

## **PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 02<sup>ND</sup> NOVEMBER, 2022**

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The SEAC met on 02<sup>nd</sup> November, 2022 under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

1. Sri Sashi Paul	-	Chairman
2. Dr. K. Murugesan	-	Secretary
3. Dr. Rabi Narayan Patra	-	Member (through VC)
4. Dr. Chittaranjan Panda	-	Member
5. Prof. (Dr.) H.B. Sahu	-	Member (through VC)
6. Prof. (Dr.) Abanti Sahoo	-	Member (through VC)
7. Dr. Ashok Kumar Sahu	-	Member
8. Er. Fakir Mohan Panigrahi	-	Member
9. Prof. (Dr.) B.K. Satpathy	-	Member
10. Dr. K.C.S Panigrahi	-	Member (through VC)
11. Sri Jayant Kumar Das	-	Member

### **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 FOR ENVIRONMENTAL CLEARANCE OF M/S K R ENTERPRISES FOR ADDITIONAL 2.4 MTPA OF COAL WASHERY UNIT IN THE EXISTING COAL CRUSHING AND SCREENING PLANT OF CAPACITY 2.4 MTPA AT VILLAGE - REMUAN, TEHSIL – TALCHER, DISTRICT – ANGUL, ODISHA OF SRI JAYABARDHAN MISHRA (PARTNER) - TOR**

1. The proposal was considered by the committee to determine the “Terms of Reference (ToR)” for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. M/s K R Enterprises has applied for “Terms of Reference (ToR)” for Additional 2.4 MTPA of Coal Washery unit in the existing Coal Crushing and Screening Plant of capacity 2.4 MTPA at Village - Remuan, Tehsil – Talcher, District – Angul, Odisha.
3. The category of the project is 2(a) Coal Washeries under Category “B” as per EIA Notification, 2006 & its amendments.
4. **Location and Connectivity** - The project is of total area 11.938ha. and located at Village – Remuan, Tehsil – Talcher, Dist – Angul, Odisha. The Geographical co-ordinates of the project site is: Latitude - 20° 57' 25.542" N to 20° 57' 53.315" N & Longitude - 85° 13' 5.650" E to 85° 13' 19.605" E and finds place in Toposheet no - F45T1, F45T5, F45N4, F45N8. The nearest NH is NH 149 adjacent to the site. The nearest railway station is Talcher Railway Station (3.46 km, SW). The nearest airport is Bhubaneswar International Airport (99.62 km, SE) from project site. Nearest Habitation is Remuan (0.25 km, SW) and Talcher (0.76 km, S). Nearest Canal is Right Bank Canal (Adjacent to the Project Site) and nearest river is Brahmani River (1.54 km, E).

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Nearest Reserve forest is Gengutia RF (0.68 km, W). Elevation of the project site is 84 to 93 m above mean sea level. No forest Land is involved.

5. The existing project was accorded 1st CTE from OSPCB vide letter no. 3058, Dated 25/08/2016, Current CTO from OSPCB vide Ref. No. 804/MB/ROSPCB/AGL/17/2013-14, dated 30/03/2020 is valid for the period from 01.04.2020 to 31.03.2025 by the State Pollution Control Board.

6. Details of Existing Production Capacity

Name of the Units	Production Capacity	CTE from OSPCB	CTO from OSPCB & Validity	Operational Unit as per valid CTO
Coal Grinding & Screening	2,00,000 MT/month	vide letter no. 3058, Dated 25/08/2016	vide Ref. No. 804/MB/ROSPCB/AGL/17/2013-14, dated 30/03/2020	2,00,000 MT/month

7. The unit configuration and capacity of Expansion project is given below:

Sl. No	Plant Facilities	Plant Existing Configuration	Proposed Configuration	Total Capacity (TPA)
1	<b>Crushing &amp; Screening Plant</b>			
	Crushing & Screening Plant	2.4 MTPA	-	<b>2.4 MTPA</b>
2	<b>Coal Washery</b>			
	Coal Washery	-	2.4 MTPA (throughput)	<b>2.4 MTPA (throughput)</b>

8. The details of the raw material requirement for the Expansion project along with its source and mode of transportation is given as below:

Raw Material Required	Quantity in Tons per Annum	Source	Distance from site (Kms)	Mode of Transportation
ROM Coal	2,400,000 TPA	MCL	10 km	Road

9. **Water Requirement** - The total water required is 430 KLD (make-up), Existing 56 KLD & Proposed 374 KLD, which will be obtained from RWH 80 KLD & remaining water 350 KLD from Surface Water (Brahmani River, Permission for the same will be obtained). Waste water generated is 9KLD which will be treated in STP of capacity 15KLD and the treated water will be used in greenbelt.

10. **Power Requirement** - The total power requirement for plant is 0.70 MW per hour. Existing power requirement is 0.3 MW. The remaining power requirement for the project is estimated as 0.4 MW, which will be obtained from TPCODL.

11. **Green Belt** - The total green belt area is 3.971 Ha. (33.26% of total plot area).

12. **Solid Waste Generation** – The total solid waste generated from the project is 14270 TPA which will be dewatered and stored in slime/tailing storage area & the collected water will be recycled in process. The tailings will be disposed to construction contractors for road & construction filings.

13. **Employment Potential:** The project will generate direct to the tune of about 250 persons as well as indirect employment opportunities for the nearby villages.

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14. **Project Cost** - The capital cost of the project is Rs. 16.68 Crores rupees (Existing Rs. 4.54 Crores & Proposed Rs. 12.14 Crores) and capital cost for Environmental Protection Measures is proposed as Rs. 1.334 Crores (Existing Rs. 0.125 Crores & Proposed Rs. 1.209 Crores). Employment generation from the expansion is 362 (Existing 47, Proposed 65 & Indirect 250).
15. There is no court case pending or violation under EIA notification 2006, to the project or related activity.
16. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 08.07.2022.
17. The SEAC in its meeting held on dated 08-07-2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent followed by site visit of Sub-Committee of SEAC to verify the present status.
18. 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.	Management of wash liquor and its composition, uses to be worked out in details.	Management of wash liquor and its composition are explained in <b>Annexure I</b> .	Complied
2.	The proponent has to clarify why it is an additional 2.4 MTPA capacity Coal Washery? is there any coal washery do exists within the premises? if so, details of such coal washery to be submitted.	<ul style="list-style-type: none"> <li>• KR Enterprises had constructed 2.4 MTPA throughput Coal washery (almost 90% done as on 05.04.2016) without obtaining permission from SPCB and EC from concerned authorities. However, it was not operated.</li> <li>• Closure notice for stoppage of Construction of Coal Washery work was issued by regional Officer (RO) SPCB, Angul vide letter no. 1365, dated 05.04.2016.</li> <li>• On 08.04.2016, KR Enterprises replied to Regional Officer (RO) SPCB, Angul that, after closure notice dated 05.04.2016, there was no progress in construction work of Coal Washery.</li> <li>• Coal Washery unit was inspected by the RO Officials of SPCB on dated 17.06.2016 &amp; 09.08.2016 &amp; it was observed that Coal Impactor, screens &amp; Washery equipment installed but was not in operation.</li> <li>• In the meantime, KR Enterprises had also applied for CTE of coal washery, dated 13.07.2016.</li> <li>• RO, Angul replied vide letter no. 2947, dated 11.08.2016 to obtain EC for coal washery before taking CTE.</li> <li>• RO, Angul, vide letter no.3004, dated 19.08.2016, issued show cause notice reg. revocation of CTO order for construction of Coal washery without permission.</li> </ul>	This will be dealt as violation case as they have already started construction work of the project without Environmental Clearance.

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		<ul style="list-style-type: none"> <li>On 20.08.2016, KR Enterprises replied to the Show Cause notice mentioning that existing Washery unit was not operated at any time and had modernized the plant with setting up of a new coal impactor and screens for enhancement of the capacity.</li> <li>After that, on 11.04.2018, The Coal Washery unit was sealed jointly by Assistant Collector, Talcher &amp; Regional Officer (RO) SPCB, Angul.</li> <li>Now KR Enterprises proposes for obtaining EC for regularization of existing 2.4 MTPA throughput Coal washery (About 90% constructed).</li> </ul> <p>Details Chronology of the plant since inception are mentioned in <b>Annexure II</b>.</p>	
3.	Detailed raw material linkage along with supporting documents.	<p>For existing coal crushing &amp; screening plant, coal is being procured through e-Auction from ALPS Mining Services (Rajgangpur) &amp; NLC Tamilnadu Power Limited.</p> <p>Furthermore, M/s. K. R Enterprises is also in process of obtaining coal linkage for the proposed expansion of Plant. Related documents w.r.t present e-auctions are attached as <b>Annexure III</b>.</p>	E-Auction orders attached
4.	Detailed land documents with kismam of land.	<p>The present land use (Kisam) of the site is Talia -1, Bagayat -3 &amp; Sharad -3. Conversation and Transfer of Land has been applied to the appropriate Authorities. However, the matter is under Sub-Judice.</p> <p>Land Documents of 11.938 Ha. (29.59 Acre) with kismam details attached as <b>Annexure IV</b>.</p>	_____
5.	CTE, CTO status of existing units within the premises.	<ul style="list-style-type: none"> <li>1<sup>st</sup> CTE was granted by SPCB, Odisha for coal Crushing &amp; Screening Plant vide letter no. 910, dtd 28/03/2008</li> <li>1<sup>st</sup> CTO was granted by SPCB, Odisha for Coal Crushing &amp; Screening Plant vide letter no. 1254, dtd 17/05/2008.</li> <li>Current CTO was granted by SPCB, Odisha vide letter no 804, dtd 30/03/2020 for Coal Crushing &amp; Screening Plant valid up to 31/03/2025.</li> <li>CTE &amp; CTO Details with CTO Compliance of Coal Crushing &amp; Screening Plant are mentioned in <b>Annexure V</b>.</li> </ul>	complied
6.	Provision of RWH.	Provision of Rainwater Harvesting (RWH) with Calculation is mentioned in <b>Annexure VI</b> .	_____
7.	Design and Capacity of STP with	Design and Capacity of sewage Treatment	_____

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	basis.	Plant (STP) with basis mentioned in <b>Annexure VII</b>	
8.	Water balance both during monsoon and non-monsoon.	Water Balance for both during Monsoon and non-monsoon mentioned in <b>Annexure VIII</b>	_____
9.	Traffic study at important intersecting points like nearest habitation, Talcher College etc.	Traffic Study will be conducted during EIA/EMP study.	This will be specified in the ToRs.

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

## **ITEM NO. 02**

### **PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR EXPANSION OF IRON ORE BENEFICIATION PLANT FROM 10.7 MTPA (THROUGHPUT) CAPACITY TO 16.0 MTPA (THROUGHPUT), RELOCATION OF TAILING DAM AT VILLAGE - SANKARI, GRAM PANCHAYAT - PHULJHAR, DIST.-KEONJHAR, LAYING OF TAILING PIPELINE AND RETURN WATER PIPELINE FROM BENEFICIATION PLANT TO TAILING DAM AND LAYING OF WATER PIPELINE AND SLURRY PIPELINE FROM BENEFICIATION PLANT TO GHORABURHANI-SAGASAH I IRON ORE BLOCK FOR M/S. ARCELOR MITTAL NIPPON STEEL INDIA LIMITED OF SRI SUBRAHMANYA SHANBHOGUE TANTRADI - EC**

1. The proposal is for Environmental Clearance for Expansion of Iron Ore Beneficiation Plant from 10.7 MTPA (Throughput) Capacity to 16.0 MTPA (Throughput), Relocation of Tailing Dam at Village - Sankari, Gram Panchayat - Phuljhar, Dist.-Keonjhar, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam and Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhani-Sagasahi Iron Ore Block for M/s. Arcelor Mittal Nippon Steel India Limited of Sri Subrahmanya Shanbhogue Tantradi.
2. The project falls under category "B" or activity 2 (b) - Mineral Beneficiation under EIA Notification dated 14th September 2006 as amended vide MoEF&CC, Govt. of India Notification No. S.O. 1886(E) Dated 20<sup>th</sup> April, 2022.
3. **Location and Connectivity:** The proposed project works will be carried out within the existing plant boundary of AM/NS INDIA existing plant, which is located in village Sankari, District – Keonjhar. The coordinates of Beneficiation plant are as follows: Latitude 21°51'30" N and Longitude 85°24'15" E. The existing 10.7 MTPA (Throughput) Beneficiation Plant has been established over an area of 79 + 6 acre (34.40 Ha). The truck unloading station has been set up over an area of 4.75 acre (1.92 Ha), adjacent to the Beneficiation plant, Dabuna. Additional land of 321.81 acre (130.23 Ha) at Sankari of Phuljhar Gram Panchayat has been identified for establishing a tailing dam. Slurry and water pipelines from Ghoraburhani-Sagasahi Iron Ore Mine to Beneficiation Plant at Dabuna will involve an area of 59.02 acre (23.886 Ha) of land. The tailing and return water pipelines from Tailing Dam to Beneficiation Plant will require 54.40 acre (22.019 Ha) of land details given in Table No. 2.1 The existing Beneficiation Plant is located on KIDCO expressway from Palaspanga to Kalimati Chakk and well connected with NH-215.

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4. Part of the expansion project in the Beneficiation Plant will be accommodated within the existing plant boundary. The land for tailing disposal is located at a distance of 12 kms by road and 18.178 kms by pipeline route from the Beneficiation Plant, Dabuna.
5. Except the tailing dam area of 130.23 ha. which is under advanced possession, the remaining land has been acquired by AMNS India. The acquisition of the tailing dam area is in progress.
6. Stage – I Forest Diversion Clearance for “pipelines” has been obtained for the entire 29.194 ha Forest Land vide Letter No. 5-ORC496/2022-BHU, dated 25.01.2022 and Letter No. 5-ORC481/2021-BHU, dated 28.12.2021.
7. Chronology of the proposal is

Sl. No.	Clearance	Approval Status
i)	Environmental Clearance for the existing Iron ore Beneficiation plant of 10.7 MTPA throughout capacity.	EC granted by MoEF & CC vide letter no. J-11015/876/2007-IA.II (M) dated 04.05.2009
ii)	Amendment of EC	Letter No. J-11015/867/2007-IA.II (M) dated 22.05.2013
iii)	Submission of Form-1 & PFR for Expansion project	Submitted to MoEF & CC vide Online application no. IA/OR/IND/58662/2016 dated 29.08.2016
iv)	TOR for the expansion project.	TOR granted by MoEF & CC, vide letter no. J-11011/222/2016-IA.II (I), dated 20.07.2017.
v)	For amendment of TOR, Essar submitted Form-1 and Pre-Feasibility Report to MoEF & CC.	Online Submission vide Online Proposal No. IA/OR/IND/58662/2016 dated 28.10.2017
vi)	Presentation before EAC (Industry-1) for amendment of ToR	Amendment for TOR Presentation held on 13.12.2017
vii)	Amendment of ToR	Meeting held during 11-13 <sup>th</sup> Dec-2017 and subsequently the proposal was held up by MOEF & CC, GOI due to ongoing CIRP process.
viii)	Amendment in ToR	Amendment in ToR granted on 23 <sup>rd</sup> January 2020.
ix)	ToR Validity Extension	ToR validity extended upto 19.07.2021 vide Letter dated 22 <sup>nd</sup> October 2020
x)	Public Consultation	Completed on 12.04.2021
xi)	Name Change Application in Parivesh Portal from ESSAR Steel Limited to Arcelor Mittal Nippon Steel India Limited.	Applied on 08.07.2021
xii)	Confirmation for Name Change Application received from MoEF&CC	Completed on 03.08.2021
xiii)	Submission of Form 2 for grant of Environmental Clearance	Applied on 18.07.2021
xiv)	EDS generated by MoEF&CC	19.07.2021
xv)	Delay in EDS compliance	Letter from DFO regarding clarification of land at Tailing Pond site has been received on 14.05.2022
xvi)	Application for EC as Category B project	As per MoEF&CC notification S.O. 1886 (E) dated 20.04.2022

8. The project configuration is

Sl. No.	Facilities	Capacity
	Existing Project Configuration	

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i)	Beneficiation Plant	10.7 MTPA (throughput) to produce 8.0 MTPA concentrate
ii)	Slurry Pipeline	12 MTPA
iii)	Tailings Pond (Not Installed)	87.01 Ha
Proposed Project Configuration		
iv)	Beneficiation Plant	16 MTPA (throughput) to produce 12.0 MTPA concentrate
v)	Slurry Pipeline (Ghoraburhani – Sagasahi Iron Ore Mines to Beneficiation Plant)	6 MTPA
vi)	Relocation of Tailings Dam from Basantpur village to Sankari Village	130.23 Ha
vii)	Underground Tailing and Return Water Pipeline and Electrical Cables with Beneficiation Plant	0 to 4 MTPA max

9. **Raw Material and Source** - Iron Ore fines are being used as Raw material for the proposed Beneficiation plant. Iron Ore fines of average grade between 58% to 64 % Fe is used and the Iron Ore Concentrate which will be produced from the Beneficiation plant will be of average grade between 63.5% to 66% Fe. For the proposed expansion, 16 MTPA Iron Ore fines will be required as feed of the beneficiation plant. These Iron Ore Fines will be sourced from captive mines of the company i.e., Ghoraburhani - Sagasahi Iron Ore block at Koira - Tehsil in Sundergarh District and Thakurani Iron Ore mine in Keonjhar District along with different private merchant miners available in the surrounding area of Odisha. The list of mines from where IOF is expected to be sourced are given in Table below.

Sl. No.	Name of the Mine	Name of the Lessee	Distance (in km)	Quantity (MTPA)
i)	Ghoraburhani-Sagasahi Iron ore mines	AMNS India	28	6
ii)	Thaukarani Iron ore mines	AMIPL	50	4.8
iii)	Balda Block C, Unchabali Iron ore mines & other merchant mines	Serajuddin & Co., Indrani Patnaik and OMC	Between 7 - 40	5.2
<b>Total</b>				<b>16.0</b>

10. **Water Requirement** - In the Beneficiation Plant, the water will be used for process operation, dust suppression system, slurry, and tailings transportation, flushing, firewater and drinking purpose. Drinking water requirements will be met from the raw water after necessary treatment within the plant facility. The total water requirement of 11.77 cusecs (about 1200 m<sup>3</sup>/h) for the beneficiation plant is sourced from Baitarani River through a 9 km long water pipeline.
11. **Power Requirement** - The existing plant operation was closely observed, and overall present plant power consumption is estimated to be 22 MW and required power after expansion is 32 MW. Six nos. of 2.25 MVA generator shall be kept as backup.
12. **Green Area** - The existing green area is 8 ha. Additionally 4 ha. Green belt will be developed. In tailing pond area for green belt is 60.52ha. Total green area is 72.52ha.
13. **Manpower** - The existing manpower is 664 nos. Additionally 450 persons will get direct employment. The total direct employment after expansion will be 1094 nos.

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14. **Project Cost** - Estimated project cost for expansion project is Rs.388.84 Crore. A sum of ` 16.35 Crores will be spent towards capital cost for EMP and a sum of ` 1.35 crores will be spent towards annual recurring cost of EMP.
15. The baseline data on micro- meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during December 2017 – February 2018 and December 2020 – February 2021. The observations are:
- Air Quality Monitoring done at 14 locations - PM<sub>2.5</sub> = 56.16 to 24.12 µg/m<sup>3</sup>, PM<sub>10</sub>= 93.6 to 40.2 µg/m<sup>3</sup>, SO<sub>2</sub>= 23.6 to 4.1 µg/m<sup>3</sup>, NO<sub>2</sub> = 27.4 to 9.1 µg/m<sup>3</sup> and CO = 0.98 to 0.11 mg/m<sup>3</sup>.
  - Groundwater Quality Monitoring done at 9 locations - pH: 7.46 to 7.26, Total Hardness: 92 to 76 mg/l, Chlorides: 60 to 30 mg/l and Fluoride: 0.03 to 0.01mg/l.
  - Surface Water quality Monitoring done at 12 locations - pH: 7.55 to 7.02, DO: 7.3 to 5.8 mg/l, BOD: 1.5 to 1.1 mg/l and COD: 9.1 to 4.4 mg/l.
  - Noise Levels Monitoring done at 11 locations - Night-time: 66.3 dB(A) to 34 dB(A) and Daytime: 72.4 dB(A) to 42.0 dB(A).
16. Public Hearing was conducted on 12.04.2021 at Village Sankari of Phuljhar Gram Panchayat, Keonjhar District. Issues are Integrated Development of the Area which includes Health, Education, and Model Village; including the construction of Roads Education facilities; Transportation; Pollution Control; Patta for Villagers; Compensation for Landholders
17. The Environment Consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the proponent made a detailed presentation on the proposal before the Committee on 03.08.2022.
18. The SEAC in its meeting held on dated 03.08.2022 decided to take decision on the proposal after receipt of certain information / documents 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.	Comparative statement of salient physical features and salient features with reference to environmental parameters of the existing mines and proposed expansion including water balance shall be submitted and detail of final non utilised ore and grade of it and its management.	The proposal is for Expansion of Iron Ore Beneficiation Plant from 10.7 MTPA (Throughput) Capacity to 16.0 MTPA (Throughput), Relocation of Tailing Dam At. Village - Sankari, Gram Panchayat - Phuljhar, Dist.-Keonjhar, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam and Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhani-Sagasahi Iron Ore Block.	—
2.	Detailed plan for reduction/ to keep within limit the values of PM <sub>2.5</sub> and PM <sub>10</sub> , since it is in borderline of permissible limit.	Mitigation Measures for controlling PM <sub>2.5</sub> and PM <sub>10</sub> : The beneficiation plant is already in operation and necessary air pollution control measures have been adopted in the plant and iron ore transport activities. Apart from	—

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		generation of dust from plant site, movement of vehicles is the major source of pollution in the proposed project. The existing pollution control measures, as stated below, will be further strengthened during the expansion of the beneficiation plant capacity. Also, Ambient air quality is being monitored regularly in accordance with CPCB / Odisha State Pollution Control Board (OSPCB). Work zone air quality is being monitored as per directives of OSPCB to assess the levels of particulate matter, NOx and SO <sub>2</sub> .	
3.	Provision of solar power at present and on proposed expansion against the corresponding total power demand.	<p>The following activities which have already been undertaken and some of the activities to be implemented are given below.</p> <ul style="list-style-type: none"> <li>• 107 solar streetlights have been installed in the village roads to avoid/reduce the chances of accidents during the night-time.</li> <li>• 3 Solar Streetlights projects have been proposed for Sankari and Patpani. Additionally, 28 sets of Solar Streetlights shall be installed considering the requirement and due consultation with the people's representative.</li> <li>• Solar based RO Plant will also be taken up.</li> <li>• Borewells shall also be installed and Solar based Drinking water facility with overhead tank will also be taken up.</li> </ul>	—
4.	Status of acquisition of private land 45ha. and R&R plan.	<p>Out of 45 ha private land, around 36.32 ha of private land is belonging to existing beneficiation plant and truck unloading station which is under operation. For the expansion project, private land of 6.362 ha is proposed for laying of tailing pipeline from Beneficiation Plant to Tailing dam at Sankari village for which we are in the process of obtaining the Right of Use under PMP Act' 1962 (Petroleum and Minerals Pipeline Act - 1962). The remaining private land of 2.67 ha only is proposed for acquisition for Tailing Dam in Sankari Village which is under progress. Since there is no displacement at our project site, which is under expansion, R&amp;R is not applicable. However, the project proponent will be providing basic facilities to the affected families.</p> <p>The establishment of the Tailing Dam will</p>	—

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		lead to acquisition of land from Sankari Village. About 23 families or households will lose their land. To standardize the living conditions, Rehabilitation and Resettlement (R & R) Policy of 2006 will be followed. A total of 11 private plots will be acquired in the process. The compensation for land loosing families, provisions under paragraph 13 of the ORRP 2006 and ORFCTLARR 2016, following provisions have been made for R&R Entitlement Matrix and given	
5.	Capacity of existing STP and on expansion with basis of calculation.	STP (Sewerage Treatment Plant) of capacity 15KLD of MBBR (Moving Bed Bio-film Reactor) based technology is installed and treated water is used for green belt and landscape development. This STP consists of physicochemical, biological, and tertiary treatment.	—
6.	Design of Tailing pond and its capacity existing and proposed and its management.	<p>As per the existing EC, a tailing dam was supposed to be located at village Basantpur in 87.0105 ha of land having 83.711 ha of forest land. Essar had to surrender this land application to the Government of Odisha because Patta was issued to the forest dwellers under Forest Right Act 2006 and this forest land was no more contiguous land and hence not suitable for any industrial use. This necessitated the relocation of Tailing Dam by finding suitable land for it. The identification of suitable land for the disposal of Tailings to be generated from the Beneficiation Plant and recommendation was made subsequent to various alternate sites analysis and comparative studies. After evaluating the areas under five parameters (Geomorphology, Geology &amp; Mineralization, Structural Geology, Forest cover and Revenue infrastructure) 4 sites (Ghorapira Pahar, Ansuan, Samraja, Saranda Pahar and Phuljhar-Sankari) in toposheet 73G/6 were targeted for ground truthing. A Note on Tailing Dam at Sankari, Phuljhar Gram Panchayat.</p> <p>The detailed report on the site identification, selection criteria, analysis and final recommendation has already been submitted to MoEF &amp; CC earlier and accordingly approved ToR was granted vide F No.-J-11011/222/2016-IA. II (I) dated 20.07.2017.</p> <p>The recommended site for Tailing Dam will be situated in village - Sankari. Phuljhar Gram Panchayat District Keonjhar and it is</p>	—

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		located at a distance of 24 kms from Beneficiation Plant, Dabuna by road. About 130.23 Ha (321.81 acre) of land has been identified for construction of the tailing dam out of which 127.56 Ha of land falls under Govt. land and 2.67 Ha forms private land. The tailing dam will be constructed by using natural available land terrain advantage which maximizes the life span of the tailing dam. The volumetric capacity of the proposed tailing dam is approximately estimated to be around 18 million tonnes and the tailing generation is estimated to be @ 1.8 MTPA.	
7.	Detailed plan to arrest siltation.	Same as 6	—
8.	Details of domestic water usage.	The existing and proposed water consumption is given in table.	—
9.	Copies of compliance to all ADS by the MoEF&CC, Govt. of India and copies of minutes of all meetings of EAC of MoEF&CC, Govt. of India.	The Form-2 of Dabuna expansion proposal has been submitted on dtd. 18.07.2021, subsequently the EDS was generated by MoEF&CC on dtd. 19.07.2021. In the meantime, MoEF & CC, New Delhi has issued the Notification S.O. 1886(E), dated 20th April 2022 (attached as Annexure-2), according to which – “all mineral beneficiation projects irrespective of procedure for beneficiation” are listed as ‘Category B’ projects and to be appraised at the state level. As per the new notification, this project comes under “Category B” (Schedule 2 (b), Mineral Beneficiation). After complying all the EDS points, AMNS India again submitted a fresh EC proposal (Form-2) to SEIAA, Odisha vide Proposal No. SIA/OR/IND/78693/2016 on dtd.22.06.2022. Consequently, we have presented our proposal in front of SEAC on dtd. 03.08.2022. No ADS was raised as such in relation to our proposal prior to this proceeding.	—
10.	Compliance to earlier EC conditions duly certified by the Regional Office, MoEF&CC, Bhubaneswar and Compliance to CTE & CTO conditions duly certified by the SPCB, Odisha.	The certified EC compliance report from MoEF&CC, Govt. of India furnished. But, certified compliance to CTE & CTO conditions has not been furnished.	Certified compliance to CTE & CTO conditions has not been furnished. However, the existing Beneficiation Plant is running with valid CTO from SPC

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
			Board, Odisha
11.	Compliance of NEERI conditions with 3D pictures of essential physical features like parking plaza, permanent sprinkling arrangement in haulage road and inside the plant, regular air monitoring stations on haulage road etc.	The existing unit is an Iron Ore Beneficiation Plant, and the proposal is for Expansion of Iron Ore Beneficiation Plant from 10.7 MTPA (Throughput) Capacity to 16.0 MTPA (Throughput), Relocation of Tailing Dam At. Village - Sankari, Gram Panchayat - Phuljhar, Dist.-Keonjhar, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam and Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhani-Sagasahi Iron Ore Block.  The best practices in relation to environment management system at Beneficiation Plant, Dabuna is attached as <b>Annexure – C</b> .	Annexure-C attached. Complied

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance for the project valid for a period of 10 years with stipulated conditions as per **Annexure – A and following specific conditions:**

- a) The project proponent shall address the tailings storage as per required safe design capacity and utilize them safely.
- b) The project proponent shall store the non-utilize grades as per IBM guidelines for future use.

### **ITEM NO. 03**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR EXPANSION OF KALARANGIATTA CHROMITE MINE (ML AREA: 23.800 HA) FOR INCREASE IN PRODUCTION FROM 0.05 MTPA TO 0.15 MTPA CHROMITE ORE (ROM) WITH MAXIMUM EXCAVATION OF 0.438 MILLION CUM PER ANNUM THROUGH OPENCAST MINING AT VILLAGE KALARANGIATTA UNDER SUKINDA TEHSIL IN JAJPUR DISTRICT FOR M/S. FERRO ALLOYS CORPORATION LIMITED OF SRI SANDEEP KITTANA ACHARYA – EC.**

1. The proposal is for Environmental Clearance for Expansion of Kalarangiatta Chromite Mine (ML Area: 23.800 Ha) for increase in production from 0.05 MTPA to 0.15 MTPA Chromite Ore (ROM) with maximum excavation of 0.438 Million Cum per Annum through opencast mining at village Kalarangiatta under Sukinda Tehsil in Jajpur District for M/s. Ferro Alloys Corporation Limited of Sri Sandeep Kittana Acharya.
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. The proposed project is for M/s Ferro Alloys Corporation Ltd. for expansion of Kalarangiatta Chromite mines for increase in production from 0.05 MTPA to 0.15 MTPA Chrome Ore

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(ROM) with maximum excavation of 0.438 Million cum per annum over an mining lease area: - 23.80Ha., at village – Kalarangiatta, Tahasil – Sukinda, Dist – Jajpur, Odisha.

4. Terms of Reference (ToR) was issued vide letter no - 3495/SEIAA on dated 18.11.2021.
5. Public Hearing was conducted on dated 17.05.2022 (at 11:00 A.M.) at village - Kalarangiatta under Sukinda tehsil of Jajpur district, Odisha. Major issues were environment protection, periphery development in the local area, local employment, organize quarterly medical camp in the area, water sprinkling and plantation activity in the local area etc.
6. **Site Location and Connectivity** - The Kalarangiatta Chromite Mine Lease is spread over an area of 23.800 ha and it falls in Survey of India Topo Sheet Open Series Map No. F45N16, F45T09, F45T13 & F45U1 (73G/12) with co-ordinates Latitude: 21° 01' 00.57" N to 21° 01' 29.29" N and Longitude: 85° 44' 18.96" E to 85° 44' 38.02" E. Kalarangiatta Chromite Mine is situated in Jajpur district of Odisha. Tomka Mangalpur Highway passes along the northern boundary of the lease area. Tomka Railway Station is situated about 26.08 km (aerial distance) in ENE-direction from lease area. Biju Patnaik International Airport, Bhubaneswar is about 85.87 km (aerial distance) in S-direction from lease area.
7. **Topography** - The entire lease area is a flat terrain having a gentle slope of 20° from South to North. Maximum elevation: 108 mRL in the Southern Part. Minimum elevation: 96 mRL in the Northern Part. There is no seasonal or perennial surface water body in the mine lease area. Damsal nala, flows next of ML area in N, forms the major drainage of the study area. HFL is at 86mRL. Bottommost elevation of the surrounding lease area is 96mRL.
8. Environmental Clearance is received for production of 0.05 MTPA Chromite Ore vide letter no. J-11015/183/2007/I.A.II(M) dated 13.05.2009 .
9. Govt. of Odisha granted mining lease for 39.318 Ha in Kalarangiatta village, Tehsil Sukinda, District Jajpur on 03.11.2001. M/s FACOR surrendered 15.518 Ha of forest land and mining lease was executed for 23.8 Ha of non-forest revenue land on 18.04.2008 for 30 years. Mining operation started from 01.11.2011. In compliance to the MMDR Amendment Act 2015, the mining lease period extended for 50 years i.e. up to 17.04 2058.
10. Based on MOEF & CC circular dated 10.03.2015 & as per Sabik settlement records, the status of ML area of 23.800 Ha as on 25/10/1980 is now interpreted as revenue forest land of Sal Jungle Kisam for which forest diversion proposal is under process and in advance stage. Mining operation is going on as per Hon'ble High Court order.
11. In the year 2020, Hon'ble National Company Law Tribunal (NCLT) Cuttack Bench under the provisions of Insolvency and Bankruptcy Code (IBC) -2016 vide its order dated 30.01.2020, has approved the resolution plan of M/s. Sterlite Power Transmission Limited (a group of Vedanta Ltd.). Pursuant to the said order of NCLT Cuttack, the Board of Directors of M/s. Ferro Alloys Corporation Ltd. have also been changed with effective from dated 21.09.2020.
12. Based on the recent exploration activity, updated mine reserve & resource data and updated mining plan, this expansion proposal was submitted to IBM for approval under

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Rule 17(3) of MCR, 2016 including Progressive Mine Closure Plan under Rule 23 of MCDR, 2017 on the account of production enhancement. IBM has approved the modification of Review of Mining Plan Vide Letter. No. MRMP/AA/09-ORI/BHU/2021-22, Dated. 29.07.2021.

13. **Modified Review of Mining Plan** was approved by IBM, Bhubaneswar dated 29.07.2021 with letter no. MRMP/AA/09-ORI/BHU/2021-22.
14. **Consent to Operate** Consent to Operate has been obtained from SPCB, Odisha in respect of Kalarangiatta Chromite Mines vide Letter No. 4158/IND.I CON.6318 dated 17.03.2022, Consent for discharging of sewage and trade effluent under Sec. 25/26 of Water (PCP) Act 1974 and existing/new operation of the Plant under section 21 of Air (PCP) Act 1981 for rated production of 50,000 Tons of Chrome Ore. Validity of CTO 31.03.2023..
15. **Hazardous Waste Authorization** from SPCB, Odisha vide letter no.: IND-IV-HW-1018/7540, dated 20.08.2020, Valid till 31.03.2022
16. **Ground water withdrawal permission (NOC)** was obtained from CGWA, Vide Ref No. CGWA/NOC/MIN/REN/1/2021/6526, Dated 06.08.2020.
17. **Forest Diversion proposal of Facor** Pursuant to the guideline dated 10.03.2015 of MoEF&CC bearing no. 8-78/1996-FC(Pt.) the total area of 23.800 Ha of non-forest land as per Hal Record was found to be having forest land as per Sabik Record (as on 25.10.1980). In view of above, Forest Diversion proposal was filed for total area of 23.800 Ha of forest land (as per Sabik Record on dated 11.11.2015 for obtaining approval of MoEF&CC as per Forest Conservation Act 1980.
18. **Surface right** over 22.739 Ha has been granted by State Government vide Letter No. 4904, Dated 05/05/2010
19. **Reserves** - Geological Reserves is 1.487 Million Tonnes and Mineable Reserves is 0.859 Million Tonnes (as on 31.05.2021). Based on the present reserve estimates and proposed production program, the life of mine is estimated to be about 6 years, which will increase with planned future exploration, road diversion and slope steepening.
20. **Method of Mining** - Fully mechanized Open cast mining is proposed to be carried out during the plan period. The operations like digging, excavation and removal of ore will be done with the help of heavy earth moving machineries. Drilling or blasting is not envisaged at present. However, it will be carried out as per requirement in future with necessary statutory approval.
21. **Production Details:** 0.150 Million TPA Chrome Ore (ROM), max excavation of 0.438 Million CuM per annum. Year wise production details is:

Year	Total Excavation (Tonnes)	ROM (Tonnes)	Waste Generation Top Soil (Tonnes)	Waste Generation OB/SB/IB	ROM:Waste Stripping Ration
2021-22	399600	63600	2800	336000	1:5.33
2022-23	932000	150000	3600	782000	1:5.24

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22. **Water Requirement:** About 80 KLD water will be required for dust suppression, plantation, wheel wash, drinking & domestic activities, etc. Mine pit water will be used for dust suppression and plantation activities. Ground water from borewell will be used for drinking and domestic use. Necessary permission for 20 KLD groundwater extraction from borewell and 700 KLD dewatering has been obtained from CGWA by the lessee and the same will be renewed.
23. **Power Requirement:** Currently, 33 KV power is stepped down through 11 KV substations and distributed throughout the mines. A contract demanding 198 KVA with total connected load of 180 KW has been made. Three DG set (250 KVA, 35 KVA, 15 KVA) are deployed to cope up with the power interruption that takes place due to low voltage and frequent tripping.
24. **Employment Potential** - The project will generate 233 manpower for the proposed expansion in the mine.
25. Baseline Environmental Monitoring for Air, water, Noise and Soil has been carried out during Pre Monsoon season (Mar 2021 - May 2021).
26. Total Cost of the proposed project will be ` Rs 12.18 Crores.
27. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 03.08.2022.
19. The SEAC in its meeting held on dated 03-08-22 decided to take decision on the proposal after receipt of certain information / documents 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.	Pollution load comparative statement of hexavalent chromium in soil, water and nearby water bodies.	Pollution load comparative statement of hexavalent chromium in soil, water and nearby water bodies has been attached as <b>Annexure No.: 1</b>	As per Annx-1 attached the hexavalent chromium level in soil is alarming. It is varied between 320 to 520 mg/kg. This may be a analytical error, which needs to be re-analyzed through a third party laboratory. EC may be recommended, however, EC may be issued after receipt of re-analysis report of soil sample.
2.	Pollution load of fluoride content w.r.t to groundwater usage in terms of domestic usage of water.	Pollution load of fluoride content w.r.t to groundwater usage in terms of domestic usage of water has been attached as <b>Annexure No.: 2</b>	-----
3.	Permission from WR department for withdrawal of groundwater.	Permission from Water Resource Department for ground water withdrawal has been attached as <b>Annexure</b>	-----

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		<b>No.: 3</b>	
4.	Settling pond and ETP design and capacity.	Settling Pond & ETP Lay out with details design have been Attached as <b>Annexure No.: 4</b>	-----
5.	Technical write up on handling of tailings and its management.	There is no beneficiation proposed in the mine lease area. Therefore, there is no tailing pond built in the mine lease.	-----
6.	Comparative statement of salient physical features and salient features with reference to environmental parameters of the existing mines and proposed expansion shall be submitted.	The comparative statement has been attached as <b>Annexure No.: 5</b>	-----
7.	Year wise production details after EC granted.	Year wise production details have been attached as <b>Annexure No. 6</b>	-----
8.	Cross-sectional dimension of retaining wall and garland drain shall be furnished.	Details have been attached as <b>Annexure No. 7</b>	-----
9.	Compliance to earlier EC conditions duly certified by the Regional Office, MoEF&CC, Bhubaneswar and Compliance to CTE & CTO conditions duly certified by the SPCB, Odisha.	EC Certified Compliance Copy by MoEF has been attached as <b>Annexure No.: 8.</b> CTE & CTO Certified compliance copy has been attached as <b>Annexure No.: 9</b>	-----

Considering the information furnished and the presentation made by the consultant **M/s Visiontek Consultancy Services Pvt Ltd, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – B** and following specific conditions.

- i) The mine shall explore implementation of membrane-based technology for removing Hexavalent Chromium from surface run off & mine drainage water.
- ii) The proponent shall discharge the treated effluent to outside nallah only after meeting the permissible limit for hexavalent chromium and other relevant parameters.
- iii) The mine shall take adequate measures to minimize the discharge of waste water to Damsala nallah.
- iv) The proponent shall revalidate the authorization obtained from SPCB, Odisha for management of Hazardous Waste as it has already expired on 31.03.2022 (as per information submitted).
- v) The project proponent shall monitor analysis of hexavalent chromium in nearby soil and water body periodically and follow mitigation measures if necessary.
- vi) **All the compliances submitted/ committed by PP (s) shall be strictly adhered to by them.**

**However, EC may be issued after receipt of re-analysis report of soil sample as analysis result submitted by the proponent reveals hexavalent chromium level in soil**

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Environmental Scientist, SEAC



varied between 320 to 520 mg/kg. This may be an analytical error, which needs to be re-analysed through a third party laboratory.

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

### **PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR TIRINGPAHAR IRON & MANGANESE MINE FOR REGULARIZATION OF EXISTING EC UNDER THE PROVISIONS OF EIA,2006 AND ENHANCEMENT OF PRODUCTION OF MN ORE FROM 0.85LTPA (0.98LTPA ROM) TO 5.38LTPA (ROM) AND PRODUCTION OF IRON ORE FOR 6.889LTPA (ROM) AT VILLAGES GURUDA, PALASA (KHA), JADIBAHAL & KHONDBONDH, BARBIL TEHSIL, KEONJHAR DISTRICT FOR M/S TATA STEEL LIMITED OF MR. SABYASACHY MISHRA – AMENDMENT TOR**

1. The proposal is for amendment of Terms of Reference for Tiringpahar Iron & Manganese Mine for regularization of existing EC under the provisions of EIA, 2006 and enhancement of production of Mn Ore from 0.85LTPA (0.98LTPA ROM) to 5.38LTPA (ROM) and production of Iron Ore for 6.889LTPA (ROM) at villages Guruda, Palasa (Kha), Jadibahal & Khondbondh, Barbil Tehsil, Keonjhar District for M/s Tata Steel Limited of Mr. Sabyasachy Mishra.
2. Tiringpahar Iron & Mn Mine was granted Environmental Clearance (EC) under EIA 1994 Notification vide Ministry's Letter No. J-11015/87/2004-IA. II (M) on 17th November 2005 for production of 0.85 LTPA of Manganese Ore.
3. The mine is located over ML area of 169 ha at Palsha (Kha), Khondbond, Jaribahal and Gurda villages of Keonjhar district in the state of Odisha.
4. The ML area consist of 133.174 ha of Forest Land & 35.826ha Non-Forest Land. Out of which Stage-II (Final) forest clearance has been obtained over 52.348ha of forest land and Stage-I forest clearance over balance forest land of 80.826ha.
5. This proposal initially was submitted in accordance with the ministry's notification no S.O (E)1530 dated 06.04.2018, for ratification of previously granted EC from EIA 1994 to EIA 2006 notification.
6. This was deferred by the EAC in it's 37th meeting dtd. 24th Oct 2018 on account of the observed violation attributed to excess production for year 2006-07 i.e. 86715 Tonnes as against the approved EC capacity of 85000 TPA.
7. The Ministry re-examined the case and vide it's letter no. J-11015/117/2018-IA.II(M) dtd. 14th Dec 2018 directed Department of Forest & Environment, Government of Odisha, to initiate credible action against the project proponent under section 19 of Environment (Protection) Act,1986.
8. Accordingly, credible action against the lessee was initiated by filing a case bearing no 2 CC 81 of 2020 in the court of JMFC Barbil and the status of the same was communicated to Ministry by Dept. of Forest & Environment, GoO vide it's letter no FNV-I-24/2018/17434/F&E, dtd. 06-11-2020.
9. Subsequently, the Ministry was please to reconsider the proposal in it's 27th EAC meeting held during 3rd Feb to 5th Feb 2021 and granted the Terms of Reference on 4th March 2021 for ratification of existing EC from EIA 1994 to EIA 2006 regime.
10. In order to include the proposed expansion plans, an application for the amendment of TOR granted earlier was submitted, on 20 July 2021, which was returned in the present form (30th

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July 2021) on account of the stay imposed by Hon'ble Madras High court on Ministry's SOP for dealing with violation case.

11. Based on the verbal suggestion by Hon'ble EAC, for the other proposals involving ratification and expansion, a fresh application was made in Form I on 16th Feb 22. This was heard by the Hon'ble EAC on 28th March 2022 in its 48th EAC (Non-Coal) however it was returned in the present form with a written suggestion to seek amendment in the TOR granted on 4th March for inclusion of the expansion in manganese ore & inclusion of iron ore as a new product.
12. Now in view of the above suggestion by EAC and Ministry's notification vide SO no: 1886(E). Dated 20th April 2022, the present proposal is applied before SEIAA, Odisha as the leasehold area is less than 250 Ha i.e: 169 Ha.
13. The company had submitted the proposal for the ratification of the existing EC from EIA 1994 to EIA 2006 notification for which the ministry has approved TOR on 4th March 2021.
14. The proposed expansion aims at
  - Expansion in production capacity of Manganese ore from 0.85 LTPA to 5.38 LTPA (ROM)
  - Production of Iron ore (New Product) for 6.889 LTPA (ROM)
  - With overburden generation of 41.62 LTPA (Peak) & total excavation of 52.36 LTPA.
15. The Tiringpahar mining lease is located at Palsha, Khondbond, Jadibahal and Guruda village at Barbil tahasil in Champua sub-division of Keonjhar district in Orissa. The deposit at Guruda block of Tiringpahar lease is located at about 25 km from Barbil town.
16. **Location and Connectivity** - The area falls under survey of India Topo Sheet Nos. 73 G/5 (New Topo Sheet Nos. F 45N/5). It is bounded between Latitudes 21°54'00" N to 21°57'00" N & longitudes 85°23'00" E to 85°25'00" E. The project with mine lease area of 169.0ha is a Category B project as the Mining lease is less than 250 ha. The deposit at Tiringpahar is located at about 25 km from Barbil town. Nearest railhead is at Banspani at 10 km which is connected by Tata Barbil branch line of SouthEastern Railway at Padapahar.
17. **Requirement of Project:** - The mine is an operational opencast mine operated with shovel-dumper combination for production of Manganese ore for 0.85LTPA. Presently, The Company is planning and implementing a growth plan targeting to enhance the production of steel from 18.5 MTPA to 30 MTPA by 2025-26. Targeted production of 30MTPA shall be achieved by expansion of steel Plant at Jamshedpur from 11 MTPA to 13 MTPA, steel plant at Kalinganagar, Odisha from 3 MTPA to 8 MTPA and rest through recently acquired Tata Steel BSL (located at Angul, now named as Tata Steel Meramundali) and at Tata Steel Long products ltd (Located at Gamharia). Accordingly, the requirement of ferro alloys will increase for which ore requirement will also increase. To cater to the enhanced requirement of ore, expansion of Tiringpahar Iron & Manganese Mines has been envisaged.

18. **Statutory clearances obtained -**

**Status of Environment Clearance** - The project has previously obtained the Environmental Clearance from the MoEF vide Letter no. J-11015/87/2004-IA II(M) dt 17.11.2005 for production of 85000 TPA of Manganese Ore as per the EIA notification 1994. The public hearing for the project was held on 29.09.2004.

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**Status of Forest Clearance** - The land within the ML area of 169 Ha consists of 133.174 ha Forest Land and 35.826 ha Non-Forest Land. Stage –II Forest clearance over an area of 52.348 has been obtained vide MoEF, Govt. of India letter no. 8-80/2004-FC, Dt.28.03.2007 and Stage-I clearance for balance forest area 80.826 ha by MoEF&CC vide letter F.No. 8-01/2019-FC, dated 02.08.2019.

**Consent to Operate** - The project has also obtained the Consent to operate for production level at 85000 TPA of Manganese Ore under Air (Prevention and Control of Pollution) Act, 1981 & Water (Prevention and Control of Pollution) Act, 1974 from State Pollution Control Board, Orissa. (Consent Order No.115, valid up to 31.03.2025).

19. **Water Requirement** - The present water consumption for the project 56 KLD however this will increase with proposed expansion to 225KLD. The project has already been accorded with permanent water allocation order by Dept. of Water Resource, Govt. of Odisha vide allocation order ref No. 7397/WR/WR-MAJII-WRC-0012/2020 (OSWAS) dtd.13-03-2020 for withdrawal of 0.4CUSEC from Baitarani River.
20. **Power Requirement** - The supply of electrical energy for the mining complex is received from local electrical sub-station of TPNODL The power requirement for the Mining complex is presently around 39744 Kw-h (in 2020-21). However, a rise of around 45-55 % w.r.t the present level is envisaged for the proposed expansion. It is presently sourced from distribution network of TPNODL and this will continue in future.
21. Baseline Environmental Monitoring has been already carried out during Pre monsoon Season (Mar2020- May 2020).Environmental monitoring has been carried out for various aspects like micro–meteorology, Ambient air quality, Ambient noise levels, Surface & Ground water quality, Hydro-geology, soil quality, biological environment, socio-economic studies etc.
22. Life of Mine - The proposed expansion is planned with an expected life of 8 years, till the expiry of lease i.e.31st March 2030.
23. The project proponent along with the consultant **M/s Vimta Labs Ltd., Hyderabad** made a detailed presentation on the proposal on 03.08.2022.
24. The SEAC in its meeting held on dated 03-08-22 decided to take decision on the proposal after receipt of certain information / documents 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
1.	Details of NEERI suggestions and its implementation programmes.	NEERI suggestions and its implementation programmes is enclosed as <b>Annexure-I</b> .
2.	Compliance to NEERI recommendation for Manganese mine expansion to be submitted.	As per the recommendations of CSIR-NEERI's Carrying capacity study, Tiringpahar Iron & Mn Mine qualifies for the proposed expansion on account of our past production being to the tune of approx.88.9% (i.e.: more than 80%) of Sanctioned EC capacity in the past five years. The detail of our compliance is addressed in <b>Annexure-I</b> at point no. 12. 2.1. on page no. 2 of 25.
3.	Details Dump management existing and proposed expansion.	The details of dump management for the existing and proposed expansion of Tiringpahar Mine is

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		enclosed as <b>Annexure-II.</b>
4.	Traffic Study Report to be submitted.	Traffic Study is being conducted and it shall be included in the Draft EIA Report and be presented during the appraisal of our proposal for EC.
5.	Compliance Report to previous EC conditions duly certified by the Regional office MoEF&CC, Bhubaneswar.	TSL has requested to Regional Office MoEF&CC for the certification of EC Compliance Report. This is under process and we assure to produce the same at the time of appraisal of our proposal for the grant of EC. A recent six-monthly compliance report is enclosed for your kind reference as <b>Annexure- III.</b>
6.	Specific measures taken Manganese poisoning in that area.	Representative workforces are tested for such Occupational contraventions. So far, no such cases of manganese poisoning have been observed. Blood samples and Serum Samples are collected and tested by approved test house for detecting traces of manganese.  Test report of such samples is enclosed as <b>Annexure-IV.</b>
7.	Fruiting plants should be taken for plantation.	Based on the recommendations of the local forest department, afforestation measures are planned with mixed varieties of native forestry floral species and fruit bearing ones. Due priority is laid on the dominant species found in the neighboring forest area such as SAL, KARANJA, NEEM, MAHANEEM, SEMAL, MAHUA, etc. However, Fruit bearing species are adopted in the social forestry, wherein we distribute fruit bearing saplings such as MANGO, GUAVA, BANANA, CHIKU, JAMUN, LICHI, LEMON, etc. to the local villagers in the Joda region. Apart from this, a centralized Nursery have been constructed wherein fruit bearing trees are developed and distributed to the local public in masses round the year. Wherever feasible fruit orchards are developed inside township area as well.  Details of the same is addressed in Annexure-I at point no. 12.14.4 on page no. 20 of 25.
8.	Copies of compliance to all ADS by the MoEF&CC, Govt. of India and copies of minutes of all meetings of EAC of MoEF&CC, Govt. of India.	Copy of previous MoM (EAC) along with the ToR granted by Ministry dtd. 4th March 2022 are enclosed as Annexure-V.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Vimta Labs Ltd., Hyderabad**, the SEAC recommended the following:

- a) Terms of Reference (TOR) issued by MoEF&CC, Govt. of India vide no. IA-J-11015/117/2018-IA-II(M), dated 4th March 2021 may be amended for inclusion of the following:

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- Expansion in production capacity of Manganese ore from 0.85 LTPA to 5.38 LTPA (ROM)
  - Production of Iron ore (New Product) for 6.889 LTPA (ROM)
- b) The following additional ToRs may be prescribed in addition to the ToRs prescribed by MoEF&CC, Govt. of India vide no. IA-J-11015/117/2018-IA-II(M), dated 4<sup>th</sup> March 2021.
- i) Copy of site-specific Wildlife Management Plan to be submitted.
  - ii) Certificate from the concerned DFO indicating that there is no elephant corridor within the lease area to be submitted.
  - iii) Any forest land required outside the lease area for use of transportation route, if so, detailed status of diversion of such forest land is to be submitted.
  - iv) Details of existing mines and their operational status within 10 kms radius is to be submitted.
  - v) The following information to be submitted.
    - a) Compliance of mining plan, including waste and OB dump management, mine closure plan etc.
    - b) Compliance to Common cause judgment
    - c) Status of R&R
    - d) Compliance of plantation
    - e) Compliance of public hearing issues
    - f) Status of complaints/ court cases/legal action
    - g) Any other relevant environmental issue / parameter.
    - h) The following studies be undertaken by domain experts, viz:
      - Blast vibration study if feasible with trial blasts
      - Socio economic study of the neighbouring habitation
      - Biodiversity study with audit mechanism.
      - Slope stability study for both mines and OB /waste dumps.
      - Surface runoff management along with rainwater harvesting and ground water recharge include the design of drainage structures.
      - Traffic density study, both inside the mines and at haulage roads, intersecting points of haulage road with public road.
      - Hydrology study: The study findings and the mitigation measures thereof to be submitted
  - vi) Cost of the CER calculated shall be utilized for the concerns of the people in terms of health, education, and infrastructure and environment protection. Project Proponent also shall include the budget for the betterment of schools nearby and to facilitate the online education system by providing Wi-Fi connectivity and desktops/tablets.
  - vii) The project proponent should provide in the EIA Report details of all the statutory

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clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC.

- viii) The project proponent should submit the revenue plan for mining lease, revenue plan should be imposed on the satellite imagery clearly demarcate the Govt. land, private land, agricultural land etc.
- ix) The project proponent should submit the real-time aerial footage & video of the mining lease area and of the transportation route. The project proponent should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The project proponent should submit the number of saplings to be planted, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this the project proponent should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Presently in India there are many agencies which are developing forest in short interval of time. Thus, for the plantation activities details of the experts/agencies to be engaged needs to be provided with budgetary provisions.
- x) The project proponent should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle needs to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
- xi) The project proponent should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility. The capital and recurring expenditure to be incurred needs to be submitted.
- xii) The project proponent should submit the measures/technology to be adopted for prevention of illegal mining and pilferage of mineral. The project proponent should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- xiii) The project proponent should clearly show the transport route of the mineral and protection and mitigative measure to be adopted while transportation of the mineral. The impact from the center line of the road on either side should be clearly brought out supported with the line source modelling and isopleth. Further, frequency of testing of Poly Achromatic Hydrocarbon needs to be submitted along with budget. Based on the above study the compensation to be paid in the event of damage to the crop and land on the either side of the road needs to be mentioned. The project proponent should provide the source of equations used and complete calculations for computing the emission rate from the various sources.

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- xiv) The project proponent should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- xv) The project proponent should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this the project proponent should submit the original test reports and certificates of the labs which will analyze the samples.
- xvi) The percentage of iron in the final waste generated and not used as iron ore or its up-gradation.
- xvii) "Zero discharge" management & "Zero Dust Re-suppression" management with SOP be submitted.
- xviii) Internal roads, drain management with network of the drain, retaining walls and settling tanks with ETPs be submitted.
- xix) Details of air quality monitoring stations of the area and additional stations at entry and exit of mines and haulage roads, habitation to be considered.
- xx) Construction and perennial maintenance of haulage road with details of plantation and the species thereof to be submitted.
- xxi) Parking plaza layout with maximum no. of vehicles and types of vehicles that can be parked with basic amenities and facilities.
- xxii) Forest Clearance details with copy of all Forest Clearance.
- xxiii) Copy of lease document.
- xxiv) Details of waste management i.e. composition and nature of waste generated, tabulated form showing year wise waste generation, usage and storage.
- xxv) Project Proponent shall consider developing a good nursery in nearby village for production of saplings of 4-6 feet height for planting in safety zone, sides of external haulage roads and distribution among villagers for planting in their private land/ community land. The nursery may be developed by company on their own or in collaboration with forest department. A detailed proposal to this effect shall be submitted. The proponent shall ensure to use organic fertilizer in the nursery.
- xxvi) Comprehensive water management, water balance with water harvesting and its reuse both monsoon and non-monsoon period.
- xxvii) STP plan with design with location in the layout map for domestic waste water treatment.
- xxviii) Provision of solar power (percentage wise) with detail plan.
- xxix) To submit the network with dimension of concrete cement roads inside the mining lease area and haulage road.
- xxx) To submit parking plaza at entry and exit of the mines with basic amenities.

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- xxxi) Plan and SoP to be submitted for water sprinkling inside the mines and outside in haulage road including regular vacuum cleaning and Zero Dust Resuspension system to completely mitigate and arrest fugitive dust emission.
- xxxii) Wagon drill blasting must be avoided- to confirm.
- xxxiii) Details of grade of Fe to be mined, cutoff grade, management of off grade, quantity of each year wise and the dumping or storage plan of off grade and wastes to be provided.
- xxxiv) Total water management including domestic use w.r.t sourcing from borewell, rain water harvesting and recycling of waste water from ETP/STP, both for monsoon and non-monsoon be submitted.
- xxxv) Measures to be taken for arresting and mitigation of occupational health hazard including identification of the same, both for employees and nearby/surrounding habitation.
- xxxvi) Year wise waste/OB management with reference to generation and utilization in consideration with dynamic movement of inventory indicating dump area and dimension of storage be submitted.
- xxxvii) Details of grades to be produced, to be discarded as waste and dumps and the utilisation plan.
- xxxviii) Details of Trees falling.
- xxxix) Permission/ NOC from CGWA as a contingency measure in case of intersection with ground water and the corresponding Disaster Management plan.
  - xl) Details of plan and calculation of consumption of solar power including for water sprinkling vis - a - vis the generation and as percentage of total power demand.
  - xli) Site specific wild Life management plan including protection and conservation of Endangered, Threatened and Near Threatened living species along with their categories be identified and submitted.
  - xliv) Rain water Harvesting Pond (s) details with design.

#### **ITEM NO. 5**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR KHATKURBAHAL (NORTH) BLOCK LIMESTONE MINE (M.L. AREA- 156.43 HA) WITH LIMESTONE PRODUCTION CAPACITY OF 1.6 MILLION TPA AT VILLAGES KHATKURBAHAL & PHALSAKHANI, TEHSIL KUTRA, DISTRICT SUNDERGARH, ODISHA W.R.T INCLUSION OF MINOR MINERAL DOLOMITE (2.4 MTPA) FOR SALE, INSTALLATION OF 600 TPH CAPACITY CRUSHER FOR DOLOMITE WITHIN ML AREA AND PERMISSION FOR SALE OF LIMESTONE (UP TO 1.6 MTPA) IN OPEN MARKET FOR M/S. SHIVA CEMENT LIMITED OF SRI MAONJ KUMAR RUSTAGI – MOD EC**

1. The proposal is for Modification of Environmental Clearance of Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha w.r.t inclusion of minor mineral Dolomite (2.4 MTPA) for sale, installation of 600 TPH capacity crusher for Dolomite

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within ML area and permission for sale of limestone (up to 1.6 MTPA) in open market for M/s. Shiva Cement Limited of Sri Manoj Kumar Rustagi.

2. This is a proposal of Shiva Cement Limited for getting Amendment in existing Environment Clearance Letter No J-11015/47/2020-IA-II(M) dated 17.03.2022 granted by MoEF&CC in favor of Shiva Cement Limited for Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha w.r.t inclusion of minor mineral Dolomite (2.4 MTPA) for sale, installation of 600 TPH capacity crusher for Dolomite within ML area and permission for sale of limestone (up to 1.6 MTPA) in open market .
3. **Location and Connectivity** - The mine is situated near Villages- Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha. The latitude is 22° 16'45.31025" N to 22° 17'10.12835" N and 84° 27'36.13496" E to 84° 29'18.22107" E. The project falls under Category" B" Project or Activity 1(a) – 4 for "Mining of Minerals" as per MoEF&CC, Govt. of India Notification as the Mining Lease Area is less than 250 ha.
4. M/s. Shiva Cement Limited has an existing Cement Plant with clinker production capacity 3.0 million TPA & Cement 2.0 million TPA at Village Telighana. Tehsil- Kutra, District Sundargarh, Odisha. Environment clearance has been obtained from MoEFCC vide File No J-11011/84/2008-IA.II (I) dated 23.03.2022. To meet the limestone requirement of cement plant, company has two mines:
  - Khatkurbahal Limestone & Dolomite Mine (ML Area- 72.439 ha) with Production Capacity 1.5 million TPA Near village – Khatkurbahal & Kulenbahal, Tehsil – Kutra, District – Sundergarh (Odisha). Environment Clearance for the same has been obtained from SEIAA, Odisha vide letter No 37895/62-MINB1/11-2021 dated 11.03.2022.
  - Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha. Environment clearance has been obtained from MoEFCC vide File No J-11015/47/2020-IA.II (I) dated 17.03.2022.
5. Project Proposal is for Amendment in Existing Environment Clearance vide Letter No J- 11015/47/2020-IA-II(M) dated 17.03.2022 granted by MoEFCC in favor of Shiva Cement Limited for Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha w.r.t inclusion of minor mineral Dolomite (2.4 MTPA) for sale, installation of 600 TPH Crusher for Dolomite and also permission for sale of limestone (upto 1.6 MTPA) in open market . Letter of Intent (LOI) as per Rule 10(2) of the Mineral (Auction) Rules, 2015 for grant of Mining Lease for Limestone was issued by the Government of Odisha in favor of M/s. Shiva Cement Limited for Khatkurbahal (North) Block Mine (ML Area 156.43 ha) vide letter no. 9010/S&M, Bhubaneswar dated 18.11.2019 and a corrigendum in LOI w.r.t area correction was issued on 14.02.2020. It may be noted that this auctioned mine is a merchant block with no end use condition. Environment Clearance has been granted by MoEF&CC vide letter No. J-1105/47/2020. IA. II (M) dated 17.03.2022 for Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) for total excavation of 5.543 million TPA [Limestone 1.6 MTPA and Mineral Reject 0.035 MTPA (ROM 1.635 million TPA), Top soil 0.033 million TPA and waste 3.875 million TPA (covering

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2.42 million TPA of Dolomite as waste)]. Now, Shiva Cement Limited has a proposal to utilize Dolomite as a minor mineral for which Revised LOI has been issued with inclusion of Dolomite by the Department of Steel & Mines, Government of Odisha vide letter no 1216/S&M, (AE) (Exp.) SM-05/2021, Bhubaneswar dated 02.02.2021. With the utilization of Dolomite as a minor mineral for sale, there will be no change in proposed total excavation (i.e. 5.543 million TPA) as permitted in the existing Environment Clearance of the above mine. Approval of Modification in Mining Plan w.r.t inclusion of Dolomite has also been issued by the Ministry of Mines (IBM) vide letter no MPM/A/01/-OR/BHU/2021-22 dated 24.04.2021.

6. **Reason For Amendment:** Both Limestone and dolomite resources are considered for the valuation of resource in the Tender document of Khatkurbahal (N) block and both the minerals were taken into account for the calculation of upfront payments and performance security. Limestone resource is 49 Million MT whereas Dolomite resource is 76 Million MT which is ~ 1.5 times of limestone resource. However, without excavation of dolomite, limestone cannot be extracted as limestone is overlain by dolomite. The Avg sale price per ton of Limestone as on feb'2022 is INR 421.00 whereas the Avg sale price per ton of Dolomite as on Mar'2021 is INR 795.00. Considering the depth of limestone availability and its exploitation, the economic viability of the project is wholly dependent on the sale of dolomite. Dolomite mineral was inadvertently not mentioned in the initial Lol issued to Shiva Cement Ltd. Secondly, the District Survey Report (DSR) of Dolomite which is a pre-requisite for filing application for EC of minor minerals was also not available with the state govt. at the time of issue of Lol. Since the execution of our captive cement plant was already in progress, SCL had to apply for EC for Limestone only while considering the entire quantity of Dolomite, i.e. 2.4Million TPA as waste as suggested by the non-coal mining EAC, MoEF&CC. The environmental impact assessment of mining and stacking of 2.4 Million TPA dolomite (considered as waste) has already been carried out during the EIA studies. Now, District Survey Report (DSR) of Dolomite has been issued by the District Collector on 28-02-2022, SCL has applied for amendment in the existing environment clearance (EC) w.r.t inclusion of minor mineral Dolomite, 2.4 million TPA for sale in open market without increasing the total excavation, i.e., 5.543 million TPA in order to utilize Dolomite (minor mineral) as a mineral which was earlier categorized as waste. 600 TPH crusher is also proposed for crushing of Dolomite within ML area. In addition, since this is a merchant mine with no end use restrictions. Company is also seeking amendment in the existing EC for grant of permission for sale of limestone (up to 1.6 MTPA) in open market.
7. The project proponent along with the consultant **M/s J.M. EnviroNet Pvt. Ltd., Gurugram-122011 (Haryana)** made a detailed presentation on the proposal on 03.08.2022.
8. The SEAC in its meeting held on dated 03-08-22 decided to take decision on the proposal after receipt of certain information / documents 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
1.	Copy of modified approved mining plan incorporating dolomite as a product and addition of 650 TPH Crusher.	Approval of modification of Mining Plan w.r.t inclusion of dolomite as a product and addition of 600 TPH Crusher granted by the Ministry of Mines (IBM) vide letter no MPM/A/01/-OR/BHU/2021-22 Dated 24.04.2021 is enclosed as <b>Annexure-I</b> .
2.	Approval of the Steel and Mines	Revised LOI with inclusion of Dolomite from

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	Deptt., Govt. of Odisha for selling of dolomite as an Ore.	<p>the Department of Steel &amp; Mines, Government of Odisha, vide letter no 1216/S&amp;M, (AE) (Exp.) SM-05/2021, Bhubaneswar dated 02.02.2021 is enclosed as <b>Annexure II</b>.</p> <p>It is pertinent to mention that this auction block is not reserved for any specific end use and as such, the successful bidder is free to use the mineral for captive use as well as sale to other end users. A copy of the document (Kindly refer S.No.3 of the "Response to Queries on Tender Document" by Directorate of Mines, Govt. of Odisha, dt. 05-09-2019) specifying the end use of the minerals (Limestone as well as Dolomite) is enclosed as <b>Annexure-III</b>.</p>
3.	Copy of EIA report prepared for grant of EC for 1.6 MTPA limestone and 2.4 MTPA dolomite as waste.	Copy of the EIA report prepared and submitted to the MoEF&CC for grant of EC for 1.6 MTPA limestone and 2.4 MTPA dolomite as waste is enclosed as <b>Annexure IV</b> .
4.	Detailed writeup as to why this will not be treated as a fresh case for grant of EC including conducting public hearing.	<p>As per EIA Notification dated 14.09.2006, prior Environment Clearance is required for the following projects:</p> <ol style="list-style-type: none"> <li>1. All new projects or activities listed in the schedule of the Notification.</li> <li>2. Expansion and Modernization of existing projects or activities listed in the schedule to this notification with addition of capacity beyond the limits specified for the concerned sector that is projects or activities which cross the threshold limit given in the schedule after expansion or modernization.</li> <li>3. Any change in product-mix in an existing manufacturing unit included in the schedule beyond the specified range.</li> </ol> <p>In light of the above, the justification for not treating this proposal as a fresh case for grant of EC including conducting public hearing is given below:</p> <ol style="list-style-type: none"> <li>1. Said proposal is neither a new project nor an expansion/modernization and change in product mix.</li> <li>2. Said proposal is for amendment in the existing Environment Clearance (Letter No J- 11015/47/2020-IA-II(M) dated 17.03.2022 granted by MoEF&amp;CC) with</li> </ol>

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent																														
		<p>inclusion of Dolomite as a product. Dolomite has already been covered in the original EC as waste.</p> <p>3. There is no change in mining lease area (156.43 ha).</p> <p>4. There is no change in Total excavation (5.543 million TPA).</p> <p>5. There is no change in Mining Technology (Opencast Mechanized).</p> <p>6. Comparison of the details of the previous EC vis-a-vis the amendments proposed are given below:</p> <table border="1" data-bbox="839 703 1382 1872"> <thead> <tr> <th data-bbox="839 703 1018 801">Particulars</th> <th data-bbox="1018 703 1197 801">Details as per existing EC</th> <th data-bbox="1197 703 1382 801">Details as per present proposal</th> </tr> </thead> <tbody> <tr> <td data-bbox="839 801 1018 900">Mining Lease area (Ha)</td> <td data-bbox="1018 801 1197 900">156.43</td> <td data-bbox="1197 801 1382 900">156.43</td> </tr> <tr> <td data-bbox="839 900 1018 967">Mining Technology</td> <td data-bbox="1018 900 1197 967">Opencast Mechanized</td> <td data-bbox="1197 900 1382 967">Opencast Mechanized</td> </tr> <tr> <td data-bbox="839 967 1018 1066">Limestone (Million TPA)</td> <td data-bbox="1018 967 1197 1066">1.6</td> <td data-bbox="1197 967 1382 1066">1.6</td> </tr> <tr> <td data-bbox="839 1066 1018 1191">Mineral Reject (Million TPA)</td> <td data-bbox="1018 1066 1197 1191">0.035</td> <td data-bbox="1197 1066 1382 1191">0.035</td> </tr> <tr> <td data-bbox="839 1191 1018 1290">Top Soil (Million TPA)</td> <td data-bbox="1018 1191 1197 1290">0.033</td> <td data-bbox="1197 1191 1382 1290">0.033</td> </tr> <tr> <td data-bbox="839 1290 1018 1451">Waste (Million TPA)</td> <td data-bbox="1018 1290 1197 1451">3.875 (Including 2.42 million Tonnes of Dolomite)</td> <td data-bbox="1197 1290 1382 1451">Waste: 1.455 Dolomite: 2.42</td> </tr> <tr> <td data-bbox="839 1451 1018 1576">Total Excavation (Million TPA)</td> <td data-bbox="1018 1451 1197 1576">5.543</td> <td data-bbox="1197 1451 1382 1576">5.543</td> </tr> <tr> <td data-bbox="839 1576 1018 1738">Proposed Limestone Crusher &amp; Screen (TPH)</td> <td data-bbox="1018 1576 1197 1738">800</td> <td data-bbox="1197 1576 1382 1738">800</td> </tr> <tr> <td data-bbox="839 1738 1018 1872">Proposed Dolomite Crusher (TPH)</td> <td data-bbox="1018 1738 1197 1872">---</td> <td data-bbox="1197 1738 1382 1872">600</td> </tr> </tbody> </table> <p>7. Public hearing has already been conducted for the total excavation of</p>	Particulars	Details as per existing EC	Details as per present proposal	Mining Lease area (Ha)	156.43	156.43	Mining Technology	Opencast Mechanized	Opencast Mechanized	Limestone (Million TPA)	1.6	1.6	Mineral Reject (Million TPA)	0.035	0.035	Top Soil (Million TPA)	0.033	0.033	Waste (Million TPA)	3.875 (Including 2.42 million Tonnes of Dolomite)	Waste: 1.455 Dolomite: 2.42	Total Excavation (Million TPA)	5.543	5.543	Proposed Limestone Crusher & Screen (TPH)	800	800	Proposed Dolomite Crusher (TPH)	---	600
Particulars	Details as per existing EC	Details as per present proposal																														
Mining Lease area (Ha)	156.43	156.43																														
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Proposed Limestone Crusher & Screen (TPH)	800	800																														
Proposed Dolomite Crusher (TPH)	---	600																														

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>5.543 million TPA (Limestone production capacity 1.6 million TPA, Mineral Reject 0.035 million TPA, Top Soil 0.033 million TPA and Waste 3.875 million TPA) on 24.08.2021.</p> <p>8. The environmental impact assessment of mining and stacking of 2.4 million TPA dolomite (considered as waste) has already been carried out during the EIA studies of the existing EC.</p> <p>Detailed write-up as to why this will not be treated as a fresh case for grant of EC including conducting public hearing is enclosed as <b>Annexure V</b>.</p>
5.	Kisam of the Land.	Kisam of the land is enclosed as <b>Annexure VI</b> .
6.	Open market Sale or Sales/ marketing of the product is beyond the scope of SEAC for EC and hence, be deleted from the application for EC.	<p>Earlier name of Proposal was mentioned as "Amendment in Existing Environment Clearance Letter No J-11015/47/2020-IA-II(M) dated 17.03.2022 granted by MoEF&amp;CC in favor of Shiva Cement Limited for Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal &amp; Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha w.r.t inclusion of minor mineral Dolomite (2.4 MTPA) and permission for sale of limestone (up to 1.6 MTPA) in open market along with captive utilization in cement plant" which has now been revised and may be read as –</p> <p>"Amendment in Existing Environment Clearance Letter No J-11015/47/2020-IA-II(M) dated 17.03.2022 granted by MoEF&amp;CC in favor of Shiva Cement Limited for Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal &amp; Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha w.r.t inclusion of minor mineral Dolomite (2.4 MTPA) and permission for transportation of limestone (up to 1.6 MTPA) by road from mining lease to other 3rd party buyers.</p>

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s J.M. EnviroNet Pvt. Ltd., Gurugram-122011 (Haryana)**, the SEAC recommended the following:

- a) Environmental Clearance issued vide No J-11015/47/2020-IA-II(M) dated 17.03.2022 by MoEF&CC, Govt. of India for Khatkurbahal (North) Block Limestone Mine (M.L.

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Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundergarh, Odisha may be amended for inclusion of minor mineral Dolomite (2.4 MTPA) as ore and installation of 600 TPH capacity crusher for Dolomite within ML area.

- b) Following Additional conditions may be stipulated in Environmental Clearance:
- i) Proper safety procedure shall be maintained while loading, unloading and transporting the ore to avoid pollution and maintain safety.
  - ii) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.
  - iii) CER related issues as per MoM of public hearing may be prescribed as special condition in EC.
  - iv) The mining authority shall assess the impact of blasting by carrying out a few trial blasts in the beginning through an institution/organization having the domain expertise and the optimum blasting parameters should be established in order to avoid any adverse impact.
  - v) As per EIA report in project description, Bench width, height and angle is indicated along with Quarry slope and the proponent shall follow it as per approved mining plan and so also blasting procedure.
  - vi) With regard to the public road and safety of commuters, the proponent must follow all the precautionary measures prescribed by DGMS including maintenance of a safety zone.
  - vii) The approved mine plan for carrying out the proposed limestone mining should be revised to include mining of proposed dolomite ores as per the proposal.

#### **ITEM NO. 06**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR PADAMPURI STONE QUARRY (2,3,4,6 & 7) UNDER CLUSTER APPROACH IS A STONE MINING PROJECT OVER A TOTAL AREA OF 11.33 HA / 27.997 ACRE AND IS LOCATED IN VILLAGE- PADAMPURI, TAHASIL &, DISTRICT- NUAPADA OF TAHASILDAR, NUAPADA – EC.**

1. Padampuri Stone Quarry (2, 3, 4, 6 7, cluster of 5 Quarries) is located at village Padampuri, Tehsil Nuapada, District Nuapada of Odisha. The project is proposed by the Tahasildar, Nuapada, Odisha. The mining lease area was granted for 5 years.
2. The proposed project is in cluster situation as 5 leases are within 500 m radius & total lease area becomes greater than 5 ha. The total cluster area granted under QL is 11.33 ha within 500m. So, as per the EIA notification 2006 and its subsequent amendment, proposed project fall in category B1.

#### **Area detail**

<b>Mine</b>	<b>Khata No.</b>	<b>Plot No.</b>	<b>Area (Ha)</b>	<b>LOI/ Lease</b>	<b>MINE PLAN</b>	<b>Status/EC status</b>

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Environmental Scientist, SEAC

Padampuri Stone Quarry 2	76	187, 227	2.023	Letter no-3141 on 31-07-2020	1808/BZ Dt: 01/09/2020	New
Padampuri Stone Quarry 3		227	1.214	Letter no-3141 on 31-07-2020	1806/BZ Dt: 01/09/2020	New
Padampuri Stone Quarry 4		187	4.856	Letter no-1844 on 10-05-2016	---	Operational/EC granted on 22-05-2017
Padampuri Stone Quarry 6		227	1.214	Letter no-3098 on 28-07-2020	1795/BZ Dt: 31/08/2020	New
Padampuri Stone Quarry 7		187	2.023	Letter no-3098 on 28-07-2020	1777/BZ Dt: 31/08/2020	New
<b>Total</b>			<b>11.33</b>			

3. The project requires prior EC before commencement of any activity at site. During presentation PP has submitted following information:

**Salient features of the project:**

S. No.	Particulars	Details														
A.	Nature & Size of the Project	Padampuri Stone Quarry (11.33 ha) for proposed production of 13,129 cu.m/year.														
B.	Location															
	Name of Village	Padampuri														
	Tehsil	Nuapada														
	District	Nuapada														
	State	Odisha														
	Coordinates	Latitude: 20° 49' 31.63" N to 20° 49' 42.7" N, Longitude: 82° 32' 53.00" E to 82° 33' 13.05" E														
	Toposheet No.	64L/09														
	Mineable Reserve	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Mine</th> <th>Mineable Reserve (cum)</th> </tr> </thead> <tbody> <tr> <td>Padampuri Stone Quarry 2</td> <td>161157.1</td> </tr> <tr> <td>Padampuri Stone Quarry 3</td> <td>93972.1</td> </tr> <tr> <td>Padampuri Stone Quarry 4</td> <td>377772.8</td> </tr> <tr> <td>Padampuri Stone Quarry 6</td> <td>75707.4</td> </tr> <tr> <td>Padampuri Stone Quarry 7</td> <td>197408</td> </tr> <tr> <td><b>Total</b></td> <td><b>906017.4</b></td> </tr> </tbody> </table>	Mine	Mineable Reserve (cum)	Padampuri Stone Quarry 2	161157.1	Padampuri Stone Quarry 3	93972.1	Padampuri Stone Quarry 4	377772.8	Padampuri Stone Quarry 6	75707.4	Padampuri Stone Quarry 7	197408	<b>Total</b>	<b>906017.4</b>
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Padampuri Stone Quarry 6	75707.4															
Padampuri Stone Quarry 7	197408															
<b>Total</b>	<b>906017.4</b>															

Proposed Production	<b>Mine</b>	<b>Production usable rock (cu.m.) per year</b>	<b>Production usable rock (cu.m.) in 5 years</b>																		
	Padampuri Stone Quarry 2	3040	15200																		
	Padampuri Stone Quarry 3	3040	15200																		
	Padampuri Stone Quarry 4	2502	11322																		
	Padampuri Stone Quarry 6	1507	7535																		
	Padampuri Stone Quarry 7	3040	15200																		
	<b>Total</b>	<b>13129</b>	<b>64457</b>																		
<b>C.</b>	<b>Mine lease area details</b>																				
	Lease Area	11.33 ha (cluster area)																			
	Topography	The lease area is sloppy hilly terrain																			
	Site Elevation Range	<table border="1"> <thead> <tr> <th>Mine</th> <th>Max (m RL)</th> <th>Min (m RL)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>368</td> <td>350</td> </tr> <tr> <td>3</td> <td>368</td> <td>356</td> </tr> <tr> <td>4</td> <td>386</td> <td>356</td> </tr> <tr> <td>6</td> <td>366</td> <td>358</td> </tr> <tr> <td>7</td> <td>368</td> <td>348</td> </tr> </tbody> </table>		Mine	Max (m RL)	Min (m RL)	2	368	350	3	368	356	4	386	356	6	366	358	7	368	348
Mine	Max (m RL)	Min (m RL)																			
2	368	350																			
3	368	356																			
4	386	356																			
6	366	358																			
7	368	348																			
<b>D.</b>	<b>Cost Details</b>																				
	Cost of the project	135 lakh (1.35 crore) (Quarry 2- 24 lakh, Quarry 3- 14.5 Lakh, Quarry 4- 58.0 lakh, Quarry 6- 14.5 Lakh, Quarry 7- 24.0 Lakh)																			
	Cost for EMP	Capital cost –44.90 Recurring cost –22.58 Lakhs/annum																			
	Cost of CER	2 % of proposed project cost																			
<b>E.</b>	<b>Details of Environmental Setting</b>																				

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Environmental Scientist, SEAC



Ecological Sensitive Areas (National Park, Wild Life Sanctuary, Biosphere Reserve, Reserve/ Protected Forest etc.) within 10 km distance	There is no National Park or Biosphere Reserve within 10 km distance from the lease area. Kandarhaira RF, approx. 2.0 km in North direction. Ghati RF, approx. 6 km in South direction. Haldi RF, approx. 7 km in West direction. Aurajoba PF, approx. 5 km in East direction. PF, approx. 3 km in ENE direction. Sunabeda Wildlife sanctuary, approx. 41.09 km in SW direction.
Water Bodies,	Jonk river, approx. 8.0 km in NW direction Canal, approx. 0.64 km in SW direction
Nearest Town	Nuapada, approx. 2.5 km in SW direction.
Nearest Railway Station	Nuapada Railway station, approx. 2.3 km in SE direction.
Nearest Highway	SH 3, approx. 1.6 km in South direction. NH 353, approx. 1.8 km in West direction.
Nearest state boundary	Chhattisgarh- Odisha interstate boundary, approx. 12.0 km in N direction.
Nearest Airport	Swami Vivekanand International Airport is approx. 93 km towards NW direction.
Seismic Zone	As per the 2002 Bureau of Indian Standards (BIS) map, Odisha falls in Zones I & II.

4. TOR has been granted from SEIAA vide letter no 2310/SEIAA dated 26.08.2021 for Padampuri Stone Quarry (2, 3, 4, 6 & 7) over a Cluster area of 11.33 ha/28.00 Acre of stone in Padampuri Tahasil – Nuapada, District – Nuapada of Odisha. Baseline study has been conducted for post monsoon season of 2020 i.e, from December, 2020 to February, 2021.
5. The public hearing was conducted on 27th Dec, 2021 at 10.00A.M in At Gram Panchayat Office, Godfula situated in plot no- 875 of khata no- 227 of Maouza Godfula, Dist- Nuapada.
6. 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.
7. The excavation in ore zone will be carried out by HEMM. While planning the proposal for the ensuing proposal period, economic depth of the pit for minimum degradation of land has been considered.
8. 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.
9. The ground water is available at the average depth of 3.25 m to 12.64 mbgl & Post monsoon water table is about 0.83 m to 5.38mbgl below the ground level. The ground water is

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available at the average depth of 3.25 m to 12.64 mbgl & Post monsoon water table is about 0.83 m to 5.38mbgl below the ground level. The highest altitude ranges from 386mRL to 366m RL and lowest altitude ranges from 358mRL to 348mRL There is no ground water intersection due to proposed mining activity.

10. The seasonal water course may be silted due to wash off from the mineral stack. In order to avoid it, garland drain along with settling tank and retention/ toe wall is proposed.
11. Garland drain along with settling tank will be constructed on the sloping side barrier of the QL area. The garland drain will be routed through settling tank to remove suspended solids from flowing into storm water and choking streams/ Nala.
12. No processing or beneficiation is proposed in the area. Only sizing will be done manually.
13. The Environment consultant **M/s P & M Solution, C-88, Sector 65, Noida** along with the proponent has made a presentation on the proposal before the Committee on 16.08.2022.
14. The SEAC in its meeting held on dated 16-08-22 decided to take decision on the proposal after receipt of certain information / documents 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
1.	Layout map showing dump, and garland drain.	Layout map showing dump site and Garland drain attached as <b>Annexure I.</b>
2.	Revenue map indicating cluster of mines location.	Revenue map indicating cluster of mine location attached as <b>Annexure II.</b>
3.	Mitigative measures for fly rock and noise due to blasting.	<p>Mitigation measures for the flyrock during blasting have been given below:</p> <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 flyrock 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> <p>Mitigation measures for the flyrock during blasting have been below:</p> <ul style="list-style-type: none"> <li>• Sequential timer blast machine is being used for primary blasting and there is no secondary blasting.</li> <li>• The boulders are broken by hydraulic rock breaker.</li> <li>• Proper maintenance of the noise generating parts of the machine is introduced.</li> <li>• Air silencers of suitable type that can modulate the noise of the engines of</li> </ul>

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>machinery are in use.</p> <ul style="list-style-type: none"> <li>• Ear muffs area given to those persons operating or working close to any machine.</li> <li>• The periodical monitoring of noise levels and blast vibrations will be practiced.</li> </ul>
4.	Details of management of storage and usage of explosives.	There is no storage of explosives as the explosives to be used for blasting purpose will be procured by hired licensed (DGMS certified) blasting contractor and blasting will be performed by the contractor also. At the end of the blasting surplus explosive will be refunded to the dealers.
5.	Detailed plan for silt management done for nearby agricultural lands and water sources and separated contingency plan should be allocated for this purpose.	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 VI</b> )
6.	No village road will be used for transportation of minerals.	Undertaking has been attached as <b>Annexure III.</b>
7.	Internal haulage road to be maintained.	Undertaking has been attached as <b>Annexure III.</b>
8.	Water sprinkling should be done through pipeline.	Undertaking has been attached as <b>Annexure IV.</b>
9.	Thick greenbelt around whole cluster should be maintained.	Undertaking has been attached as <b>Annexure V.</b>
10.	Data on Vibration due to blasting should be measured and kept ready for submission to SEIAA.	Data on vibration due to blasting will be given after mining will be operated
11.	Mitigation measures to be followed to protect canal and HT line.	Setting tank and garland drain will be constructed at a direction of water flow from the mining lease area to protect the canal and HT line (Settling tank and Garland Drain detail has been attached as <b>Annexure VI</b> )
12.	Supporting documents and photographs that Padampuri quarry 1 & 5 are extinct/ closed.	Photocopy attached separately as Annexure for your reference.

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

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Padampuri Stone Quarry (2, 3, 4, 6 & 7) in cluster without referring to SEAC with specific conditions as per **Annexure – C** 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.

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- iv) Approved Mining Plan of individual lease
- v) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
- vi) 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.
- vii) 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.
- viii) 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.
- ix) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.

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

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR SUNDARPUR STONE QUARRY WITH PROPOSED EXCAVATION OF 10000 CUM/YEAR OF STONE OF TAHASILDAR, CHHATRAPUR HAVING AN AREA OF 5.058 HA. LOCATED AT KHATA NO. 1469, PLOT NO. 10609/A, VILLAGE: SUNDARPUR, TAHASIL: CHHATRAPUR, DISTRICT: GANJAM OF TAHASILDAR CHHATRAPUR – EC**

1. This is a proposal for Environmental Clearance of Sundarpur Stone Quarry with proposed excavation of 10000 CuM/year of stone of Tahasildar, Chhatrapur having an area of 5.058 Ha. Located at Khata No. 1469, Plot No. 10609/A, Village: Sundarpur, Tahasil: Chhatrapur, District: Ganjam of Tahasildar Chhatrapur.
2. The project falls under Category “B1”, or activity 1 (a) - Mining of Minerals under EIA Notification dated 14th September 2006 as amended from time to time.
3. Standard Terms of Reference for this project was issued by MoEF&CC, Govt. of India on dated 03.04.2021 vide proposal no File No.60636/72-MINB1/02-2021.
4. Public Hearing was conducted on dated 09.03.2022 at Plot No. 10520, Khata No. 400, Mouza- Sundarpur which is adjacent to Sundereswari Temple. Public Hearing issues raised are plantation for protection of environment, water sprinkling in transportation roads for dust suppression, issues of soil erosion due to mining, dust pollution due to blasting, local employment, traffic congestion due to transportation, generation of fly rocks due to blasting, damage of houses due to blasting.
5. Baseline data collection was during 01 Dec 2020 to 28 Feb 2021.
6. **Location and Connectivity** - The proposed mining project is for stone Quarry stone mining located in village Sundarpur under Chatrapur Tahasil of Ganjam District, Odisha, over an area of 5.058 Ha or 12.500Acre. The lease area is bounded by Latitude: 19° 23'

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32.8°N To 19° 23' 43.1"N Longitude: 84° 54' 29.2" E To 84° 54' 35.9" E. It is a part of area covered in the Survey of India Toposheet No. 65J/14. The lease area is located at a distance of 11.4 km from Tahasil Chatrapur. Village Sundarpur is at a distance of 3km from to the mining area. District Ganjam is at a distance of 40.8km. Chatrapur is the nearest place from the lease area for all infrastructure facilities like hospital, school, bus service, market. The Chatrapur Railway Station is at a distance 9.7 kms from the lease area. NH-16 is at a distance of 12.4 km and SH-36 is at a distance of 34m from the lease area. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10Kms radius of the lease area.

7. The Mining Plan of the Mining Project has been approved by Joint Director Geology, South Zone, Berhampur, Odisha on dated 17.12.2020.
8. **Reserves** - The total geological reserve has been estimated as 792582cum. And mineable reserve is 593525cum.
9. **Production** - The Mine proposed to produce total 50000 Cu.m of stone/road metal during Plan Period and 10000cum/annum.
10. **Employment Potential** - A total of 15 workers (Skilled, Semi-skilled and Un-skilled- 12nos.& Mines Manager/Mine Permit Manager-3nos) will be employed during mining operation.
11. **Water Requirement** - 5 KLD of water will be required for drinking, domestic purpose and for dust suppression. Water will be withdrawn from tube wells from nearby village.
12. **Power requirement** - Solar lights will be employed for day to day living purposes. Diesel requirement will be 100liters/day.
13. **Plantation** - Plantation will be raised along both sides of the roads, available vacant spaces and in the lease area. It is proposed for planting 60 nos. of saplings per annum by the lessee in the lease boundary and village approach roads which is to be undertaken in consultation with the concerned authority.
14. Waste will be about 10% of excavation will be generated i.e., 5000cum of waste during the plan period and 1000cum/ annum. Waste will be utilised by the lessee for making of mine road.
15. The total estimated cost of the project is approximately INR `10 lakhs and EMP cost is ` 80000.
16. The Environment consultant **M/s Green Circle INC., Vadodara - 390021 (Gujarat)** along with the proponent has made a detailed presentation on EIA/EMP report on 15.07.2022.
15. The SEAC in its meeting held on dated 15-07-2022 decided to take decision on the proposal after receipt of certain information / documents 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.	Chemical composition of wastes to be generated to be submitted.	The Waste will be generated as soil the chemical properties of the soil is attached at <b>Annexure – 'A'</b>	----
2.	Certified Compliance Report to	The previous EC compliance report	Half yearly

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	Previous EC conditions.	submitted to RO, MoEF & CC, Bhubaneswar. The received copy attached herewith at <b>Annexure – ‘B’</b>	compliance report submitted to SEIAA is submitted.
3.	Detailed plan for flying rocks.	Preventive measures taken for damage of houses and control the blasting related to fly rock due to blasting at Sundarpur Stone Quarry. The preventive measures is attached at <b>Annexure – ‘C’</b>	----
4.	Preventive measures taken for damage of houses due to blasting		
5.	Layout of dump and rejects generated, storage area, usage during the plan period.	The development plan is attached at <b>Annexure – ‘D’</b>	----

Considering the information furnished and the presentation made by the consultant **M/s Green Circle INC., Vadodara - 390021 (Gujarat)** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – D** and following additional condition:

- i) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.

### **ITEM NO. 08**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR BALANDA STONE QUARRY 10 OVER AN AREA 4.856HA LOCATED AT VILLAGE- VILLAGE- BALANDA, TAHASIL: LATHIKATA, DISTRICT: SUNDARGARH OF SRI PREM SAHU – EC.**

1. The proposal is for Environmental Clearance for Balanda stone quarry 10 over an area 4.856ha located at village- Village– Balanda, Tahasil: Lathikata, District: Sundargarh of Sri Prem Sahu.
2. Balanda stone quarry 10 mine is located at Balanda, Tahasil- Lathikata, District-Sundagarh, State-Odisha (Khata no.-504, Plot no.- 1899p) over an area of 4.856 ha. The proposed project is in cluster situation as nine quarry (1, 2, 3, 5, 6, 7, 8, 9 & 10) are within 500 m radius & total lease area becomes greater than 5 ha i.e, 37.915 ha. So, as per the EIA notification 2006 and its subsequent amendment, proposed project fall in category B1. The project has been proposed by Sri. Prem Kumar Sahu. The lease of Balanda Stone Quarry 10 has been allotted to Sri. Prem Kumar Sahu for quarrying of stone (minor mineral) by the Tahasildar Lathikata vide letter no.- 3350 dated 06.10.2020 for 5 years. Mining Plan has been approved by Dy. Director, Geology, Joint Director Geology, Sambalpur vide Memo no. 614 dated 13.04.2021. The proposed production is 12,081.4 cu.m/annum of stone by opencast semi-mechanized method with adoption of drilling & blasting. The estimated project cost is Rs 65 Lakhs. As per EIA notification 2006 and its subsequent amendment thereof proposed project fall in category B1.

### **3. PROJECT DESCRIPTION**

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- **Location:** Khata No. 504, Plot No. 1899p, Village – Balanda, Tahasil: Lathikata, District: Sundargarh, State: Odisha
- **Topo sheet No-** F45G11, F45G12, F45G15, F45G16
- Latitude: 22°11'15.52"N to 22°11'29.54"N
- Longitude: 84°44'46.96"E to 84°44'52.52"E
- Proposed Production – 12,081.4 cum/year of stone
- Railway Station – Kalunga Railway Station, approx. 3.5 km in North direction.
- Airport - Ranchi Airport, approx. 140 km in North direction.
- Highway- SH-10, approx. 5.7 km in North direction.
- Nearest river embankment is Langmohan River at a distance of 1.2 to 1.7 Km. in NW
- Dwargam village at approx. 400 m in north direction.
- Sagor Reserve Forest, approx. 1.5 km in West direction.

#### 4. RESERVE

<b>Geological Reserves</b>	10,28,786.9 cu.m
<b>Mineable reserve</b>	5,19,409.8 cu.m

5. About 19 persons will be given employment to the people of nearby villages.
6. There is requirement of approx. 6.2 KLD water for this project. 0.2 KLD will be for drinking/domestic purpose which will be taken from nearby source/ water tanker.
7. Mining will be carried out by opencast semi-mechanized method with adoption of drilling & blasting. Handling of rock mass will be done both manually & by excavators. Loosening of rock mass will done by drilling & blasting. In order to prevent haphazard excavation of pits and suitable blending of ore, the excavation has been proposed at one place. In mine, proposed height is 6m & width of bench is more than 6m.
8. There will be generation of about 48731.8 cu.m/annum of waste from Balanda cluster during plan period. This waste will be dumped in the North side which will cover an area of 70 sq.m. (0.007 ha) & dump height will be max. 8m. This waste generated will be used for road construction & maintenance.
9. Baseline data on ambient air quality, water quality, noise level, soil, flora and fauna Site-specific meteorological data have been collected for pre- monsoon season during March, 2021 to May, 2021.
10. The Public Hearing has been conducted on 04.05.2022 at Gotidhara field of Balanda G.P under Latthikata Tehsil of District Sundargarh, Odisha under the supervision of Addl. District Collector, Panposh, Sundargarh.
11. Plantation will be done in mining lease approach road. About 1800 number of trees will be planted along approach road & at other place after consultation with the local authorities.
12. Estimated cost of the project is Rs. 65.0 lakh.
13. About 2% of the project cost will be used for the development of the social infrastructure of the area.
14. About Rs. 10.8 lakhs (Capital), Rs. 4.90 lakhs (recurring)

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15. The project will prove beneficial to the people as the company has already agreed to provide infrastructural facilities to the villagers like educational facilities, medical facilities, Transportation facilities, water supply etc. which will improve the socio-economic environment of the area.
16. The project proponent along with the consultant **M/s ATMOS Sustainable Solutions Pvt. Ltd., Noida (U.P)** made a detailed presentation on the proposal on 16.08.2022.
16. The SEAC in its meeting held on dated 16-08-2022 decided to take decision on the proposal after receipt of certain information / documents 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																								
1.	Details of the leases present in the cluster.	There are 9 stone quarries present within 500 m radius. Details of the leases																								
2.	Kisam of land and certificate from concerned DFO/Tahasildar that there is no involvement of DLC/forest land in the lease area and lease cluster.	The proposed land is non forest waste land. No DLC land certificate are attached as <b>Annexure-I</b> .																								
3.	Exact distance of the lease and cluster boundary from the nearest wildlife sanctuary / Eco-sensitive zone.	Nearest wildlife sanctuary is Palkot at approx. 63 km away from cluster boundary.																								
4.	Status of complaints/ court cases/legal action regarding to leases in cluster along with a detailed write up indicating case no., purpose of the case etc.	There is no litigation against the applicant and the lease area in any court of law.																								
5.	Previous EC details of all the leases present in cluster.	EC details of all the leases Given below: <table border="1"> <thead> <tr> <th>Name of the Quarry</th> <th>Lease area (Ha.)</th> <th>EC letter no</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Balanda Stone Quarry-1</td> <td>4.249</td> <td>536/ mining by DEIAA, Sundargarh</td> <td>12.10.2018</td> </tr> <tr> <td>Balanda Stone Quarry-2</td> <td>4.876</td> <td>534/ mining by DEIAA, Sundargarh</td> <td>12.10.2018</td> </tr> <tr> <td>Balanda Stone Quarry-3</td> <td>4.046</td> <td>3575/SEIAA by SEIAA, Odisha</td> <td>04.07.20215</td> </tr> <tr> <td>Balanda Stone Quarry-5</td> <td>4.046</td> <td>347/ mining by DEIAA, Sundargarh</td> <td>10.08.2017</td> </tr> <tr> <td>Balanda Stone Quarry-6</td> <td>4.087</td> <td>494/ mining by DEIAA, Sundargarh</td> <td>07.11.20217</td> </tr> </tbody> </table>	Name of the Quarry	Lease area (Ha.)	EC letter no	Date	Balanda Stone Quarry-1	4.249	536/ mining by DEIAA, Sundargarh	12.10.2018	Balanda Stone Quarry-2	4.876	534/ mining by DEIAA, Sundargarh	12.10.2018	Balanda Stone Quarry-3	4.046	3575/SEIAA by SEIAA, Odisha	04.07.20215	Balanda Stone Quarry-5	4.046	347/ mining by DEIAA, Sundargarh	10.08.2017	Balanda Stone Quarry-6	4.087	494/ mining by DEIAA, Sundargarh	07.11.20217
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Balanda Stone Quarry-3	4.046	3575/SEIAA by SEIAA, Odisha	04.07.20215																							
Balanda Stone Quarry-5	4.046	347/ mining by DEIAA, Sundargarh	10.08.2017																							
Balanda Stone Quarry-6	4.087	494/ mining by DEIAA, Sundargarh	07.11.20217																							

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent			
		Balanda Stone Quarry-7	4.047	496/ mining by DEIAA, Sundargarh	07.11.2017
		Balanda Stone Quarry-8	2.832	544/ mining by DEIAA, Sundargarh	12.10.2018
		Balanda Stone Quarry-9	4.876	122/ mining by DEIAA, Sundargarh	23.02.2017
		Balanda Stone Quarry-10	4.856	No EC obtained	
		EC letters are attached as <b>Annexure –II</b>			
6.	Lease wise and Year wise production of all the leases in cluster in past.	Year wise production of all the leases in cluster in past has been attached as <b>Annexure III.</b>			
7.	Details of explosives to be used and its storage area and its management.	<p>Power gel &amp; ANFO will be used as blasting material. No explosives will be stored at the site. Blasting will be carried out by license holder vendor under the supervision of a Qualified Mines Manager.</p> <p>Management:</p> <ul style="list-style-type: none"> <li>• Controlled &amp; muffled blasting will be done so that debris shall not fall beyond mining lease area.</li> <li>• Blasting will be carried out after making adequate announcement to the local inhabitants through public address system.</li> <li>• Proper inspection after shot firing will be done by the blaster.</li> <li>• Warning siren about half an hour prior to blasting activity will be given for alerting the villagers.</li> <li>• The nearby villagers will be informed about one day prior to blasting. Blasting will done at fixed time during day time only.</li> <li>• All necessary precautions as enumerated under 106(2)(b) of MMR 1961 will be followed</li> <li>• Register will be maintained by quarry owner to note the blasting interval &amp; time.</li> </ul>			
8.	Details of silt management, water logging management and Waste Water Management, besides discharge / disposal management with SOP / mechanism of water	Source of water flow in the lease area is rain water. Considering monsoon annual rainfall of the Sundargarh district i.e, 1.295 m (as per CGWA) the total annual yield is 12481.16 cum. Considering 60 rainy days per day yield will be			

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	accumulated during rainy season in mines pit.	<p>208 cum/day. Garland drain &amp; settling tank proposed to be designed in such way so that total storage capacity will be much more than the rainy days runoff. In this condition zero discharge will be maintained.</p> <p><b>Silt management</b></p> <ul style="list-style-type: none"> <li>• For silt management, siltation ponds will be constructed to arrest silt and sediment flows from mine operation, OB and mineral dumps.</li> <li>• Garland drains and siltation ponds will be de-silted at regular intervals.</li> <li>• The drains will be regularly de-silted, particularly after monsoon and should be maintained properly.</li> <li>• There will be no damages caused due to mining in the catchment area of the river/nalla falling in study area as the ground water recharge rate is higher than the extraction rate of mining region.</li> </ul> <p><b>The SOP would be:</b></p> <ul style="list-style-type: none"> <li>• The will be garland drain along the periphery of individual leases of the cluster to arrest the runoff water into the pit.</li> <li>• Proper drainage will be maintained to eliminate inundation of working pits during rains from run-off water.</li> <li>• Settling tank and retention/ toe wall will be constructed on the end of the garland drain for the setting of suspension.</li> <li>• The width &amp; depth of the drain would be 2.0 m &amp; 1.5 m respectively. Chek dam of height 0.5 m will be constructed at every 50m interval to lower the velocity &amp; arrest the parts of silts of the flowing water.</li> <li>• it is proposed to keep one diesel operated pump at each quarry site during monsoon season to draw out the accumulated water from the quarry. The rain water will be routed to the garland drain &amp; settling tank.</li> <li>• The drains will be regularly de-silted, particularly after monsoon and should be maintained properly.</li> </ul> <p>Detailed surface runoff &amp; parameters of garland drain &amp; settling tank for individual mines in cluster has been attached as <b>Annexure- IV</b>.</p>
9.	Study report on ground water of that area and mitigation measures taken for non-contamination of	It is observed from the dug well in the adjacent area and in the nearby villages that the ground water table varies between 20 m to 30 mbgl from

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	ground water due to mining.	<p>the surface level. During dry season the water table falls to 30m whereas during rainy season the water table remains at 20.0m. As the mining activity is to be carried out in hilly area. There will be no intersection of ground water table. Site elevation of mines in cluster ranges from 217.4 to 312 m RL. Ground water level ranges from 190 m RL to 200 m RL (20 to 30mbgl). Mining will be.</p> <p>There is chance of water run-off during monsoon season. About 20% of water will be accumulated in pit &amp; rest will be flow out with natural drain. Therefore it is proposed to keep one 5 HP diesel operated pump at each quarry site during monsoon season to draw out the accumulated water from the quarry. The rain water will be routed to the garland drain &amp; settling tank. At the conceptual period the mined out pit will be converted into water reservoir.</p> <p><b>Mitigation measures:</b></p> <ul style="list-style-type: none"> <li>• This is mining project &amp; no water is involved in the process.</li> <li>• The proposed project is only for mining of building stone &amp; source analysis show that no heavy metal or leachable material is present in strata.</li> <li>• There will be generation of very less amount of domestic effluents which will be discharged to soak pits through septic tank.</li> <li>• At the conceptual period the mined out pit will be converted into water reservoir &amp; water will be utilized for dust suppression, plantation and other activities.</li> </ul>
10.	Details of Zero discharge proposal.	As it is a mining activity no water is involved in the process. So there will be no waste water generated due to mining activity. The domestic effluents generation will be will be discharged to soak pits through septic tank.
11.	Slope study report to be undertaken both for mine and OB / waste dump by domain expert and blasting study as well.	Report has been attached as <b>Annexure X</b> .
12.	Details of waste management i.e. composition and nature of waste generated, tabulated form showing year wise waste generation, usage and storage i.e. complete waste / dump / OB management.	There will be generation of total 48731.8 cu.m/annum of mineral waste from all of the mines in cluster during plan period. The waste is granitic in nature. The waste will be stacked in the temporary waste dump & will be utilized by lease for making of mine road & allied infrastructures. Dump height will be max 8m. The

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>waste generated will be used for road construction &amp; maintenance.</p> <p><b>Dump management</b></p> <ul style="list-style-type: none"> <li>• It is proposed to store this top-soil in the earmarked site &amp; will be utilized for plantation purpose after separated out from the mixed rock boulders &amp; pebbles.</li> <li>• Waste to the tune of about 20% - 30% of excavation will be generated during mining which will be utilized by the respective Lessee for making of mine road and allied infrastructures.</li> <li>• Dump slope will be provided with retaining wall and garland drain to prevent the wash off.</li> <li>• Dump slope will be maintained with the horizontal to make the dump stable.</li> <li>• During the conceptual period the waste generated will be utilized completely for road construction and rest will be transported to the crusher area.</li> <li>• There will be no waste dump exists within the lease area during the conceptual period.</li> </ul>
13.	Status of physical condition and maintenance of approach roads. NOC and maintenance of approach road from concerned authority.	All mines in cluster is well connected by an approach road of approx.3.68 km. This is a unmetalled road. For the maintenance of this road about Rs. 7.36 lakh as capital cost (& Rs. 9.1 lakh as recurring cost) has been allocated, which will be provided by the PP. NOC has been obtained from gram panchayat, letter has been attached as <b>Annexure- V</b> .
14.	Total Plantation should be carried out within 2-3 years and maintenance to be continued in remaining years. Trees present in mining area should be uprooted & transplanted in safety zone.	Total Plantation should be carried out within 2 years of plan period & rest year maintenance will be continued. There is hardly any presence of vegetation except few shrubs & bushes. In Balanda stone quarry 10, about 1370 sapling will be planted in green belt area of 0.858 ha & about 430 sapling will be planted along approach road of approx. 410 m length.
15.	Sludge disposal from ETP and settling tanks, rain water harvesting and usage /recharge / recycling of it to reduce the use of ground water.	As it is a mining activity no water is involved in the process. So there will be no waste water generated due to mining activity. Very minimal amount of domestic effluents will be generated which will be discharged to soak pits through septic tank. Mined out pit will be converted into water reservoir. Runoff water from mine head will be stored in the abandon pit (Rain water harvesting) and utilized for dust suppression, plantation and other activities.
16.	Detailed proposal for Rain water Harvesting and water balance	There is no proposal for Rain water Harvesting as it is active mining area. However, mined out

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	(both monsoon and non-monsoon).	pit will be converted into water reservoir when it is abandoned.
17.	Occupational Health Study report, including identification of occupational health hazards for employees as well as neighboring habitation, remedial measures for it and periodical health checkups, at least once in six months by occupational health expert.	The occupational health study will be carried out after the mining cluster will be in operation. The plan for occupational health checkup for the mines worker and nearby population has been attached as <b>Annexure- VII</b> .
18.	Detailed surface runoff management plan.	Surface runoff management plan has been attached as <b>Annexure-IV</b> .
19.	Proceedings of public hearing to be submitted and actions proposed to be taken in physical terms for the environmental issues raised.	Proceedings of public hearing has been attached as <b>Annexure- VIII</b> .
20.	An undertaking that they will not touch the ground water table in next 10 years.	Undertaking has been attached as <b>Annexure-IX</b> .
21.	Mining activity will affect the bio-diversity of the area. How bio-diversity of the area will be managed during mining activity? Study to be carried out about damage to bio-diversity during mining activity.	Attached as <b>Annexure- XII</b> .
22.	Details of the CSR activity by Leases of Cluster.	Attached as <b>Annexure- XI</b> .

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s ATMOS Sustainable Solutions Pvt. Ltd., Noida (U.P)** on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

- b) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Balanda Stone quarry (1, 2, 3, 5, 6, 7, 8, 9 & 10) in cluster without referring to SEAC with specific conditions as per **Annexure - E** after receipt of individual applications from the lessee in cluster along with following documents.
- i) Filled in form-I of individual lease
  - ii) Prefeasibility report of individual lease
  - iii) EMP of individual lease.
  - iv) Approved Mining Plan of individual lease
  - v) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
  - vi) 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.
  - vii) No storage and usage of blasting materials/explosives inside the lease area without license/permission/authorization from competent Authority as per Indian Explosives

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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.

- viii) 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.
- ix) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.

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

#### **PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR BALANDA STONE QUARRY 2 OVER AN AREA OF 4.876 HA UNDER CLUSTER APPROACH WITH TOTAL CLUSTER AREA 37.915 HA AT VILLAGE– BALANDA, TAHASIL: LATHIKATA, DISTRICT: SUNDARGARH OF SRI KAMESHWAR TIWARI – EC**

1. Balanda Stone Quarry – 2 over an area of 4.876 ha. of Sri Kameshwar Tiwari is coming under cluster approach with total cluster area 37.915 ha. at village– Balanda, Tahasil: Lathikata, District: Sundargarh.
2. The SEAC recommended for approval of EIA/EMP in cluster approach at Agenda Item No. 8.
3. The SEIAA may consider to grant Environmental Clearance to this individual lease in cluster without referring to SEAC with specific conditions as per **Annexure - E** after receipt of individual applications from the lessee in cluster along with documents as per Agenda Item No. 8.

#### **ITEM NO. 10**

#### **PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR DWARAGAM STONE QUARRY OVER AN AREA OF 12.8721 HA VILLAGE- DWARAGAM, TAHASIL – DIGAPAHANDI, DISTRICT- GANJAM OF SMT.LAXMI SETHI - EC**

1. The proposal is for Environmental Clearance for Dwaragam Stone Quarry over an area of 12.8721 ha village- Dwaragam, Tahasil – Digapahandi, District- Ganjam of Smt.Laxmi Sethi.
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. Dwaragam stone quarry project is located at village- Dwaragam, Tahasil- Digapahandi, District-Ganjam, State - Odisha (khata no.-317, plot no.-382) over an area of 12.8721 ha or 31.808 acre.
4. The Quarry lease has been allotted to Smt. Laxmi Sethi for quarrying of stone (minor mineral) by the Tahasildar Digapahandi vide letter no.- 3833 dated 05.07.2019 for 5 years.
5. Mining Plan has been approved by Joint Director, Geology Authorized officer, Joint Director Geology South Zone, Berhampur vide Memo no. 486/SZ dated 17.05.2021.
6. **Location and Connectivity** - The area under discussion is featured in Survey of India Topo Sheet No – 74A/11 and is bounded between the Latitude -19°20'19.9"N to 19°20'32.7"N, Longitude – 84°31'18.0"E to 84°31'40.4"E. Berhampur Railway station is the nearest railway

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station located at a distance of 29.40kms from the lease area. Nearest Airport is Biju Patnaik International Airport, Bhubaneswar, approx. 169 Km. Nearest Road bridge is at a distance of 3.50kms from the mining lease. Dwargam village is 420m from the proposed area.

7. TOR has been granted from SEIAA vide letter no 1809/SEIAA dated 26.07.2021 for Dwaragam Stone Quarry.
8. The public hearing has been conducted on 26.04.2022 at village- Dwaragam under Digapahandi Tehsil of District Ganjam, Odisha under the supervision of Addl. District Magistrate, Ganjam.
9. Baseline Study was conducted during period for pre- monsoon season during March, 2021 to May, 2021.
10. **Geological and Mineable Reserve:** -Total Geological Reserve of Dwaragam Stone Quarry is 16, 59,344 cum and Mineable Reserve is 12,61,296 cum. The average production is proposed to be 5000 cum /year and 25000 cum is the total production during the plan period. The stone will be excavated by open cast semi mechanised method.
11. **Method of Mining** - Mining will be carried out by opencast semi-mechanized method with adoption of drilling & blasting. Handling of rock mass will be done both manually & by excavators. Handpicks, spade, chisel, hammer will be used by manual labors for sorting & sizing. Loosening of rock mass will be done by drilling & blasting. In order to prevent haphazard excavation of pits and suitable blending of ore, the excavation has been proposed at one place. In mine, proposed height is 5m & width of bench is more than 5m.
12. A total of 2,775 cum (10%) waste/rejects is likely to be generated during the plan period which will be dumped in the NW site which will cover an area of 1000 sq.m. (0.1 ha) & dump height will be 4m.
13. **Employment Potential** - Total number of employment will be around 23 numbers including Management, Supervisory personnel, Skilled, Semiskilled and Unskilled.
14. **Water Requirement** - There is requirement of approx. 4.5 KLD water for this project. 0.3 KLD will be for drinking/domestic purpose which will be taken from nearby source/ water tanker.
15. **Plantation** - Plantation will be done in mining lease approach road. About 1320 number of trees will be planted along approach road in the first year & at other place after consultation with the local authorities.
16. The estimated project cost is ` 50 lakhs and EMP cost is Rs. 11,60,000.00(Capital Cost), and Rs. 4,90,000 (Recurring cost).
17. The project proponent along with the consultant **M/s Atmos Sustainable Solutions, Noida (U.P)** made a detailed presentation on the proposal on 05.08.2022.
18. The SEAC in its meeting held on 05.08.2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent.
19. 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
1.	Detailed	Fly rock is the undesirable throw of debris from a blast. Fly rock is usually caused

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent																																
	mitigation measures for flying rock.	<p>by the incorrect selection or application of burden, insufficient stemming length or blast holes initiated out of sequence. Because fly rock can cause severe injury and property damage, shot firers must take precautions to prevent it, especially if blasting occurs near property or people.</p> <p><b>Mitigation measures:</b></p> <ul style="list-style-type: none"> <li>• Mining will be carried out by approved method and by authorized vendor.</li> <li>• Controlled &amp; muffle blasting will be carried out to prevent flying fragments.</li> <li>• Preparation of charge and charging and stemming of holes will be done by a qualified blaster.</li> <li>• 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.</li> <li>• Overcharging will not be done.</li> <li>• No deep whole blasting will be carried out. In this mine blasting will be carried out upto 1.5 m depth.</li> <li>• Blasting will not be carried out in windy condition to prevent the spread of any hazardous materials.</li> <li>• Use of sequential or delay firing so all shots initiate from the face backwards.</li> <li>• Local villagers will be intimidated in advance before blasting by beating drums.</li> </ul>																																
2.	Risk involved and measures to be taken for Dump stabilization and dump management.	<p>There will be generation of about 2,775 cu.m (555 cu.m/annum) of waste during plan period. These wastes will be dumped in the NW side which will cover an area of 1000 sq.m. (0.1 ha) &amp; dump height will be 4m. These waste generated will be used for road construction &amp; maintenance.</p> <p><b>Dump management:</b></p> <ul style="list-style-type: none"> <li>• It is proposed to store this top-soil in the earmarked site &amp; will be utilized for plantation purpose after separated out from the mixed rock boulders &amp; pebbles.</li> <li>• Dump slope having less than 450 will be provided with retaining wall and garland drain to prevent the wash off.</li> <li>• Dump slope will be maintained with the horizontal to make the dump stable.</li> <li>• During plan period, retaining wall and garland drain will be constructed for the proposed dump.</li> <li>• During the conceptual period will be used for road construction &amp; maintenance.</li> <li>• There will be no waste dump exists within the lease area during the conceptual period.</li> </ul>																																
3.	Green belt plantation should be increased in safety zone.	<p style="text-align: center;">Year wise Green belt development plantation</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="427 1447 517 1585">Year</th> <th data-bbox="517 1447 708 1585">Total Plantation</th> <th data-bbox="708 1447 900 1585">Plantation in safety barrier zone (1.672 ha)</th> <th data-bbox="900 1447 1091 1585">Plantation along approach road</th> <th data-bbox="1091 1447 1283 1585">Plantation in village consulting local authorities</th> <th data-bbox="1283 1447 1458 1585">Location</th> </tr> </thead> <tbody> <tr> <td data-bbox="427 1585 517 1619">1<sup>st</sup></td> <td data-bbox="517 1585 708 1619">1850</td> <td data-bbox="708 1585 900 1619">1400</td> <td data-bbox="900 1585 1091 1619">200</td> <td data-bbox="1091 1585 1283 1619">250</td> <td data-bbox="1283 1585 1458 1937" rowspan="5">Approach road – 400m nos Along both sides of road (of approx. 0.4 km) at spacing of 2.0*2.0m. Safety</td> </tr> <tr> <td data-bbox="427 1619 517 1653">2<sup>nd</sup></td> <td data-bbox="517 1619 708 1653">1750</td> <td data-bbox="708 1619 900 1653">1300</td> <td data-bbox="900 1619 1091 1653">200</td> <td data-bbox="1091 1619 1283 1653">250</td> </tr> <tr> <td data-bbox="427 1653 517 1686">3<sup>rd</sup></td> <td data-bbox="517 1653 708 1686">Maintenance</td> <td data-bbox="708 1653 900 1686">Maintenance</td> <td data-bbox="900 1653 1091 1686">Maintenance</td> <td data-bbox="1091 1653 1283 1686">Maintenance</td> </tr> <tr> <td data-bbox="427 1686 517 1720">4<sup>th</sup></td> <td data-bbox="517 1686 708 1720"></td> <td data-bbox="708 1686 900 1720"></td> <td data-bbox="900 1686 1091 1720"></td> <td data-bbox="1091 1686 1283 1720"></td> </tr> <tr> <td data-bbox="427 1720 517 1753">5<sup>th</sup></td> <td data-bbox="517 1720 708 1753"></td> <td data-bbox="708 1720 900 1753"></td> <td data-bbox="900 1720 1091 1753"></td> <td data-bbox="1091 1720 1283 1753"></td> </tr> </tbody> </table>	Year	Total Plantation	Plantation in safety barrier zone (1.672 ha)	Plantation along approach road	Plantation in village consulting local authorities	Location	1 <sup>st</sup>	1850	1400	200	250	Approach road – 400m nos Along both sides of road (of approx. 0.4 km) at spacing of 2.0*2.0m. Safety	2 <sup>nd</sup>	1750	1300	200	250	3 <sup>rd</sup>	Maintenance	Maintenance	Maintenance	Maintenance	4 <sup>th</sup>					5 <sup>th</sup>				
Year	Total Plantation	Plantation in safety barrier zone (1.672 ha)	Plantation along approach road	Plantation in village consulting local authorities	Location																													
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4 <sup>th</sup>																																		
5 <sup>th</sup>																																		



Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent					
							zone (1.672 ha)- 2700 nos. Village area – 500 nos. In village area like school premises, Aangawadi, Panchayat Bhavan
		Total	3600	2700	400	500	
4.	Silt management and detailed plan for the same to arrest /remedy of silt ingress to surrounding agricultural lands and budget should be allocated to it.	<p>Run-off may contain solids from:</p> <ul style="list-style-type: none"> <li>• water from excavated pit</li> <li>• Spoil heaps and stock piles</li> <li>• work areas and equipment</li> </ul> <p><b>Following practices will be followed for silt management</b></p> <ul style="list-style-type: none"> <li>• For silt management, siltation ponds will be constructed to arrest silt and sediment flows from mine operation, OB and mineral dumps.</li> <li>• Garland drain (of size 320 m x 2.0m x 1.5m) &amp; 2 settling tank (of size 10m*2.0m*2.0m) proposed to be designed in such way so that total storage capacity will be much more than the rainy days runoff. Settling tank and retention/ toe wall will be constructed on the end of the garland drain.</li> <li>• Chek dam of height 0.5 m will be constructed at every 50m interval to lower the velocity &amp; arrest the parts of silts of the flowing water.</li> <li>• Retaining fences will be used to prevent solids from being washed or blown away.</li> <li>• Garland drains and siltation ponds will be de-silted at regular intervals.</li> <li>• The drains will be regularly de-silted, particularly after monsoon and should be maintained properly.</li> </ul>					
5.	Safety measures during blasting including provision of warning to be submitted.	<p>Blasting operation will be carried out by non -conventional method using non explosive demolition agents (NEDA) such as Dexpan, eco bust etc. No explosives will be stored at the site. Blasting will be carried out by license holder vendor under the supervision of a Qualified Mines Manager.</p> <p><b>Safety measures:</b></p> <ul style="list-style-type: none"> <li>• Controlled &amp; muffled blasting will be done so that debris shall not fall beyond mining lease area.</li> <li>• Blasting will be carried out after making adequate announcement to the local inhabitants through public address system.</li> <li>• Proper inspection after shot firing will be done by the blaster.</li> <li>• Warning siren about half an hour prior to blasting activity will be given for alerting the villagers.</li> <li>• The nearby villagers will be informed about one day prior to blasting.</li> </ul>					

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<p>Blasting will done at fixed time during day time only.</p> <ul style="list-style-type: none"> <li>• All necessary precautions as enumerated under 106(2)(b) of MMR 1961 will be followed.</li> <li>• Register will be maintained by quarry owner to note the blasting interval &amp; time.</li> </ul>

Considering the information furnished and the presentation made by the consultant **M/s Atmos Sustainable Solutions, Noida (U.P)** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – D** and following additional condition:

- i) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.

#### **ITEM NO. 11**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR EXPANSION WITH MODIFICATION OF “ARIANA”, MULTISTORIED RESIDENTIAL COMPLEX OVER AN BUILT UP AREA- 58788.51 SQM AT MOUZA- SANKARPUR, BHUBANESWAR, ODISHA AT MOUZA- PATIA, OF BHUBANESWAR MUNICIPAL CORPORATION IN THE DEVELOPMENT PLAN AREA OF BHUBANESWAR DISTRICT KHORDA FOR M/S.KRIDAY REALTY PRIVATE LIMITED OF SRI SIDDHARTHA ROY – EC**

1. The proposal is for Expansion with Modification of “ARIANA”, Multistoried Residential complex over a built up area-58788.51 sqm at Mouza- Sankarpur, Bhubaneswar, Odisha of Bhubaneswar Municipal Corporation in the Development plan area of Bhubaneswar District Khorda for M/s.Kriday Realty Private Limited of Sri Siddhartha Roy.
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. M/s Kriday Realty Private Limited has proposed for expansion with modification of Residential Project “TATA ARIANA” located at Mouza - Sankarpur , Bhubaneswar in the district of Khurda in Odisha.
4. The project has been granted prior environmental clearance vide letter no - 1997/SEIAA on dated 24th April 2013 for construction of 12 Towers having total construction area of 1,85,176.33 m2 (including Basement ) 132395.7 sqm (Excluding Basement area).
5. Later due to PPP agreement expired in the year 2017 & Extension of Time (EoT) received only in December’2021 from BDA building revised proposal for expansion and modification was submitted and recommended for the ToR .
6. Based on the same ToR was granted vide Letter No. SEIAA-File No- File No.76188/83-MIS/04-2022 dated 29.04.2022 for Expansion and Modification of Residential Project “ TATA ARIANA ” for total plot area of 12 Acre or 48575.31 sqm .

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7. **Location and Connectivity** – The proposed site is located at Mouza- Sankarpur, Bhubaneswar, Odisha. The Geographical co-ordinate of the project site are Latitude: 20°15'47.40"N & Longitude: 85°45'22.72"E. The site is very near to NH 5 is approx. 0.92km. The nearest railway station is Bhubaneswar Railway Station approx. 9.3 km from the project site. Biju Patnaik International Airport is at a distance of approx. 7km from the project site. Chandka-Dampara Wild Life Sanctuary is about 7.71km. Nandankanan Wild Life Sanctuary is about 14km.
8. The site is coming under Bhubaneswar Municipality area.
9. The residential population of the project will be 2392 persons after 100% completion. The population for the project is estimated at 2392 permanent, 316 visitors, and 1133 in retail, Club & Town admin building etc.

10. The Current Status of building Project:

S. No.	Project Activity	Details	Work completed so far	Work Yet to be completed
i)	Plot Area	Total Plot Area: 48575.31 sqm. (12.00 Acre/ 4.857531 Ha), In Possession-201537.49 sqm		
ii)	Ground coverage	9,977.279 (20.5%)	6918.703 (14.2%)	3058.576 (6.3%)
iii)	Road Area	8075.162		
iv)	Green belt (plantation area )	9997.585		
v)	Green belt above Podium	8195.295		
vi)	Service Area	515.522		
vii)	Swimming Pool	269.383		
viii)	open parking area	5800.365		
ix)	Proposed FAR	Permissible -2.75 Proposed – 2.749		
x)	Built Up Area	EC obtained for 12 Towers with built-up area of 1,85,176.33 m <sup>2</sup> (including Basement ) & 132395.7 sqm (Excluding Basement area)		
		The total built-up area after modification will be decreases from 1,85,176.33 m <sup>2</sup> (including Basement ) to 171593.75 m <sup>2</sup>	Existing-79458.56 sqm (Excluding Basement) 112805.24 sqm (Including Basement))	Proposed built up area- 58788.51 sqm
xi)	Landscape Area Total Green belt (plantation area ) 20.6 % Green belt above Podium 16.9 %	18192.88 sqm (37.5 %)	Green belt (plantation area 9997.585 sqm	
			Green belt above Podium 8195.295 sqm	
xii)	Parking Area 30 % percentage of total built-up area towards FAR	Total parking area - 41,685.917	Existing 8 Towers = 24377.318 Sqm (31% of Built up area )	Proposed 4 Towers & = 17308.599 Sqm (30% of Built up area )

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S. No.	Project Activity	Details	Work completed so far	Work Yet to be completed
xiii)	Maximum height of building	66 m	-(G+13, G+14 , G+15 & G+16) -51 m	Proposed – ( G+21) -66 m
xiv)	No. of Units	1210 nos.	792	418 Total no of L.I.G. Flats=244 nos (Which is more than 20% of total nos. of Flats)
xv)	Total project cost	` 557 Cr	` 346 Cr	` 211

11. **Water Requirement** – During Operation phase the total water requirement for proposed 4 towers is approx. 323 KLD (domestic + flushing ), out of which total domestic water requirement for residential is 215 KLD, flushing water is 108 KLD . The total fresh water requirement is 215 KLD (daily basis for residential blocks for domestic requirement).It is expected that the proposed additional 4 towers will be generate approx. 269 KLD (80 % of wastewater from residential and club area. The wastewater will be treated in a STP having capacity of 860 KL (provided for Existing and proposed sewage water Treatment ) provided within the complex generating 215 KLD of recoverable treated waste water from STP which will be recycled within the project. During dry season there it will be follow zero discharge of surplus treated wastewater and 140 KLD will become surplus in monsoon season and will be discharged into municipal sewer. Sewerage treated water can be used in Toilet Flushing & Irrigation to reduce the load on fresh water.

Therefore, the total fresh water requirement is approx. 895 KLD ( Existing +Proposed+ visitor and retail area etc.), out of which total domestic water requirement for residential is 589 KLD, flushing water is 306 KLD . The total fresh water requirement is 589 KLD (daily basis for residential blocks for domestic requirement).

12. **Total no. of Rainwater Harvesting pits** – 08 nos for the project.

13. **Power Requirement** - The overall maximum demand is approximately 4384.49 kW or 6000kVA at power factor 0.9. It is proposed to have Grid supply at 33KV from Electricity Supply Company. It is proposed to have 100% Power Backup for Common Area Services and limited for each flat. The Back-up power shall be provided by 415 Volt DG Sets. Total Backup power load is 3530 KVA which will be met by 3 nos. 1010 kVA, 1 no. 500 KVA 415 DG sets. Solar Power proposed for 4 towers is 100KW.

14. **Solid waste Management** - During operation phase, waste comprise of municipal waste majorly. Total waste generation after overall development of the project is estimated to be 3381 kg/day. Waste will be segregated into recyclable, compostable and inert waste. Apart from this E-waste will be generated from the project site. Hazardous waste to be generated from site is used oil only from DG sets. Presently, total solid waste generation is about 1.196 T/day. However, it is envisaged to be 3.8 T/day after 100% completion and operation of the project. The Municipal Solid Waste Management will be conducted as per the guidelines of Solid Waste Management Rules, 2016.

15. **Green Belt** – The project has been well planned to have sufficient open space and green coverage. The green area comprises of evergreen, tall and ornamental trees and ornamental shrubs inside the premises. The green area has been developed over total green area measuring 18192.88 sqm (37.5 %) has already been developed. The biodiversity in the area

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will improve due to the proposed green cover. Evergreen tall and ornamental trees and ornamental shrubs will be planted inside the premises.

16. **Parking Details** – Total Parking Area Provided - 41,685.917Sq.m. (Existing 8 Towers = 24377.318 Sqm (31% of Built up area) & Proposed 4 Towers = 17308.599 Sqm (30% of Built up area ).
17. **Rain Water harvested** through 08 nos. of Rain Water recharging pits. .
18. **Fire fighting Installations:** Fire fighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the provisions given in Part-IV of National Building Code of India -2016 and relevant BIS specifications.
19. The project cost is 577 crores in total out of which for existing building is 327 crores and for proposed building is 250 crores. Environmental Monitoring Programme Cost Capital and recurring cost towards EMP will be Rs. 2058.75 lakhs and 429.9 lakhs/ annum respectively.
20. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 03.08.2022.
21. The SEAC in its meeting held on 03.08.2022 decided to take decision on the proposal after receipt of certain information / documents from the proponent followed by site visit of Sub-Committee of SEAC.
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
1.	Certificate from chartered civil engineer that no construction has been made in proposed four towers bearing number 5,6,7,8. Construction status of the original plan approved vis- a- vis the approved revised plan also.	Certificate from Chartered Civil Engineer attached as <b>Annexure-1</b> .
2.	Comparative matrix on relevant environmental parameters e.g. impact on STP, Green belt, Fire tender roads etc on expansion. Whether existing system can accommodate the proposed expansion?	Comparative matrix on related to environment parameters e.g. impact on STP on expansion is attached as <b>Annexure-2</b> .
3.	Reduce discharge of treated water to drain by utilising in green belt plantation.	Water balance diagram is attached as Annexure-3 During dry season there it will be follow zero discharge of surplus treated wastewater and 140 KLD will become surplus in monsoon season and will be discharged into municipal sewer. Sewerage treated water can be used in Toilet Flushing & Irrigation to reduce the load on fresh water.
4.	Detailed calculation on	<b>Solar Power Requirement (Existing phase , where</b>

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent																																			
	solar energy existing and proposed.	<p><b>OC is obtained)</b>  <b>SOLAR WATER HEATING</b>            20 % of total hot water requirement must be catered through Solar Thermal system for ph-I &amp;II:            No. of Flats = 1BHK= 222, 2BHK 378 nos.+ 3BHK 192 nos            TOTAL=-= 792 Flats            Hot Water Requirement @ 40 lpcd = 33000 liters  <b>Total solar collectors already installed= 262</b>  <b>Solar Power Requirement for 4 Towers</b>  <b>SOLAR PV SYSTEM</b>            (Providing for emergency lighting of common area (Staircase, lift lobby, basement etc.) for phase-3</p> <table border="1"> <thead> <tr> <th>Tower No</th> <th>Load - KVA</th> <th>PV Solar Requirements</th> <th>Total Solar PV</th> <th>Space Required in Sq Ft</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>5% of Total power requirement for proposed 4 towers</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>478.3</td> <td>23.9</td> <td>25 KW</td> <td>3250</td> </tr> <tr> <td>6</td> <td>478.3</td> <td>23.9</td> <td>25 KW</td> <td>3250</td> </tr> <tr> <td>7</td> <td>478.3</td> <td>23.9</td> <td>25 KW</td> <td>3250</td> </tr> <tr> <td>8</td> <td>478.3</td> <td>23.9</td> <td>25 KW</td> <td>3250</td> </tr> <tr> <td>Total</td> <td>1913.3</td> <td>95.7</td> <td>100 KW</td> <td>13000</td> </tr> </tbody> </table> <p>Detailed calculation on solar energy existing and proposed is given in <b>Annexure-4</b>.</p>	Tower No	Load - KVA	PV Solar Requirements	Total Solar PV	Space Required in Sq Ft			5% of Total power requirement for proposed 4 towers			5	478.3	23.9	25 KW	3250	6	478.3	23.9	25 KW	3250	7	478.3	23.9	25 KW	3250	8	478.3	23.9	25 KW	3250	Total	1913.3	95.7	100 KW	13000
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Total	1913.3	95.7	100 KW	13000																																	
5.	Continuous greenbelt to be made. A detailed report and layout on green belt existing and proposed.	<p>Agreed            The project has been well planned to have sufficient open space and green coverage. The green area comprises of evergreen, tall and ornamental trees and ornamental shrubs inside the premises. The green area has been developed over total green area measuring 18192.88 sqm (37.5 %) has already been developed. The biodiversity in the area will improve due to the proposed green cover. Evergreen tall and ornamental trees and ornamental shrubs will be planted inside the premises. and greenbelt plan is attached as <b>Annexure-5</b>.</p>																																			
6.	Comparative statement for all physical features between existing and proposed expansion.	Comparative statement for all physical features between existing and proposed expansion is attached as <b>Annexure-2</b> .																																			
7.	Compliance Report to previous EC conditions duly certified by Regional	Compliance Report to previous EC conditions are attached as <b>Annexure-6</b> .																																			

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	Office, MoEF&CC, Bhubaneswar.	
8.	Structural stability from NIT/ IIT with endorsement from BDA as per the bye laws of the later with reference to original approved plan and revised approved plan in view of increase in number of floors and building height.	Structural stability Certificate attached as <b>Annexure-7.</b>
9.	Traffic study undertaken as stated be vetted and submitted with decongestion plan as & if necessary.	Traffic study report is attached as <b>Annexure-8.</b>
10.	The PP to submit sabik RoR with kisam, Hal RoR with kissam for the project area to rule out the investment of Forest/DLC land.	Land has been allotted for residential - development under Bhubaneswar Development Authority (BDA). There will be permanent change in land use pattern as mostly homestead land will be used for construction of Residential Building with Retail. Proposed area is coming under residential zone as per BDA plan. Total land requirement for this project is 12 Ac. The land documents given in <b>Annexure-9. Kisam of the plot –Gharabari.</b>
11.	To submit a Fire Safety Certificate for the operating towers and utilities and Fire Safety recommendation for the remaining construction.	Fire Safety Certificate for the operating towers and utilities and Fire Safety recommendation for the remaining construction is attached as <b>Annexure-10.</b>
12.	To submit the plan for Ventilation, lightning and air conditioning of lift from lowest basement floor to terrace floor.	All plans are attached as <b>Annexure-11.</b>
13.	Provision of solar power for the entire project with location of installation of photovoltaic frames and utilisation of solar power for the common area to be marked in the layout plan.	Attached as <b>Annexure-11.</b>
14.	To submit a bio-diversity register for the 12 acre project area as per the provision of biodiversity Conservation Act, 2003 along with a write up on the improvement in	The project has been well planned to have sufficient open space and green coverage. The green area comprises of evergreen, tall and ornamental trees and ornamental shrubs inside the premises. The green area has been developed over total green area measuring 18192.88 sqm (37.5 %) has already been developed. The biodiversity in the area will improve

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	conservation of biodiversity during the year 2013 till now.	due to the proposed green cover. Evergreen tall and ornamental trees and ornamental shrubs will be planted inside the premises and greenbelt plan is attached as <b>Annexure-4</b> . <b>Bio diversity report</b> for project site and study area is attached as <b>Annexure-12</b> .
15.	To submit the Energy Conservation efforts made in the project as per bureau of Energy efficiency under Energy Conservation Act, 2002.	Energy Conservation Report is attached as <b>Annexure- 13</b> .
16.	To submit the original NoC from CGWA VIS-A-VIS the actual consumption of water for the last 10years along with the permission letter and agreement with the State Government Water Resource Department.	Water requirement of the project has met from PHED Supply. Ground water has used as stand by or in emergency purposes. The water supply connection has been invariably metered. Meter has approved or certified by concern Department. The water meter has been installed after getting the permission and being duly tested by the PHED, observing formalities as per Orissa Water Works (ULB) Rules, 1980 and as amended from time to time. Sanction Order for water supply connection from Office of the Sub-Divisional Officer, Bhubaneswar is attached as <b>Annexure-14</b> .
17.	To submit the organogram for management of WTP, WWTP, STP, SWM, Hazardous Waste, Greenbelt, DG set emission, Vehicular emission, Safety of Lifts, Fire safety and other safety requirements of the project including Battery rules, DG rules, BMW rule in case of Dispensary/First aid center etc.	Management plan is attached as <b>Annexure-15</b> .
18.	To submit the compliance of existing CTE & CTO duly certified by SPCB, Regional office, Bhubaneswar.	Compliance of existing CTE & CTO is attached as <b>Annexure-16</b> .

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

### **ITEM NO. 12**

### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF BASINGGORJA DECORATIVE STONE MINES OVER AN AREA OF 2.428 HECTARES IN VILLAGE - BASINGGORJA**

Proceedings of the SEAC meeting held on 02.11.2022 (Old proposals – compliance received)



**UNDER TAHASIL - GUNUPUR OF DISTRICT - RAYAGADA, ODISHA OF SRI G. R. SAMYUKTA - EC**

1. This is a proposal for Environment Clearance of for Basinggorja Decorative Stone Mines over an area of 2.428 Hectares in village - Basinggorja under Tahasil - Gunupur of District - Rayagada, Odisha of Sri G. R. Samyukta.
2. The project falls under category "B" or activity 1 (a) – Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. Basinggorja Decorative Stone Mine over an area of 2.428Ha of M/s. Stone Fileds, Prop-Smt. G.R.Samyukta is located in village Bassinggorja under Gunupur Tahsil of Rayagada District Odisha. The lease was granted to M/s. Stone Fields being the successful bidder for tenure of 20 (Twenty) years from the date on which this executed deed is registered.
4. The Mining Plan has been approved by the Joint Director of Mines, Directorate of Mines, Bhubaneswar, Odisha. under section 2 of Rule 28 (4) of OMMC, 2016 as per clause 5.
5. Mining plan prepared by Sri H.C. Sahoo, vide his IBM's Regn. No. RQP/BBS/033/2001/A was approved on 24.10.2006 by the Directorate of Mines, Odisha, Bhubaneswar for the purpose of grant / execution of the mining lease and mining operation was commenced in FY 2006-07 by the submission of an opening notice to the concerned department of State Govt.
6. Subsequently, Scheme of Mining consisting of review of Mining Plan for 5 years from 2006-07 to 2010-11 and year wise development for next 5 years from 2011-12 to 2015-16 was prepared by the RQP, Sri S.C. Nayak, vide his IBM's Regn.No. RQP/CAL/211/95/A and submitted by the Lessee for approval. Scheme of Mining could not be processed for approval due to sad demise of the proprietor, Late G.N.V Naidu.
7. Since the period of submitted Scheme of Mining was valid up to 31.03.2016, the next Scheme of Mining of Basinggorja Decorative Stone Mine over an area of 2.428 hectares prepared by Sri S.C. Nayak vide his DM's registration number RQP/OD/029/2015 under Rule 18(2) of GCDR, 1999 for a period of 5 years from 2016-17 to 2020-21 was approved by the Directorate of Mines, Odisha, Bhubaneswar.
8. Since the approved Scheme of Mining is valid up to 31.03.2021, the present Scheme of Mining has been prepared by the same RQP, Sri S.C. Nayak vide his DM's Regn No.RQP/OD/029/2015, M/s MINESKETCH Consultants (P) Ltd, Flat No.205, Bhagwan Tower, Cuttack Road, Bhubaneswar-751006
9. **Location and Connectivity** - The lease area under reference featured in the Survey of India Topo sheet no. 65M/16 is on Khata No 9, Plot No.2/p. The geo coordinates of the lease area is 19°06'47.46"N to 19°06'51.60"N & 83°52'11.52"E to 83°52'05.40"E.The area is located 80 km from District Headquarters Rayagada and 246 Km from State Capital Bhubaneswar. Nearest railway stations is at Gunupur at an distance of 7.8 KM(SE). The lease area can be approached from SH: 4 & NH: 326 (Jeypore highway) at a distance of 7.5 Km & 20 Km. Nearest Airport is Jeypore Airport which is at a distance of 206 Km. There is neither seasonal nor perennial nala within the lease area. Drainage system in the region is dendritic. Surface runoff water in the region will be discharged to the natural drainage course.
10. **Reserve Estimation** has been calculated as 273486cum

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11. The lease has proposed to excavate a total of 24,000 m<sup>3</sup> of decorative stone and 4800 m<sup>3</sup> (max) annually from Bassinggorja Decorative Stone Quarry. The method of mining is Open cast semi-mechanized.
12. Life of mine is 32 years.
13. A total of 30,000 m<sup>3</sup> waste is likely to be generated during the plan period.
14. **Power requirement:** Power requirement is 100 KVA shall be required for lighting during night time and shall be taken from the State Grid. Necessary permission shall be taken after commencement of the project. Diesel will be used for running of equipments during mining operation. It is estimated that 1 KLD of diesel will be required and same shall be procured from local pump station.
15. **Water requirement:** Water requirement for the project is 8 KLD for domestic, plantation & dust suppression which will be sourced from Govt sources of water.
16. **Green Belt Development:** About 2000 sapling of local species will be planted over an area of 0.4 ha in 7.5m wide safety zone along lease boundary, Haul Road side.
17. **Employment Potential:** Total manpower requirement is 42no.s. Administrative & supervisory personnel will be 7 numbers and 32 workers will be employed per day under skilled, semi-skilled & un-skilled category in the quarry with 3 nos. of absentee. Indirect employment through creation of shops/ stalls, hired vehicles etc. also can be generated to full fill the day to day requirements of the mining personnel's.
18. The cost of the project is ` 110 lakhs. EMP capital cost of the project is 14.0 Lakh. EMP Recurring cost is 8.80Lakh/Annum. CSR Budget is 9.0 lakh/Annum
19. The proponent has made a presentation on the proposal before the Committee on 18.05.2022.
20. The SEAC in its meeting held on dated 18.05.2022 decided to take decision on the proposal after receipt of certain information / documents 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
1.	Year wise production details of mine duly certified by mining officer.	Certificate regarding Production since 2006-07 till date form DDM, Koraput Circle is attached as <b>Annexure -1</b> .
2.	Cluster certificate from the Mining Officer that there is no mines within 500 meters of proposed quarry.	Necessary Certificate regarding no other mine present within 500 meter from the project boundary is attached as <b>Annexure-2</b> .
3.	Brief write up why the case will not be treated under Violation category.	Deputy Director Mines has issued permission for mining over the project as per the approved mining plan, production has been done beyond the limit approved mining plan. The same quantity also sold by paying the royalty to Government of Odisha. During Mining operation all the environmental measures has been taken as proposed in mining plan. There is no

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		deviation of conditions on approved mining plan, Hence, we request your good self for have lenient view of our application and take necessary action for early issuance of environmental clearance.

Considering the information furnished and the presentation made by the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – F and following additional conditions;**

- i) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.

### **ITEM NO. 13**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR BASUPALI STONE QUARRY - 2 WITH PROPOSED EXCAVATION OF 5000 CUM/YEAR OF STONE OF TAHASILDAR BOLANGIR HAVING AN AREA OF 2.023 HA. LOCATED AT KHATA NO. 14 PLOT NO.79, VILLAGE BASUPALI UNDER BALANGIR TAHASIL OF BALANGIR DISTRICT, ODISHA (UNDER CLUSTER APPROACH FOR BASUPALI CLUSTER STONE QUARRY OVER AN AREA OF 9.67 HA WITH 5 INDIVIDUAL MINES) OF TAHASILDAR, BOLANGIR – EC.**

1. The proposed mining project is for Stone Quarry located in village Basupali under Bolangir Tahasil of Bolangir District, Odisha, over an area of 9.67 Ha or 23.9Acre. The Quarry lease has been proposed to be environmental clearance by the Tahasildar, Bolangir (successful bidder) for excavation of Stone for a period of five years. The Mining Plan of the Mining Project has been approved by The Joint Directorate of Geology, Bolangir, Odisha on dated 30.03.2021. As per EIA notification 2006 and subsequent amendments, the project falls under item - 1(a)-Mining of Minerals in the Schedule of EIA Notification, 2006 & Subsequent amendments thereof. The project is coming under B1 Category (5nos of Individual Cluster) as the lease area is greater than 5.0 Ha. Documents such as approved Mining Plan, Pre-feasibility Report are required for Environment Clearance in respect of the said quarry lease. The lease area is bounded by Latitude: N20°37'23.5"toN20°37'35.5" & Longitude: E83° 26'48.3" to E83° 27'03.4". It is a part of area covered in the Survey of India Toposheet No. 64P/6.
2. The lease area is located at a distance of 10 km from Tahasil Bolangir. Village Basupali is at a distance of 1.2 km from the mining area. District Bolangir is at a distance of 10 km. Bolangir is the nearest place from the lease area for all infrastructure facilities like hospital, school, bus service, market. The east coast railway line is at a distance 0.6 kms from the lease area. NH-201 is at a distance of 1.7 km and SH-42 is at a distance of 9.5 km from the lease area. There is no national park, wild life sanctuary, eco sensitive areas and industrial area situated within 10 Kms radius of the lease area. The mining of stone will be done by open cast semi-mechanized method for excavation & then loading into dumpers/tractors/tippers for transport to the users destination. The quarry will be mined for five years. The average proposed rate of production is 112166 Cum (max) per annum and a total production of 22476 Cu.m in the plan period. A total of 50 nos. of workers are to be

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employed in this quarry for winning/raising of 22476Cu.m. Stone production for the plan period.

3. The total water requirement will be approximately 25 KLD for different purposes like domestic, Dust suppression, plantation purposes. Water will be withdrawn from tube wells from nearby village. No use of electric power as the operation will be done in the day time. However solar lights will be used for day to day living purposes.
4. Mining of Stone from the Basupali Cluster Stone Quarry bearing Plot no-79 & 101, Khata No- 14 will be carried out by means of open cast semi-mechanized mining method. Since the proposed project is a stone mining project, there will be very less emission of noxious gas to air during the mining operation. There will be, however, generation of a negligible amount of dust during excavation of Stone. Suitable measures for dust suppression will be carried out by spraying water at dust generating points. Emission of noxious gas from vehicles can be controlled by regular maintenance.
5. Plantation will be raised along both sides of the roads, available vacant spaces and in the haul road; It is proposed for planting 1320 nos. of saplings per annum by the lessee on the sides and village approach roads which is to be undertaken in consultation with the concerned authority. No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes. Trucks and tractors will be used for transportation.
6. Proposed work will be carried out within one month after getting EC depending upon rainy season as no mining activities will be carried out during rainy season.
7. 10 KLD Ground water will be used for drinking and domestic purpose whereas surface water will be used for green belt development and dust suppression. No use of electric power as the operation will be done in day time. However solar lights will be used for day to day living purposes. Trucks/tippers and tractors will be used for transportation. So, the approximate quantity of the fuel Diesel used per day is 1000Lit/day. Due to the proposed Stone mining, there will be generation of employment for 50 persons. Out of which, 50 nos. are skilled, 10 nos. are semi-skilled, and 15 nos. are unskilled and 25 nos are mines manager/mine permit manager. Total cost of the project will be ` 2 Crores.
8. ToR was issued by SEIAA, Odisha vide letter no. 1805/SEIAA, dated 26.07.2021. Baseline data collected on Pre-Monsoon Season from 01st March 2021 to 31st May 2021. Public hearing was conducted on 04<sup>th</sup> March 2022.
9. Nearest Wild Life Sanctuary located is Karlapat Wild Life Sanctuary at a distance of- 114 Km Latitude- 19°40'19.75" N Longitude- 83°02'09.99" E.
10. The Environment consultant **M/s Green Circle. Inc, Green Empire (Anupushpam) Above Axis bank, Near Yash Complex, Gotri Main Road, Gotri, Vadodara - 390021 (Gujarat)** along with the proponent has made a presentation on the proposal before the Committee on 16.08.2022
11. The SEAC in its meeting held on 16.08.2022 decided to take decision on the proposal after receipt of certain information / documents 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
1.	Layout map showing dump, and garland drain.	Temporary waste dump is shown in map but garland drain is not necessary due to waste dump is temporary in nature.

Proceedings of the SEAC meeting held on 02.11.2022 (Old proposals – compliance received)

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
2.	Revenue map indicating cluster of mines location.	Cluster or mines location shown in Revenue map.
3.	Mitigative measures for fly rock and noise due to blasting.	Controlled blasting technique will be adopted to minimize the ground vibration and to avoid flying of rocks. The plantation & the green belt around the mining lease boundary will help in reducing noise level.
4.	Details of management of storage and usage of explosives.	The loosening of rock mass will be done by drilling & blasting. Drilling will be done either by wagon drill or jack hammer taking in to consideration the bench height varying from 3m to 6mtr. Assuming 26348m <sup>3</sup> (Max) productions per annum of cluster- 1, the monthly production target will be around 2635m <sup>3</sup> . To produce 2635 of rock mass, tentatively 263kg/month of explosives will be required assuming powder factor 2m <sup>3</sup> /kg. No explosives will be stored onsite and will be utilized on daily basis and will be taken back by the certified contractor after its use at the end of day's work.
5.	Detailed plan for silt management done for nearby agricultural lands and water sources and separated contingency plan should be allocated for this purpose.	<ol style="list-style-type: none"> <li>1. Designing stone quarry so that contaminated run-off is prevented from leaving the site with garland storm water system.</li> <li>2. Minimise the amount of ground we expose and not much stockpiles to be stored at site with fast dispatches.</li> <li>3. Cover or screen stockpiles (even its minimum) and tips, vegetation or use retaining fences to prevent solids from being washed or blown away.</li> <li>4. Not to remove vegetation from the site.</li> <li>5. Divert clean water and prevent water from entering in the excavations by using cut off ditches around your working area.</li> <li>6. Use of settlement ponds, tanks or lagoons to collect run-off from the site if its exists nearby and allowed by the locals and let suspended solids settle so the same can be removed them from the water. It will be ensured that with: <ul style="list-style-type: none"> <li>• designing settlement within the mining area carefully so it can take the amount of water that will flow through it to outside</li> <li>• Can stop discharges from the mining area if the water becomes contaminated</li> </ul> </li> </ol>

Proceedings of the SEAC meeting held on 02.11.2022 (Old proposals – compliance received)

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		<ul style="list-style-type: none"> <li>• No chemical will be used in the quarry area</li> <li>• The water reaching to the garland storm water network can be treated or controlled by Bioswales concept treat water entering your settlement pond if it is contaminated by pollutants other than suspended solids.</li> </ul> <p>Use sustainable drainage systems (SuDS) to control surface water run-off at your site, such as grass swales, ponds or infiltration trenches. SuDS deal with run-off close to the source by slowing and holding back the run-off from your site and allowing natural processes to break down pollutants. For further information, see our SuDS guidance.</p> <p>Collect run-off from your roads by using ditches and build bridges to cross watercourses.</p> <p>Clean your site roads regularly and keep them free from dust and mud.</p> <p>Use designated vehicle washing areas and collect contaminated water in a slump.</p> <p>Consider whether you need to build any flood attenuation ponds and spillways upstream of your site to prevent your settlement ponds from overflowing and causing pollution after heavy rain. <b>Bioswales:</b></p>
6.	Water sprinkling should be done through pipeline.	Water sprinkling will be done through pipeline.
7.	Thick greenbelt around whole cluster should be maintained.	Thick greenbelt around whole cluster will be maintained.
8.	Data on Vibration due to blasting should be measured and kept ready for submission to SEIAA.	Controlled blasting will be adopted so there is no vibration due to blasting.
9.	Details of haulage roads to be used for transportation of material and its proper maintenance. Planting of saplings details on both side of haulage roads.	Main road (NH-201) directly connect to the mines.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Green Circle. Inc, Green Empire (Anupushpam) Above Axis bank, Near Yash Complex, Gotri Main Road, Gotri, Vadodara - 390021 (Gujarat)** on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

- c) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for 5 nos. of Individual mines in cluster without referring to SEAC with specific conditions as per **Annexure – G** after receipt of individual applications from the lessee in cluster along with following documents.

Proceedings of the SEAC meeting held on 02.11.2022 (Old proposals – compliance received)

- ii) Filled in form-I of individual lease
- iii) Prefeasibility report of individual lease
- iv) EMP of individual lease.
- v) Approved Mining Plan of individual lease
- 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) Mitigation measures shall be taken around temporary waste dumps and garland drain shall be provided around the temporary dumps also.
- xi) 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.

  
Member Secretary, SEAC

  
Chairman, SEAC

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF EXPANSION OF IRON ORE BENEFICIATION PLANT FROM 10.7 MTPA (THROUGHPUT) CAPACITY TO 16.0 MTPA (THROUGHPUT), RELOCATION OF TAILING DAM AT VILLAGE - SANKARI, GRAM PANCHAYAT - PHULJHAR, DIST.-KEONJHAR, LAYING OF TAILING PIPELINE AND RETURN WATER PIPELINE FROM BENEFICIATION PLANT TO TAILING DAM AND LAYING OF WATER PIPELINE AND SLURRY PIPELINE FROM BENEFICIATION PLANT TO GHORABURHANI-SAGASAHU IRON ORE BLOCK FOR M/S. ARCELOR MITTAL NIPPON STEEL INDIA LIMITED OF SRI SUBRAHMANYA SHANBHOGUE TANTRADI – EC.**

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**I. Statutory compliance:**

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report, (incase of the presence of schedule-I species in the study area)
- (iv) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority and other concerned authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- (vi) The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

**II. Air quality monitoring and preservation**

- (i) The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- (ii) The project proponent shall submit monthly summary report of continuous stack

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emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

- (iii) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- (iv) The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.
- (v) Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- (vi) Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
- (vii) The project proponent shall carry out conditioning of the ore with water to mitigate fugitive dust emission, without affecting flow of ore in the ore processing and handling areas.
- (viii) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of air pollutants such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the National ambient air quality standards.
- (ix) The transportation of mineral shall be carried out through the covered trucks. Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in beneficiation operations and in transportation of ore to the beneficiation plant. The vehicles carrying the mineral shall not be overloaded.
- (x) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xi) Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. Health records of the workers shall be maintained.
- (xii) Regular Ambient Air Quality Monitoring shall be carried out. The monitoring stations will be set up in consultation with the SPCB. At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of  $PM_{2.5}$ ,  $PM_{10}$ ,  $SO_2$  and  $NO_x$  are anticipated in consultation with the State Pollution control Board. It will be ensured that at least one monitoring station is set up in up-wind & in down-wind direction along with those in other directions. The instruments used for ambient air quality monitoring shall be calibrated regularly.

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- (xiii) Data on ambient air quality (PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>) shall be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board/Central Pollution Control Board once in six months.

### **III. Water quality monitoring and preservation**

- (i) The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- (ii) Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- (iii) Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- (iv) The project proponent shall practice rainwater harvesting to maximum possible extent.
- (v) The effluent from the ore beneficiation plant shall be treated in the tailing thickener and the tailings slurry shall be transported through a closed pipeline to the tailing pond.
- (vi) The tailing pond shall be lined with appropriate impervious lining on all sides as well as the bottom to prevent any leachate going from the tailing pond into groundwater.
- (vii) The garland drain shall be constructed around the tailing pond before the starting operation on the project.
- (viii) The decanted water from the tailing pond shall be re-circulated and there should be zero discharge from the tailing pond.
- (ix) Appropriate technology shall be used for maximum recovery of ore in order to reduce slurry discharge and to increase the life of the tailing pond.
- (x) Garland drains with appropriate size, gradient and length shall be constructed to arrest silt and sediment flows from ore dumps and directly into the water bodies. The water so collected shall be utilized for watering the roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- (xi) Effluents containing Cr+6 shall be treated to meet the prescribed standards before reuse. Effluent Treatment Plant should be provided for treatment of wastewater generated from the beneficiation plant.
- (xii) Run off from the mineral and reject dumps and other surface run off should be analyzed for Cr+6 and in case its concentration is found higher than the permissible limit the water should be treated before reuse.
- (xiii) Adhere to "Zero Liquid Discharge".
- (xiv) Regular monitoring of water quality for surface water sources as well as ground water

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sources shall be carried out. The groundwater shall be monitored downstream of beneficiation plant as well as tailing pond upto groundwater table and record of monitoring data should be maintained and submitted on six monthly basis to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, the Central Ground Water Authority, the Regional Director Central Ground Water Board and the State Pollution Control Board.

- (xv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xvi) Appropriate mitigative measures shall be taken to prevent pollution of the nearby surface water source in consultation with the State Pollution control Board.

#### **IV. Noise monitoring and prevention**

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

#### **V. Energy Conservation measures**

- (i) Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- (ii) Provide LED lights in their offices and residential areas.

#### **VI. Waste management**

- (i) The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016
- (ii) Kitchen waste shall be composted or converted to biogas for further use.(/o be decided on case to case basis depending on type and size of plant)
- (iii) Separate impervious concrete pits for disposal of sludge shall be provided for the safe disposal of sludge generated from the beneficiation operation.

#### **VII. Green Belt and EMP**

- (i) Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- (ii) The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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- (iii) Plantation shall be raised all around the beneficiation plant site and the tailing pond around the plant, tailing disposal area, roads etc. by planting the native species in consultation with the local DFO/ Agriculture Department.

#### **VIII. Human Health Issues**

- (i) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- (ii) The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- (iii) 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
  - a) 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.
- (iv) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

#### **IX. Corporate Environment Responsibility**

- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-1 A.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha as a part of six-monthly report.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha along with the Six

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Monthly Compliance Report.

- (v) Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out
- (vi) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.

**X. Miscellaneous**

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".
- (v) The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (vi) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project proponent shall inform the Regional Office, MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

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- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the State Level Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the SEIAA, Odisha.
- (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xiii) The SEIAA, Odisha may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiv) The SEIAA, Odisha reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xv) The Regional Office, MoEF&CC, Govt. of India, Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xvi) The above conditions shall 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, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- (xvii) Any appeal against this EC 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.

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**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR EXPANSION OF KALARANGIATTA CHROMITE MINE (ML AREA: 23.800 HA) FOR INCREASE IN PRODUCTION FROM 0.05 MTPA TO 0.15 MTPA CHROMITE ORE (ROM) WITH MAXIMUM EXCAVATION OF 0.438 MILLION CUM PER ANNUM THROUGH OPENCAST MINING AT VILLAGE KALARANGIATTA UNDER SUKINDA TEHSIL IN JAJPUR DISTRICT FOR M/S. FERRO ALLOYS CORPORATION LIMITED OF SRI SANDEEP KITTANA ACHARYA – EC.**

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**A. SPECIFIC CONDITIONS:**

- 1) Waste should be dumped on the earmarked sites within the mining lease area and no waste should be dumped outside the lease area.
- 2) The Project Proponent shall start the plantation and cover at least 50% of the proposed area under plantation in the next 5 years. The density of the plantation should not be less than 2500 saplings/Ha. The species to be selected for the plantation should be in consultation with local forest department or any other expert agency engaged for the same. The Project Proponent shall keep the record of saplings planted, survival rate, area covered under plantation, location etc. In addition to this gap filling needs to be done to as and when require for maintaining the density of plantation. The PP shall submit the drone images of area before and after the plantation. PP shall carry out pilot study for phytoremediation of hexavalent chromium through IMMT, CSIR, Bhubaneswar. The budget earmarked for the plantation shall be kept in separate bank account and audited annually. PP shall submit the detail such as photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation and outcome of the pilot study etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
- 3) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.
- 4) The amount proposed under **Corporate Environment Responsibility (CER)** head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
- 5) The amount (except occupational health) proposed under Environmental Management Plan (EMP) head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of

- MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1<sup>st</sup> July of every year for the activities carried out during previous year.
- 6) The amount proposed under Occupational Health plan head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.
  - 7) The Project Proponent shall set up an Environmental Management Cell comprises of persons having qualification and experience in the field of environment along with supporting staff. The details of the same needs to be submitted to the SEIAA, Odisha within 3 months of the grant of EC.
  - 8) The project proponent shall give an undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. before grant of ToR/ EC. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future.
  - 9) In case of violation of above undertaking, the ToR/Environmental Clearance shall be liable to be terminated forthwith.
  - 10) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
  - 11) State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
  - 12) The Project Proponent shall implement the short term and long term measures proposed to be taken in order to get rid from the adversity of Cr (VI) contamination, needs to be implemented and status report of the same along with benefit occurred needs to be submitted to Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha annually.
  - 13) The Project Proponent shall keep a record of each blasting viz. location, number of holes, delay assigned of each hole, explosive quantity of each hole, blasting pattern etc.

**B. STANDARD CONDITIONS: (AS MINISTRY'S O.M NO 22-34/2018-IA.III DATED 8.01.2019 & 16.01.2020)**

**Statutory compliance**

- 14) 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.

- 15) The Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- 16) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
- 17) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- 18) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- 19) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.
- 20) The Project Proponent shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- 21) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- 22) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-1A. II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- 23) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- 24) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- 25) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- 26) The Project Authorities should widely advertise about the grant of this EC letter by

printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the

- 27) State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change ([www.parivesh.nic.in](http://www.parivesh.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.
- 28) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

#### **Air quality monitoring and preservation**

- 29) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM 10, PM2.5, N02, CO and S02 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
- 30) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

#### **Water quality monitoring and preservation**

- 31) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
- 32) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-

- mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six- monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- 33) The Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
  - 34) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data 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, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
  - 35) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
  - 36) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.
  - 37) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by

concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

- 38) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

**Noise and vibration monitoring and prevention**

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

**Mining plan**

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

the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office.

### **Land reclamation**

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

lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

- 53) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- 54) Slope study by an expert of repute of water dumps to be done and submitted within six months from the date of issue of EC to SEAC / SEIAA

### **Transportation**

- 55) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load.
- 56) The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.
- 57) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt- conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
- 58) Haulage road shall be developed and maintained perennially and perpetually by the proponent in construction with the concerned authority of the Govt. and to this effect, the proponent shall submit an undertaking in form of a legal affidavit
- 59) Traffic density study if not done by domain expert, then the expert to be ratified / authenticated by domain expert and submitted within a month time.

### **Green Belt**

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

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

- 61) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- 62) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- 63) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-1 species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- 64) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

#### **Human Health Issues**

- 65) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.
- 66) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and

- educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carry out base line HRA for all the category of workers and thereafter every five years.
- 67) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
  - 68) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.
  - 69) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
  - 70) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
  - 71) The proponent shall implement the mitigative measures as suggested in the Study Report on effect of chromite mines to nearest human habitation.



- 72) Occupational health check-up shall be done by occupational health expert periodically for employees as well as nearby villagers.

**Corporate Environment Responsibility (CER)**

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

**Miscellaneous**

- 75) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC, Bhubaneswar and SEIAA, Odisha.
- 76) 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.
- 77) The project proponent shall install solar panel inside the mine to generate 5KW of power required for Administrative Building as proposed.
- 78) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
- 79) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC, Bhubaneswar and SEIAA, Odisha.
- 80) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
- 81) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
- 82) The SEIAA, Odisha or any other competent authority may alter/modify the above

conditions or stipulate any further condition in the interest of environment protection.

- 83) Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- 84) 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.
- 85) 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.

**SPECIFIC CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF INDIVIDUAL MINING LEASE OF PADAMPURI STONE QUARRY (2,3,4,6 & 7) UNDER CLUSTER APPROACH IS A STONE MINING PROJECT OVER A TOTAL AREA OF 11.33 HA / 27.997 ACRE AND IS LOCATED IN VILLAGE- PADAMPURI, TAHASIL &, DISTRICT- NUAPADA OF TAHASILDAR, NUAPADA – EC.**

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

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

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

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR  
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

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.

**SPECIFIC CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF INDIVIDUAL MINING LEASE OF BALANDA STONE QUARRY (1, 2, 3, 5, 6, 7, 8, 9 & 10) IN CLUSTER APPROACH OVER TOTAL CLUSTER AREA 37.915 HA LOCATED AT VILLAGE- VILLAGE- BALANDA, TAHASIL: LATHIKATA, DISTRICT: SUNDARGARH OF SRI PREM SAHU – EC.**

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

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

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

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR  
DECORATIVE 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

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.



**SPECIFIC CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF INDIVIDUAL MINING LEASE OF BASUPALI STONE QUARRY - 2 WITH PROPOSED EXCAVATION OF 5000 CUM/YEAR OF STONE OF TAHASILDAR BOLANGIR HAVING AN AREA OF 2.023 HA. LOCATED AT KHATA NO. 14 PLOT NO.79, VILLAGE BASUPALI UNDER BALANGIR TAHASIL OF BALANGIR DISTRICT, ODISHA (UNDER CLUSTER APPROACH FOR BASUPALI CLUSTER STONE QUARRY OVER AN AREA OF 9.67 HA WITH 5 INDIVIDUAL MINES) OF TAHASILDAR, BOLANGIR – EC.**

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1. This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Odisha, Hon'ble NGT and any other Court of Law, if any, as may be applicable to the quarry lease.
2. The Environmental Clearance is subject to obtaining requisite NBWL Clearance, if any, from the Standing Committee of National Board for Wildlife for Mining project.
3. The lessee shall implement the Pollution Control Measures and safeguards as proposed in the approved EIA/Environment Management Plan (EMP) in the cluster approach.
4. The lessee shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
5. Transport of minerals shall be done either by dedicated road or it should be ensured that the trucks/dumpers carrying the mineral should not be allowed to pass through the villages. The lessee shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density.
6. The lessee shall obtain NOC from concerned Block Development Officer (BDO) for usage of haulage road/Panchayat Road.
7. The lessee shall ensure safety of human life and livestock from accidents in case village / any habitation is very nearby the mining lease area.
8. The lessee shall ensure the safeguard and wellbeing of villagers and school, regular health monitoring of all residents in the area and the compliance Report shall be submitted to the regional office of the MOEF & CC and SEIAA, Odisha.
9. The lessee/concerned Tahasildar shall follow the detailed procedure for De-reservation of Gochar kissam land if involve in the lease area before going for mining activity.
10. Under no circumstances, the lessee shall use wagon drilling blasting during mining activity.

11. The lessee shall not store and use blasting materials/explosives inside the lease area without obtaining license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983.
12. The lessee shall obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water.
13. The lessee shall complete the rejuvenation of ponds if any within lease area on priority basis after obtaining Environment Clearance.
14. No mining activities shall be allowed in forest area, if any, for which the Forest Clearance is not available.
15. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Odisha.
16. No change in the calendar plan including excavation, quantum of mineral and waste should be made.
17. Mining shall be carried out as per the provisions outlined in the approved mining plan.
18. Protection of vegetation in the surrounding areas, and proper storage of solid waste, subgrade ore and their use have to be given priority during mining operation.
19. The illumination and sound at night at the lease area disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponents must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
20. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
21. The soil to be generated during mining activity shall be stacked in the earmarked temporary soil stack and shall be utilized for the plantation purpose to be undertaken around the respective hill/patch and adjacent to haul roads of the same in lease area.
22. The abandoned mine pit shall be converted to rain water storage tank and the rain water stored in pit shall be utilized for plantation as well as dust suppression.
23. Total Plantation shall be carried out within 2-3 years of mining activity and maintenance shall be continued in remaining years. Trees present in mining area shall be uprooted & transplanted in safety zone.
24. All the lease holders in a cluster to join hand through a registered MOU on cluster to cluster basis for laying of permanent pipeline by the side (one side) of the main haulage road with half-moon automatic sprinklers system for suppression of dust during movement of vehicles.
25. All the lease holders in a cluster should join hand for grading of the main haulage road to maintain the gradient facilitating smooth movement of vehicles.

26. The same cluster approach to be taken for development of green belt all around the cluster area baring catch dams for flow of runoff water during rainy season. These activities may be coordinated by the leadership in the cluster leases or RQP for the cluster with help from Revenue Inspector of the area for better results.
27. The SEIAA, Odisha may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
28. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
29. The above-mentioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.