C No-93/2017. Case copy is attached in Annexure-6.	Copy submitted

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
g)	Permission from concerned authority for High-tension Electricity line near to the project site and mention the aerial distance of the High-tension Electricity line from the proposed site.	Permission has been obtained from Office of the Chief Engineer-cum-Chief Electrical Inspector, Central Zone, Odisha vide letter no. 1120, dated 16.12.2023. Permission letter is attached in Annexure-7.	Copy submitted.
h)	Include compliance to Specific TOR point 1 in EIA.	The case has been registered on 18.01.2018 vide case no. 2(C)C.C No-93/2017. Case copy is attached in Annexure-6.	Copy submitted
i)	Timeline for completion of pending infrastructure like installation of solar panels, organic waste converter etc.	Pending infrastructure work like Installation of Solar Panels & Organic Waste will be completed within one year.	-
j)	The proponent shall provide adequate space for visitors parking.	Total 837.01 sqm area is provided for visitor parking.	-
k)	It is a case of violation and all aspects related to environmental regulations need to be verified for which the PP needs to provide them in a tabular form giving the date of completion and current status etc.	All aspects related to environmental regulations will be completed within one year.	-

25. The SEAC observed the following:

Since, this is a violation case as the PP submitted as per provisions of SOP dtd. 7<sup>th</sup> July, 2021 and OM dtd. 28<sup>th</sup> January, 2022. It is mentioned that the Hon'ble Supreme Court has stayed the operation of said OM of SOP dtd. 7<sup>th</sup> July, 2021 and OM dtd. 28<sup>th</sup> January, 2022. Hence, the proposal may be returned to SEIAA, Odisha for further action.

**RE - CONSIDERATION OF CATEGORY B2 PROPOSALS RETURNED FROM SEIAA - 02 Nos.:**

**ITEM NO. 01**

**PROPOSAL OF AMENDMENT ENVIRONMENTAL CLEARANCE FOR BIRUPA RIVER SAND, BATITANKI OVER AN AREA OF 12.00 ACRES OR 4.86 HA AT VIILLAGE-BATITANKI UNDER BARI TAHASIL OF JAJPUR DISTRICT OF SRI GAGAN BIHARI JENA – MOD EC**

1. This proposal is for environmental clearance for Baddohel Sand Quarry over an area 12.30Acre or 4.977Ha in village Baddohel under Khariar tahasil of Nuapada district of Tahasildar, Khariar.
2. **Category:** The project is categorized in Category-B2 of Schedule under item 1(a)-Mining of Minerals in the EIA notification, 2006 and its subsequent amendments.
3. The proposal was placed in SEAC meeting held on 2nd, 7th, 8th & 11th Sept, 2023. The SEAC observed that on Replenishment Study-
  - a) Dates of Pre and Post Monsoon Survey are not mentioned.
  - b) Details of benchmarks by putting no. of pillar points and various Ground Control Points at the site not given.
  - c) Details of comparison of both pre and post monsoon elevation data not given.
  - d) As per table 7 of the study (Reserve assessed in the Software) Pre monsoon mineable reserve is 24060 cum and post monsoon mineable reserve is 16842 cum. Also in another

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table titled as Comparison of Reserve details -Mineable Reserve in cum after taking all safety measures is 24060 cum in Pre monsoon and 6666.66 cum in post monsoon. Hence there is net loss of sand as per Replenishment study. Therefore this case is not recommended.

4. Hence, the SEAC decided to reject the proposal.
5. The proposal was placed in the 140th Meeting of SEIAA, Odisha held on 26.10.2023 & 27.10.2023 and after detailed deliberation in the matter, the Authority accepted the recommendation of SEAC that there is net loss of sand as per Replenishment study. Hence, the SEIAA rejecting the Replenishment study Report. The PP is required to submit the revised replenishment study report keeping in view of the observation of SEAC and submit the ARRS report through ORSAC empanelled agency.
6. The Tahasildar, Bari vide his letter no. 3730 dt.02.11.2023 has mentioned that only 965cum sand has been extracted against 5000cum sand was allowed in EC letter for the period 04.06.2022 to 31.12.2022 and then the quarry operation is closed from 31.12.2022 due to non – submission of amendment of EC. The PP also mentioned that there was EC condition that the PP shall submit the ARRS report by 15<sup>th</sup> October 2022 and quarry operated on 04.06.2022 that's why they could not submit satisfied ARRS Report through ORSAC empanelled agency during this year. Also requested one year time for submission of ARRS report through ORSAC empanelled agency.
7. The proposal was placed in the 142nd Meeting of SEIAA, Odisha held on 13.11.2023, 14.11.2023 & 15.11.2023, and SEIAA pursue the submission made by the Tahasildar, Bari in their letter dt. 02.11.2023 and observed that the SEAC has concluded that there is net loss of sand as per Replenishment study. In view of this no fresh mining can be allowed at present. The PP may carry out Annual rate of Replenishment Study (ARRS) through ORSAC empanelled agency and submit the report for further consideration by SEAC/SEIAA.
8. Now, the PP has submitted the revised ARRS study report.
9. The proposal was placed in the 147th Meeting of SEIAA, Odisha held on 14.12.2023 & 15.12.2023. After detailed deliberation, the Authority decided that the revised ARRS report may be referred to SEAC for their considered views.
10. The SEAC has gone through the revised replenishment study report.

After detailed discussion, the SEAC recommended for grant of EC upto lease period.

#### ITEM NO. 02

#### **PROPOSAL OF AMENDMENT ENVIRONMENTAL CLEARANCE FOR GAMUNDI JAMAPALLI SAND QUARRY IN VILLAGE GAMUNDI & JAMAPALLI OVER AREA OF 12.20 ACRES OR 4.937 HECTARES UNDER GHUMUSUR (BHANJANAGAR) TAHASIL OF GANJAM DISTRICT OF SRI RABINDRA GOUDA – MOD EC**

1. This proposal is for amendment Environmental Clearance for Gamundi Jamapalli Sand Quarry in village Gamundi & Jamapalli over area of 12.20 acres or 4.937 hectares under Ghumusur (Bhanjanagar) Tahasil of Ganjam District of Sri Rabindra Gouda.
2. **Category:** The project is categorized in Category-B2 of Schedule under item 1(a)-Mining of Minerals in the EIA notification, 2006 and its subsequent amendments.

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3. The proposal was placed in SEAC meeting held on 2nd, 7th, 8th & 11th Sept, 2023. The SEAC observed that on Replenishment Study-
  - i) Levels provide deposit at all points as 0.65 to 0.75m.
  - ii) No scouring of bed noticed even in deeper section.
  - iii) Error in calculation as swz considered as 54000sqm within lease area of 49370 sqm.
  - iv) 937 ha. is considered as 68040 sqm for replenishment calculation.
  - v) Study is doubtful and erratic
4. Hence, the replenishment study report is not acceptable.
5. The proposal was placed in the 140th Meeting of SEIAA, Odisha held on 26.10.2023 & 27.10.2023 and after detailed deliberation in the matter, the Authority decided that no further production is allowed in this case. The PP is required to submit the revised ARRS report by March, 2024 through ORSAC empanelled agency.
6. Now, the Mining Officer, Baripada has submitted the revised ARRS report vide letter no. 758 dt.18.12.2023 and mentioned that estimated sand replenished in safe mineable area is 9067.87cum.
7. The proposal was placed in the 148th Meeting of SEIAA, Odisha held on 21.12.2023. After detailed deliberation, the Authority decided that the revised ARRS report submitted by PP may be referred to SEAC for re-examination.
8. **The SEAC has gone through the revised replenishment study report.**

**After detailed discussion, the SEAC recommended for grant of EC upto lease period for replenished quantity only of 6162.83 cum. Extraction shall be strictly done in areas of deposition only as per replenishment study.**

  
MEMBER SECRETARY, SEAC

**TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY IN CLUSTER APPROACH AND INFORMATION TO BE INCLUDED IN THE EIA/EMP REPORT FOR RENGITIPALLI - A,B,C,D & E STONE QUARRIES CLUSTER OVER AN AREA OF 170.249 ACRES OR 68.899 HECTARES IN THE VILLAGE RENGITIPALLI UNDER TAHASIL KODALA IN DISTRICT GANJAM OF SRI JUTI KRUSHNA PANDI - TOR**

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1. Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
2. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
3. Name and area of other mines within 500 meter of the lease area.
4. All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
5. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/Topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
6. Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
7. Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
8. It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
9. Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
10. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.

11. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
12. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given. Proposal for Common Non-Mineralized Zone for dumping of rejects / OB.
13. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
14. Status of forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
15. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
16. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
17. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
18. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
19. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
20. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be

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indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.

21. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
22. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need-based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
23. One season (non-monsoon) [i.e. March - May (Summer Season); October - December (post monsoon season) ; December - February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
24. Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
25. Environment Impact Assessment / Environment Management Plan document shall be in accordance with the provisions & generic structure stipulated in the EIA Notification 2006 dated 14.09.2006 & subsequent amendments.
26. EIA-EMP document shall be based on the maximum achievable mineral extraction of the mine and according to the impact of mines in cluster (within 500m) of the said mine.
27. EIA-EMP document shall include complete profile of the all the Project Proponent, implementing organization of mines in cluster (within 500m) of the said mine.
28. EIA-EMP document shall cover land description of project site (plot/survey / khasara number, village, tehsil, district, state & extent of land involved), of mines in cluster (within

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- 500m) of the said mine.
29. EIA-EMP document shall include deposit conditions working depth mining scheme, details of machinery, backfilling of mine pit with type of blasting, drilling and explosives.
  30. The general features such as surface drainage, mineral transportation and process flow of beneficiation plant, power and water supply shall be indicated.
  31. The baseline environmental status within 10km radius from the boundary limit of mining lease area (buffer zone) and core zone with respect to air, water, noise and soil shall be covered of mines in cluster (within 500m) of the said mine.
  32. Baseline data generation for one season (post monsoon) with respect to air, water, noise and soil shall be generated on the same sampling locations for obtaining EC
  33. EIA-EMP document shall include land use pattern including agriculture, forest land, water bodies and settlements.
  34. Existence of National Park, Wild Life sanctuary, migratory routes of wild animals within 10 km of mine lease area shall be brought out.
  35. Topographical map of study area (core & buffer zone -10 km from the boundary of core zone) showing major topographical features shall be included.
  36. EIA-EMP document shall include biological environment (flora and fauna) and socio-economic environment within the study area.
  37. EIA-EMP document shall include anticipated impacts on land, air, noise and water environment and the mitigation measures of mines in cluster (within 500m) of the said mine.
  38. Environmental Monitoring Programme and the environment management plan shall also be covered measures of mines in cluster (within 500m) of the said mine.
  39. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
  40. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
  41. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
  42. Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
  43. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

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44. Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
45. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.
46. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
47. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
48. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
49. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
50. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
51. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
52. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
53. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
54. Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

55. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
56. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
57. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
58. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
59. Besides the above, the below mentioned general points are also to be followed
  - a) All documents to be properly referenced with index and continuous page numbering.
  - b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
  - c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
  - d) Where the documents provided are in a language other than English, an English translation should be provided.
  - e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
  - f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J- 11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
  - g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
  - h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
  - i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.
60. The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report.

**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

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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.

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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. During transportation of sand, all traffic safety measures shall be taken to avoid any kind of accidents.
20. Bio - toilet provision shall be made.
21. 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.
22. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
30. 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.

31. 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.
32. 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.
33. 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.



## Annexure - C

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

Sl. No.	Essential Criteria	Reference
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 is 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	

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**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR  
DECORATIVE STONE MINES & STONE QUARRY**

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**A. Specific conditions**

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

**B. Standard conditions**

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

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

parameters and allows only species adopted to that micro climate.

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

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

## 5.5. HAZARDS AND RISK MANAGEMENT

### 5.5.1 Explosives

Blasting is done by means of explosives which are hazardous during of handling, storage and blasting.

#### 5.5.1.1. Storage and Handling

The Applicant is advised to store the explosives as per the Indian Explosives Act, 1958 and the Explosive Rules, 1983. Necessary permissions should be obtained from the Joint Controller of Explosives to store and uses of explosives in the quarry in the magazine permit under Form - 23 or Agreement shall be made with holder of Form - 22 who can supply and fire explosives as per safety practices. However blasting in the mine or quarry shall be done as per the MMR, 1961 under the supervision of Mines Blaster certificate holder, appointed under Reg. 160 of Metalliferous Mines Regulations, 1961.

#### 5.5.1.2. Blasting


Poorly designed shots can result in misfires early ignition and flying rock. Safety can be ensured by planning for round of shots to ensure face properly surveyed, holes correctly drilled, direction logged, the weight of explosion for good fragmentation. Blast design, charge and fire around of explosives should be carried out by a trained person.

#### 5.5.1.3. Drilling

Slipping and Falling of labours from the edge of a bench during drilling is possible. Part of training should include instructions to face towards the open edge of the bench so any inadvertent backward step is away from the edge. Suitable portable rail fencing which can be erected between the drilling operations and the edge of the mine can be provided. Attachment of a safety line to the drilling rig and provide harness for the driller to wear can be done. Newer drill machines are provided with cabin which controls noise level within cabins. Driller operators should be protected with ear protection.

### 5.5.2. Loading

Possible risks during loading of mined rocks are falling of rock on the driver, plant toppling over due to uneven ground, failure of hydraulic system, fires, fall while gaining access to operating cabin, electrocution in Draglines, failure of wire ropes in Dragline. In order to overcome these risks:



- Operator cabin should be of suitable strength to protect the driver in event of rock fall.
- Electrical supply to dragline should be properly installed with adequate earth continuity and earth leakage protection.
- Wire rope should be suitable for work undertaken and be examined periodically.
- Ensure that loaders are positioned sufficiently away from face edges

### **5.5.3. Transportation**

Brake failure, lack of all-around visibility from driver position, vehicle movements particularly while reversing, rollover, Vibrations, Noise, Dust and improper / no signalling are some of the factors causing risk. This can be avoided by following measures:

- Visibility defects can be eliminated by the use of visibility aids such as closed circuit television and suitable mirrors.
- Edge protection is necessary to prevent inadvertent movement.
- Seatbelt to protect driver in event of vehicle rollover.
- Good maintenance and regular testing necessary to reduce possibility of brake failure.
- Avoid driving at the edge of roadway under construction
- Heavy earth moving equipment and vehicle drivers and those giving signals should be well trained.

### **5.5.4. Unstable face**

Chances of Rock fall or slide exists. Regular examination of face must be done and remedial measures must be taken to make it safe if there is any doubt that a collapse could take place. Working should be advanced in a direction taken into account the geology such that face and quarry side remain stable.

### **5.5.5. General safety measures**

Provisions of the Mines Act, Rules and Regulations orders made there under shall be complied with, so that the safety of the mine, machinery and persons will be ensured. Permission, relaxation or exemption wherever required for the safe and scientific mining of the deposit will be obtained from the Department of Mine Safety. Copy of Agreement for handling of Explosives under License Holder at Proposed site is given in additional document.

- Safety kits should be located in easily accessible place with major first aid materials in it.
- Entry of any unauthorized person into mine and plant areas shall be completely prohibited
- Arrangements for fire fighting in the mine's office complex and mining area



- Provision of all the safety appliances such as safety boot, helmets, goggles, ear plugs etc. shall be made available for the employees
- Mining will be undertaken in coexistence with the requirements of the Mining Plan which shall be updated from time to time
- Handling of explosives, charging and blasting shall be undertaken only by a competent person
- Adequate safety equipment shall be provided at the explosive magazine

All the mining equipment shall be maintained as per the guidelines of the manufacturer.

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