

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 23RD AUGUST, 2023**

The SEAC met on 23rd August, 2023 at 03:30 PM by Virtual mode (VC) through video conferencing in Google Meet under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

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

CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):

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

ITEM NO. 01

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR DUMANGDIRI STONE QUARRY-IV PROJECT OVER AN AREA OF 13.456 HA FOR PRODUCTION OF 10070 CUM/YEAR OF STONE AT VILLAGE- DUMANGDIRI, TEHSIL- PANPOSH, DISTRICT- SUNDARGARH OF SRI AKSHAYA KUMAR PRAHARAJ - EC

1. This proposal is for Environmental Clearance for Dumangdiri Stone Quarry-IV project over an area of 13.456 Ha for production of 10070 cum/year of stone at Village- Dumangdiri, Tehsil- Panposh, District- Sundargarh of Sri Akshaya Kumar Praharaj.
2. **Category:** As per EIA notification 2006 and its subsequent amendment thereof, proposed project falls in category B1 under Schedule of item of 1(a)-Mining of Minerals.
3. Dumangdiri Stone Quarry-IV is located at village - Dumangdiri, Tehsil- Panposh, District- Sundargarh in Odisha. The project has been proposed by Sri Akshay Kumar Praharaj and doesn't come under DLC land.
4. The mining lease area was granted for 5 years period vide letter no. 489, dated 14.03.2022.
5. The mining plan has been approved vide letter no 386 Dated 16.03.2022. by Director of Mines Odisha, Bhubaneswar.

Proceedings of the SEAC meeting held on 23.08.2023 (Old proposals – compliance received)

J. Nayak
Environmental Scientist, SEAC

6. **TOR details:** TOR letter has been Issued vide letter no. 4561/SEIAA dated 19.05.2022.
7. **Public hearing details:** Public hearing was successfully executed on date 07-11-2022 in Dumangdiri Playground, Dumangdiri Village Under Panposh Tahasil of Sundargarh district. Issues raised during public hearing are air pollution and mitigation measures, surface water bodies and their management, ground vibration and noise, land use pattern, livestock and pasture land, employment and agriculture.
8. **Location and connectivity:** The Dumangdiri Stone Quarry- IV comes near village-Dumangdiri, Tehsil-Panposh, District- Sundargarh, Odisha. Geo-graphically the ML area extends from Longitude 84°48'28.80"E to 84°48'41.07"E and Latitude-22°21'25.10"N to 22°21'38.40"N. The area falls in Survey of India topo sheet No. F45G15. Nearest Electric Transmission is Line Pole is present in Dumangdiri Village at a distance of 900m from the lease boundary. Nearest Town is Panposh Tehsil is 14.71 Km. from the proposed area towards W. Nearest Airport is Biju Patnaik International Airport is approx 210.0 km towards SSE direction. Nearest Railway Station is Kuarmunda railway station at a distance of 6.4 Km in SSE direction. Nearest River Embankment is present at a distance of 1.1km from the lease boundary. Nearest Sanctuary / National Park /Eco-Sensitive Zone / Elephant Corridor/ Conservation Reserve is Ushakothi Wildlife Sanctuary : Approx 104 km from the lease boundary.
9. **Baseline data:** Meteorological data at the site was monitored during March 2022 to May 2022 representing pre monsoon season.
 - a) **Ambient air quality :** The Ambient Air Quality Monitoring reveals that of seven monitoring stations the minimum concentrations of PM₁₀ are 39.59 µg/m³ at AQ7 and maximum 62.54 µg/m³ at AQ3. The results of PM_{2.5} reveal that the minimum concentration of 18.47µg/m³ is recorded at AQ7, while maximum concentration of 30.02µg/m³ is found at AQ3.As far as gaseous pollutants SO₂ and NO_x are concerned, the prescribed CPCB limit of 80 µg/m³ for residential and rural areas had never surpassed at any selected station. The minimum & maximum concentrations of SO₂ are found to be 6.55 µg/m³ at AQ7 and 13.68 µg/m³ at AQ4 respectively. The minimum & maximum concentrations of NO_x are found to be 7.88 µg/m³ at AQ7 and 21.07 µg/m³ at AQ3 respectively.
 - b) **Water quality:** To assess the physical and chemical properties of water in the region, ground water samples from six locations& surface water from three locations were collected from various water sources around the mine lease area. The pH of the ground water samples in the region varied from 7.18 to 7.43.The results indicate groundwater is generally in conformity with the drinking water standards (IS: 10500) and surface water is in conformity with IS-2296 standards.
 - c) **Noise Levels:** The values of noise observed in some of the areas are primarily owing to vehicular traffic. Assessment of hourly night time Leq (Ln) varies from 32.5 to 44.9 dB (A) and the hourly daytime Leq (Ld) varies from 52.7 to 58.8 dB (A) during the night within the study area. The status of noise quality within the 10 km zone of the study area is, therefore, within the MoEF & CC standards.
 - d) **Soil quality:** 07 soil samples were collected in and around the mine lease area to assess the present soil quality of the region. The pH of the soil indicates that the soil is slightly alkaline in

nature. Based on the results, it is evident that the soils are not contaminated by any polluting sources.

10. **Topography:** The lease area is undulating land having gentle slope along all direction. The highest elevation of the lease area is 280 mRL towards centre and the lowest elevation is 240 mRL. Thus the maximum difference of 40 meter in altitude. Overall slope of the area is in SW.
11. **Reserves and total production:** The proposed production is 10,070 cu.m/year of stone by opencast Semi-Mechanized Mining Method.

	Category	Recovery Factor (95%)	Quantity in (cum)
Geological Reserves	Proved	0.95	2872422.9
	Probable	0.95	638600.5
	Possible	0.95	638600.5
Total (a)			4149623.8
Mineable Reserve	Proved	0.95	2374650.4
	Probable	0.95	494899.7
Total (b)			2869550.1
Total (a+b)			7019173.9

Year	Total Production in cum
1 st Year	10070
2 nd Year	10070
3 rd Year	10070
4 th Year	10070
5 th Year	10070
Total	50,350

12. **Mining method:** Mining will be done by opencast semi-mechanized method with adoption of drilling & blasting. Mining will be done by deploying machines like jackhammer, drill compressor, rock breaker, excavator and tractors/trucks. Tipper trucks will be used for transporting stone and waste. Drilling & blasting will be carried out as & when required. Lessee will take all necessary permission and do accordingly DGMS norms. Blasting will be carried out by an employed blaster. Short hole blasting will be practiced.
13. **Water requirement:** The total water requirement will be around 5.50 KLD. This water will be supplied from the nearby area.

Activity	Calculation	Round off Figure KLD
Drinking	@ 10 lpcd per labor $25 \times 10 / 1000 = 0.25$ KLD	0.25 KLD

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Dust suppression	Total haulage road to be water sprinkled =160 m 160 m*6m*0.5 lt/sqm *2times/1000= 0.96 KLD	0.96 KLD
Plantation	2112 plants in five year @ 2L/per plant= 2112*2= 4224/1000= 4.224 KLD	4.224 KLD
Total		5.434 /5.50 KLD

14. **Waste generation:** A total of 2650 cum waste/rejects is likely to be generated during the plan period. A temporary dump has been proposed on the eastern part of the lease area. The amount of waste generated shall be kept within the lease area for a very short period of time and shall be used for road construction and maintenance time to time. About 0.007 Ha area has been proposed for temporary dump. As the dump shall have only one terrace and the height of dump shall not exceed 8m also the stack shall be for a very short period of time each year hence retaining walls/garland drains are not essential.

Year	Waste /Rejects in cum
1st Year	530
2nd Year	530
3rd Year	530
4th Year	530
5th Year	530
Total	2650

15. **Greenbelt:**

Year	Green belt Nos.			Total Plantation
	Safety zone	Plantation along Approach road	Plantation at other place in village after consulting local authorities	
1 st	1452	160	100	1712
2 nd	Maintenance	Maintenance	100	100
3 rd			100	100
4 th			100	100
5 th			100	100
Total	1452	160	500	2112

16. **Manpower:** The number of working people required for the proposed project is 25.

17. **Project cost:** Estimated cost of the proposed project is 50 Lakhs. EMP budget includes a capital cost of Rs. 4,62,400 and recurring cost of Rs. 3,26,000

Table: EMP budget

S. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
i)	Pollution Control	--	1,00,000

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	Dust Suppression /Water Sprinkling		
ii)	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	--	50,000 40,000 10,000 10,000
iii)	Green belt development	4,22,400	50,000
iv)	Maintenance of approach road	40,000	66,000
Total		4,62,400	3,26,000

Table: CER budget

S. No.	Activity	Capital Cost (in Rs.)/annum
i)	Financial aid for medical camp in Dumangdiri village. @ Rs. 25,000/ camp (2 camp in a year).	50,000
ii)	Skill development program camps like computer learning, sewing etc. in Dumangdiri village. @Rs 25,000/trainer (2 trainer)	50,000
TOTAL		1,00,000

18. **Environment Consultant:** The Environment consultant M/s P & M Solution, Noida along with the proponent made a presentation on the proposal before the Committee on 07.07.2023.
19. The SEAC in its meeting held on dated 07-07-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Status of Stone quarry – I, II and III along with distance certificate from concerned Tahasildar from stone quarry – IV.	Dumangdiri Stone Quarry –I & II are permanently closed/extinct on dt 16.06.2022. Hence Stone quarry I & II were not included in application for obtaining EC. The distance between Dumangdiri Stone Quarry – III & IV is more than 1Km.	-
ii)	Clarify the discrepancy of water requirement and discharging wastewater into nearby Dam in PPT and EIA [as compliance to TOR 9 (ii)].	There will be no discharge of waste water into nearby Dam, (a) Sources of inflow water in the mine are Rain water within the lease area, (b) Surface Run-off water from the adjacent area. No pumping arrangement is required within the plan period, because rain water will be diverted in to low lying area through drain which not allow the rainy-off water into the pit.	-
iii)	The proponent assured (as compliance to TOR 18) to submit the NOC/Certificate from the respective	The NOC/ certificate regarding the road use from the respective panchayat is obtained & annexed	Copy attached

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Trayak
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	Panchayat to use the road during the final presentation for EC. But they failed to do the same. So, the proponent must submit the same.	herewith.	
iv)	Reduced Level (RL) of the reservoir, RL of ground water level during summer and rainy season as well as RL of surface post mining as per the approved mining plan.	Reduced Level of the nearby reservoir which is about 2.5km away from the lease is 229m. RL of ground water level during summer is ranging between 215m-220m & rainy season is 220m-225m. RL of surface post mining as per the approved mining plan is 240m which is much above the water table.	-
v)	NOC from Mandira Dam authorities for operation of the mines near to the Dam.	Mandira Dam is situated at a distance of 15Km from the Dumangdiri Stone Quarry –IV. Hence Mandira dam will not be affected due to quarry operation in Dumangdiri Stone Quarry – IV.	NOC from Mandira Dam authorities for operation of the mines near to the Dam not submitted.
vi)	Details of blasting planning such as numbers of blasting per day, time of each blasting etc.	Short hole Muffled/Controlled blasting technique will be adopted Monthly production is very less i.e, 839.16m ³ . Hence for a achieving this much quantity, per day blasting is not needed. Number of blasting shall be 2/3 times per month.	-
vii)	Distance from habitation and layout indicating no mining zone towards habitation.	The nearest habitation is situated approximately 800 meters away from boundary of Dumangdiri Stone Quarry – IV. As a result of this considerable distance, there is no necessity for a no-mining zone in this specific instance.	Layout not submitted.

Considering the information furnished and the presentation made by the consultant, **M/s P & M Solution, Noida** along with the project proponent, the SEAC recommended for grant of Environmental Clearance upto lease period with stipulated conditions as per Annexure – A and following additional conditions;

- i) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.
- ii) 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 decorative stone quarry for ensuring that working personnel are not affected by silicosis.
- iii) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is

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fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.

- iv) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the Annexure – B.

ITEM NO. 02

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR DUMANGDIRI STONE QUARRY - III OVER AN AREA 20.364 HA AT DUMANGDIRI VILLAGE IN PANPOSH TEHSIL, DISTRICT SUNDARGARH OF SRI DULAL CHOUDHARY - EC

1. This proposal is for Environmental Clearance for Dumangdiri Stone Quarry - III over an area 20.364 ha at Dumangdiri village in Panposh Tehsil, District Sundargarh of Sri Dulal Choudhary.
2. **Category:** As per EIA notification 2006 and its subsequent amendment thereof, proposed project falls in category B1 under Schedule of item of 1(a)-Mining of Minerals.
3. The Dumangdiri Stone Quarry-III project has been proposed by Sri Dulal Choudhary. The mining plan has been approved vide letter no 1445/Mines Dated 02.07.2020. by Director of Mines Odisha, Bhubaneswar.
4. **TOR details:** TOR letter has been Issued vide letter no. 4593/SEIAA dated 19.05.2022
5. **Public hearing details:** Public hearing was successfully executed on date 07-11-2022 at Dumangdiri Playground, Dumangdiri Village Under Panposh Tahasil of Sundargarh district. Issues raised during public hearing are air pollution and mitigation measures, surface water bodies and their management, ground vibration and noise, land use patten, livestock and pasture land, employment and agriculture.
6. **Location and connectivity:** The Dumangdiri Stone Quarry-III comes near village-Dumangdiri, Tehsil Panposh, District Sundargarh, Odisha. Geo-graphically the ML area extends from Longitude 84°47'58.65" E to 84°04'07.14"E and Latitude 22° 22' 08.86"N to 22° 22'27.05" N with an elevation of about 340mRL to 260mRL. The area falls in Survey of India topo sheet No. F45G15. Nearest Electric Transmission Line Pole is present in Dumangdiri Village at a distance of 500m from the lease boundary. Nearest Town is Birmitrapur is at 7.51 Km in NW direction. Nearest Airport is Biju Patnaik International Airport, is approx 210.0 km towards SE direction. Nearest Railway Station is Kaurmunda railway station at a distance of 7.00 Km in SSW. Nearest Highway is NH-143 which is approx 5.54 km in W direction. Nearest river embankment is at a distance of 2.8 Km from the lease boundary.
7. **Baseline data:** Meteorological data at the site was monitored during March 2022 to May 2022 representing pre monsoon season.
 - a) **Ambient air quality:** The Ambient Air Quality Monitoring reveals that of seven monitoring stations the minimum concentrations of PM₁₀ are 39.59 µg/m³ at AQ7 and maximum 62.54 µg/m³ at AQ3. The results of PM_{2.5} reveal that the minimum concentration of 18.47µg/m³ is recorded at AQ7, while maximum concentration of 30.02 µg/m³ is found at AQ3. As far as gaseous pollutants SO₂ and NOx are concerned, the prescribed CPCB limit of 80 µg/m³ for residential and rural areas

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had never surpassed at any selected station. The minimum & maximum concentrations of SO₂ are found to be 6.55 µg/m³ at AQ7 and 13.68 µg/m³ at AQ4 respectively. The minimum & maximum concentrations of NO_x are found to be 7.88 µg/m³ at AQ7 and 21.07 µg/m³ at AQ3 respectively.

- b) **Surface water:** The analysis results indicate that the pH ranges between 7.25 and 7.46. Dissolved Oxygen (DO) was observed in the range of 6.4 to 7.2 mg/l against the minimum requirement of 4 mg/l. BOD values were observed to be in the range of 4.0 - 7.8 mg/l.
- c) **Ground water:** pH varies from 7.18 at GW1 to 7.43 at GW2 during study period. Total hardness varies from 148.0 mg/l at GW5 to 184mg/l at GW1 during study period. Total dissolved solids vary from 386.0 mg/l at GW5 to 502 mg/l at GW4 during study period.
- d) **Noise Level:** The values of noise observed in some of the areas are primarily owing to vehicular traffic. Assessment of hourly night time Leq (Ln) varies from 32.5 to 45.6 dB (A) and the hourly daytime Leq (Ld) varies from 52.7 to 58.8 dB (A) during the night within the study area. The status of noise quality within the 10 km zone of the study area is, therefore, within the MoEF & CC standards.
- e) **Soil quality:** 07 soil samples were collected in and around the mine lease area to assess the present soil quality of the region. The pH of the soil indicates that the soil is slightly alkaline in nature. Based on the results, it is evident that the soils are not contaminated by any polluting sources.
8. **Reserves and total production:** As estimated Geological Reserves and Mineable Reserve of the proposed project is 7446576.9 and 3956682.6 cum respectively.

	Category	Recovery Factor (95%)	Quantity in (cum)
Geological Reserves	Proved	0.95	4674358.3
	Probable	0.95	1833942.8
	Possible	0.95	938276.2
Total (a)	-	0.95	7446576.9
Mineable Reserve	Proved	0.95	3077880.3
	Probable	0.95	878802.3
Total (b)	-		3956682.6
Total (a+b)	-		11403259.5

Year	Volume of Rock Mass in cum	Volume of waste rock mass @ 5%: m ³	Vol. of Usable Rock mass(95%) m ³	Total Production in cum
1 st Year	10530	526.5	10004	10004
2 nd Year	10530	526.5	10004	10004
3 rd Year	10530	526.5	10004	10004

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Jayak
Environmental Scientist, SEAC

4 th Year	10530	526.5	10004	10004
5 th Year	10530	526.5	10004	10004
Total	52650	2632.5	50020	50020

9. **Mining method:** Mining will be done by opencast semi-mechanized method with adoption of drilling & blasting. Mining will be done by deploying machines like jackhammer, drill compressor, rock breaker, excavator and tractors/trucks. Tipper trucks will be used for transporting stone and waste. Drilling & blasting will be carried out as & when required. Lessee will take all necessary permission and do accordingly DGMS norms. Blasting will be carried out by an employed blaster. Short hole blasting will be practiced.

10. **Water requirement:** the water requirement for workers for drinking purpose will be around 0.25 KLD & the total water requirement will be around 11.50 KLD. This water will be supplied from the nearby area.

Purpose	Total (in KLD)
Domestic & drinking	0.25
Dust suppression	3.72
Green belt development	7.47
Total	11.44-11.50 KLD

11. **Waste generation:** A total of 2632.5 cum waste/rejects is likely to be generated during the plan period. Considering swell factor of 1.2 the total broken volume of waste will be 3159 cum which will be dumped in the dumping site which will cover an area of 360 sqm, so the dump height will be 10 m. Depending upon the essentially about 70 % of these waste/rejects will be utilized concurrently for backfilling and construction and maintenance of road in the lease area

Year	Waste /Rejects in cum
1st Year	526.5
2nd Year	526.5
3rd Year	526.5
4th Year	526.5
5th Year	526.5
Total	2632.5

12. Greenbelt:

Year	Greenbelt Nos.			Total Plantation
	Safety Zone Area	Plantation along approach road	Plantation at other places in village after consulting local authorities	

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1st	2615	620	100	3335
2nd	Maintenance		100	100
3rd			100	100
4th			100	100
5th			100	100
Total		2615	620	500

13. **Manpower:** The number of working people required for the proposed project is 25.

14. **Project cost:** Total cost of the project is 50 Lakhs. EMP budget includes a capital cost of Rs. 9,02,000 and recurring cost of Rs. 3,26,000.

Table: BUDGET ALLOCATION FOR EMP IMPLEMENTATION

S. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
i)	Pollution Control Dust Suppression /Water Sprinkling	--	1,00,000
ii)	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	--	50,000 40,000 10,000 10,000
iii)	Green belt development	7,47,000	50,000
iv)	Maintenance of approach road	1,55,000	66,000
Total		9,02,000	3,26,000

Table: CER cost

S. No.	Activity	Capital Cost (in Rs.)/annum
i)	Financial aid for medical camp in Dumangdiri village. @ Rs. 25,000/ camp (2 camp in a year).	50,000
ii)	Skill development program camps like computer learning, sewing etc. in Dumangdiri village. @Rs 25,000/trainer (2 trainer)	50,000
TOTAL		1,00,000

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

16. The SEAC in its meeting held on dated 07-07-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Status of Stone quarry – I, II and IV along with distance certificate from concerned Tahasildar from stone quarry – III.	Dumangdiri Stone Quarry –I & II are permanently closed/extinct on dt. 16.06.2022. Hence Stone quarry I & II were not included in application for obtaining EC. The distance between Dumangdiri Stone Quarry – III & IV is more than 1Km.	-

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Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
ii)	Clarify the discrepancy of water requirement and discharging wastewater into nearby Dam in PPT and EIA [as compliance to ToR 9 (ii)].	There will be no discharge of waste water into nearby Dam (a) Sources of inflow water in the mine area Rain water within the lease area (b) Surface Run-off water from the adjacent area. No pumping arrangement is required within the plan period, because rain water will be diverted in to low lying area through a drain. The working area will have a garland drain which will not allow the rainy-off water into the pit.	-
iii)	The proponent assured (as compliance to TOR 18) to submit the NOC/Certificate from the respective Panchayat to use the road during the final presentation for EC. But they failed to do the same. So, the proponent must submit the same.	The NOC/certificate regarding the road use from the respective Panchayat is obtained & annexed herewith.	Copy attached
iv)	Reduced Level (RL) of the reservoir, RL of ground water level during summer and rainy season as well as RL of surface post mining as per the approved mining plan.	Reduced Level of the nearby reservoir which is about 2.5km away from the lease is 229m. <ul style="list-style-type: none"> - RL of ground water level during summer is ranging between 215m-220m & rainy season is 220m-225m. - RL of surface post mining as per the approved mining plan is 279m. which is much above the water table. 	-
v)	NOC from Mandira Dam authorities for operation of the mines near to the Dam.	Mandira Dam is situated at a distance of 16Km from the Dumangdiri Stone Quarry-III. Hence Mandira Dam will not be affected due to quarry operation in Dumangdiri Stone Quarry – III.	NOC from Mandira Dam authorities for operation of the mines near to the Dam not submitted.
vi)	Details of blasting planning such as numbers of blasting per day, time of each blasting etc.	Short hole Muffled/ Controlled blasting technique will be adopted. Monthly production is very less i.e, 877.5m ³ . Hence for achieving this much quantity. Per day blasting is not needed. Number of blasting shall be 2/3 times per month.	-
vii)	Distance from habitation and layout indicating no mining zone towards habitation.	Nearest Notification is adjacent to the lease area. So 300m non-mineable zone has been proposed in the Mining Plan. As	Layout not submitted.

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Trayak
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		per mining plan the proposed mining area is more than 500m from the nearest habitation. Proposed mining zone is not towards habitation, Yearly excavation/mining will be carried out in opposite direction of the habitation.	

Considering the information furnished and the presentation made by the consultant, **M/s P & M Solution, Noida** along with the project proponent, the SEAC recommended for grant of Environmental Clearance upto lease period with stipulated conditions as per Annexure – A and following additional conditions;

- i) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.
- ii) 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 decorative stone quarry for ensuring that working personnel are not affected by silicosis.
- iii) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.
- iv) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the Annexure – B.
- v) The EC is subject to submission of layout showing the safety zone and mineable zone which the PP needs to adhere.

ITEM NO. 03

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR PANKALABADI - B SAND QUARRY OVER AN AREA OF 12.682 ACRES/ 5.132HA. LOCATED IN VILLAGE - PANKALABADI, TAHASIL - DHARAKOTE IN DISTRICT – GANJAM OF SRI. KRUPASINDHU MUDULI - EC

1. This proposal is for Environmental Clearance of Pankalabadi - B Sand quarry over an area of 12.682acres/ 5.132Ha. located in village - Pankalabadi, Tahasil - Dharakote in District – Ganjam of Sri. Krupasindhu Muduli.
2. **Category:** As per the EIA Notification,2006 and its subsequent amendments, this project falls in category B under Schedule of activity 1(a)- Mining of Minerals.
3. The mining lease granted by Tahasildar, Dharakote, Ganjam has been auctioned and leased out to the successful bidder Sri. Krupasindhu Muduli, S/o – Jhuriya Muduli, At – Ramakrushna Nagar, 2nd Line, PO – Lochapada, Berhampur, Dist – Ganjam after obtaining statutory

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clearances. The mining lease will be granted on for long term basis for 5 years and the lease period will start from the date of registration of executed lease deed.

4. Letter of Intent has been issued by Tahasildar, Dharakote to the successful bidder Sri. Krupasindhu Muduli vide letter no.1088 dated 31.03.2022.
5. The Mining plan has been approved by the Deputy Director of Geology (Authorised Officer), O/o The Joint Director of Geology (S.Z), Berhampur vide memo no – 594/SZ on dated 02.05.2022.
6. The mining lease area is listed as an identified sand minor mineral in Page – 93, Serial no 3, in DSR of the Ganjam district.
7. **TOR details:** Terms of Reference (TOR) was granted by SEIAA, Odisha vide letter No. 5189 dated: 19.08.2022.
8. **Public hearing details:** The public hearing in respect of the above project was held on 25.11.2022 as per schedule and the venue in accordance with the EIA notification S.O.1533 (E) dt.14.09.2006 near to lease area. Issues raised during public hearing are air pollution control (water sprinkling, plantation in nearby school and roads, employment to locals, health care (health camp, blood donation camp etc. in nearby village namely Laxmipur.) drinking water (Installation of RO plant to nearby village) and maintenance of roads. The budget incurred for the action plan of public hearing is Rs.3,50,000.
9. **Location and connectivity:** The Pankalabadi - B Sand quarry is on Khata no- 319, Plot no – 1837 & 2231 of Kisam Nadi at village Pankalabadi in Dharakote Tahasil in Ganjam District of Odisha. The area under discussion is featured in Survey of India Topo Sheet No – E45A10 and is bounded between the Latitude -19° 36' 23.47" N to 19° 36' 27.53" N and Longitude – 84° 38' 20.24" E to 84° 38' 38.68" E. Village Pankalabadi is located at a distance of 1.06 km SSW from the lease area and Dharakote at a distance of 10 km NW direction, 58 km from the District Headquarters Ganjam and 145 km from the State Capital Bhubaneswar. Brahmapur Railway Station is the nearest railway station located at a distance of 38 kms from the lease area. Nearest Road Bridge is at a distance of 2.85 km East direction from the mining lease area. Unmetalled road from the lease area of 124 meter is connecting to Pankalabadi Village road and it is connecting to NH 59. NH- 59 is the nearest National Highway which is at a distance of 0.85 km S direction. The proposed area falls in seismic Zone – II as per IS – 1893 (Part-1) – 2002. The nearest river embankment located at a distance of 1.88km from the mining lease.
10. There is no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/ Elephant Reserves (existing) is situated within 10km of the mining lease area.
11. **Replenishment study:** The volume of sand available after post monsoon is around 14,040 m³, which can be treated as safe extractable within the framework of the study after arrival of river level. Further volume of sand which can be extracted (Pre- monsoon survey date) is 23,130.72 m³. As it is a new mine no excavation has done in this year. But in post-monsoon the available area for mining is 13000 m² and available sand is 14,040 m³ whereas, approved production capacity for the year is 12,000 m³.
12. **Baseline details:** One season data of ambient air quality, water quality, noise level, meteorology, soil and flora and fauna has been collected during pre-monsoon season March 2022 to May 2022.

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- a) Air quality: PM10: - The maximum value for PM10 observed at project site location 70 $\mu\text{g}/\text{m}^3$ and minimum value at Mangalpur Village 44.2 $\mu\text{g}/\text{m}^3$. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 100 $\mu\text{g}/\text{m}^3$. The maximum value for PM2.5 observed at project site location 44.1 $\mu\text{g}/\text{m}^3$ and minimum value observed at Mangalpur Village 26.0 $\mu\text{g}/\text{m}^3$. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 60 $\mu\text{g}/\text{m}^3$. The maximum value for SO2 observed at project site location 11.3 $\mu\text{g}/\text{m}^3$ and minimum value observed at Damodarpalli Village 5.1 $\mu\text{g}/\text{m}^3$. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80 $\mu\text{g}/\text{m}^3$. The maximum value for NO2 observed at project site location 19.6 $\mu\text{g}/\text{m}^3$ and minimum value observed at Damodarpalli Village 7.3 $\mu\text{g}/\text{m}^3$. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80 $\mu\text{g}/\text{m}^3$. The maximum value for CO observed at Laxmipur location 1.07 mg/m^3 and minimum value observed at Baharhaguraha Village 0.43 mg/m^3 . The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 4 mg/m^3 .
- b) Ground Water -The analysis results of ground water samples showed: the pH in range of 7.06- 8.07 which are with the specified standard limits of 6.5 to 8.5. Color and turbidity of the samples < 5.0 Hazens and <1.0 NTU respectively. The total hardness of the samples ranged from 358.8 mg/l – 400.89 mg/l . Calcium and magnesium concentrations ranged from 55 mg/l -71.1 mg/l and 29.92 mg/l –46.8 mg/l respectively. The total dissolved solids of the samples ranged from 568 mg/l – 746.8 mg/l . The TDS values are within the stipulated 2000 mg/l . Range of chlorides and sulphates concentrations ranges from 110.3 mg/l - 152.4 mg/l and 39.6 mg/l – 53.46 mg/l respectively. Fluoride concentration ranged from 0.32 mg/l – 0.44 mg/l and is found to be within the permissible limits. Iron concentrations in ground water varied from 1.11-1.32 mg/l . Zinc levels varied from 0.55-0.81 mg/l respectively. Aluminium concentration in ground water is <0.02 mg/l at all locations.
- c) Surface Water- The analysis results indicate that pH and total coliform of the Surface water was found to be in range of 7.5 – 8.2 and 160 - 340 MPN/100ml.
- d) Soil Status- It has been observed that the pH of the soil in the study area ranged from 7.01 to 7.83. The electrical conductivity was observed to be in the range of 347.28 $\mu\text{mhos}/\text{cm}$ to 387.0 $\mu\text{mhos}/\text{cm}$. The total nitrogen values range between 106.4 to 179.4 mg/kg . The phosphorus values range between 42.3 to 56.08 mg/kg , indicating that the phosphorus content in the study area falls in less to medium category. The potassium values range between 186.3 – 227.3 mg/kg
- e) Noise study: The daytime (Leqday) noise levels are observed to be in the range of 46.4 – 54.6 dB(A) which are within the prescribed limit of 55 dB(A). The maximum noise level of 54.6 dB (A) was observed at project site and the minimum noise level of 46.4 dB(A) was observed at Village Damodarpalli during the study period. It is observed that the day time noise levels are in accordance to the prescribed limit of 55 dB (A). The nighttime (Leqnight) Noise levels are observed to be in the range of 34.8 – 43.8 dB(A) Which are within the prescribed limit of 45 dB(A). The maximum noise level of 43.8 dB (A) was observed at project site and the minimum noise level of 34.8 dB (A) at Village Damodarpalli during the

study period. It has been found that the night time noise levels are in accordance to the prescribed limit of 45 dB (A)

13. **Reserves and total production:** As estimated, total geological reserves is 54,229.2 cum and total mineable reserve is 38551.2 cum/annum. Extractable mineable reserve is 23130.72 cum. The proposed production is 16,000 m³ per year and 80,000 m³ for five years.
14. **Mining method:** The sand will be excavated by open cast manual method and thickness of sand deposit for mining is taken as 1.0m. Handpicks and spade axe will be used by laborers for extracting & loading of sand. Keeping in view of the market demand and resource availability in respect of reserves, proposed sand quarry is scheduled to produce @ 16000 cum/year for the plan period.
15. **Water requirement:** Water requirement for the project will be 3 KLD. Water required in the project will be for drinking purpose and dust suppression, which will be sourced from water tanker. NOC will be obtained from Gram Panchayat.
16. **Mine Drainage:** The entire deposits will be protected by making barrier around the lease boundary. Mining will be done above the water level of river. Anything accumulating inside the quarry due to occasional rain will be allowed to percolate into the quarry floor.
17. **Greenbelt:** Greenbelt will be developed in the buffer zone of mine lease area and village haulage roads side also. It is proposed for planting 250 saplings suitable per annum by the lessee in vicinity of the riverbank and haulage road side. Plantation shall be done with suitable local species like teak, mango, Jammu, jhaun, neem etc. per year and along the approach road during the plan period.
18. **Manpower:** Employment Generation from the project is 23 nos. of people. Indirect employment through creation of shops/ stalls, hired vehicles, etc. also, can be generated to full fill the day-to-day requirements of the mining personals.
19. **Project cost:** The total project cost is Rs. 50 Lakhs only. EMP cost includes capital cost of 4.70 Lakhs and recurring cost of 2.35 Lakhs.

S. No.	Description	Capital Cost (Rs.)	Recurring Cost (Rs.)
i)	Air pollution Control: Dust Suppression/ Water Sprinkling	30,000	1,00,000
ii)	Road Maintenance	50,000	60,000
iii)	Greenbelt	40,000	25,000
iv)	Personal Protective Equipment	-	20,000
v)	Environmental monitoring	-	30,000
vi)	Addressal of Public Hearing issues	3,50,000	-
Total		4,70,000/-	2,35,000

20. **Environment Consultant:** The Environment consultant M/s Parivesh Environmental Engineering Services (PEES), Lucknow - 22 along with the proponent made a presentation on the proposal before the Committee on 24.04.2023.

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21. The SEAC in its meeting held on dated 24-04-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Pankalabadi - A sand quarry is coming within 500-meter distance of the Pankalabadi - B sand quarry. The Tahasildar intimated that Pankalabadi - A sand quarry is already closed and no auction to be done in future for mining activity in Pankalabadi - A sand quarry. An undertaking to be submitted for closure of Pankalabadi - A sand quarry mentioning in future no auction to be done and no more mining activities will be carried out in the said quarry.	Undertaking from Tahasildar, Dharakote for closure of Pankalabadi - A Sand Quarry has been attached as Annexure - 1.	Copy submitted
ii)	KML file shows already mining activity has been carried out in Pankalabadi - B sand quarry. The Tahasildar has intimated that they have already obtained EC earlier for mining activity. Copy of earlier EC and compliance to earlier EC conditions certified by Tahasildar to be submitted.	Earlier EC Compliance Report certified by Tahasildar, Dharakote has been attached as Annexure - 2.	complied
iii)	Revised replenishment study along with all the details.	Revised replenishment study report has been attached as Annexure - 3.	To be verified by SEAC
iv)	Standard Operating Procedures (SOP) for transportation of Sand in the road passing through village.	Standard operating Procedures (SOP) for transportation of sand has been attached as Annexure - 4.	submitted
v)	In the public hearing, people raised demand for maintenance of 7.7 km road through which sand is transporting. Detailed proposal for maintenance of 7.7 km road through which sand is transporting is to be submitted.	Letter has been attached as Annexure - 5.	submitted

Considering the information furnished and the presentation made by the consultant, M/s Parivesh Environmental Engineering Services, Lucknow, along with the project proponent, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure - C and following specific conditions:

- Mining Plan has been approved for extraction of sand for quantity of 16000cum/annum. However, Replenishment Study Report reveals that 14040cum/annum sand can be extracted. Hence, EC may be recommended for extraction of 14040m³/annum of sand based on replenishment study as it is within the capacity approved in mining plan.
- Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per Annexure - D.

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- c) Sand extraction shall be limited to quantity and depth as per replenishment study report. Regular replenishment study as per guidelines to be conducted and report to be submitted.
- d) Provision of Bio-toilet shall be made at the site.
- e) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- f) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

ITEM NO. 04

PROPOSAL OF AMENDMENT ENVIRONMENTAL CLEARANCE OF M/S. JINDAL STAINLESS LIMITED FOR JINDAL CHROMITE MINES (ML AREA 89.00HA) LOCATED IN THE VILLAGE KALIAPANI, TEHSIL-SUKINDA, DISTRICT-JAJPUR OF SRI SABYASACHI MOHAPATRA – MOD EC

1. This proposal is for amendment Environmental Clearance of M/s. Jindal Stainless Limited for Jindal Chromite Mines (ML Area 89.00ha) located in the village Kaliapani, Tahasil-Sukinda, District - Jajpur of Sri Sabyasachi Mohapatra.
2. **Category:** It is an open cast mining with shovel dumper combination. As per new notification no. 3977(E) dated 14.8.2018 mining lease area less than 100 ha. and falls in category "B".

Statutory clearance details:

Sl. No.	Approval	Letter No	Valid till
i)	Mining Plan Approval	BBS/JJP/CR/2174/MPM/2022-23 Date:17.08.2022	31.03.2026
ii)	Environment Clearance approval	EC22B001OR115726, date:04.04.2022	03.01.2052
iii)	Forest Clearance approval	8-68/2000-FC, Date:20.04.2023	03.01.2052
iv)	Consent to Operate	5413 IND-I-CON-2562 Date:31.03.2023	31.03.2024
v)	CGWA permission for drawl of water for 48 KLD for domestic consumption	CGWA/NOC/MIN/REN/1/2023/7562 Date:28.03.2023	22.02.2025
vi)	DGMS permission for CBM	180050/SEZ/BBSR Region/Perm/2022/ 238108 Date:06.06.2022	Till completion of CBM

3. **Amendment justification:** Amendment is sought for incorporating opencast mining operation and allied activities in the 7.5 mtr. of Safety Zone area inside JSL lease (sharing Common Boundary between JSL and TSML) in addition to the opencast mining. It may be noted that the mining will be restricted within JSL lease hold area only. Due to the above said operations there will be no change in production capacity and no change/ increase in Mining Lease area and hence; no

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Environmental Scientist, SEAC

increase in pollution load. JSL has made MoU with TSML and BAL for Common Boundary mining in the Safety Zone area of JSL, for which DGMS permission and Mining Plan approval from IBM have already been obtained. Hence the project proponent proposes to carry out Mining operation and allied activities in the 7.5 mtr. Safety Zone area, inside JSL Lease near common boundary with TSML (i.e. Western boundary of JSL and Eastern boundary of TSML) along with existing provision of common boundary mining with BAL as well as development and production from Quarry 1 & 2 in line with the approved Mining Plan and EC. As per the present approved Mining Plan the total Mineable Reserve is 3.81 Million Tonnes as on 01.04.2022. Around 0.6 Million Tonnes of Chromite Ore is locked up in the benches within 7.5 m of safety zone of mine lease area, which can be extracted by the JSL. Therefore, the company is requesting for the amendment in the Existing Environmental Clearance dated 04.04.2022.

4. **Mine lease:** The mining lease over 89.00 ha. in village Kaliapani & forest block - 27 for chrome ore was executed on 4.1.2002 for 20 yrs i.e. from 4.1.2002 to 3.1.2022. As per section 8A (3) of MM(D&R) Amendment Act 2015, the lease period has been extended for a period of 50 yrs i.e. up to 03.01.2052 (with effect from 04.01.2002) and the supplementary lease deed for extended period has been executed on 08.06.2022.
5. **Mining/Project details:** Mining shall be carried out within 7.5m of the boundary (common with TSML) as per the MOU signed with between M/s. Tata Steel Mining Ltd. (TSML). For this all necessary regulatory approvals to excavate locked up Chromite Ore have already been obtained. TSML & JSL will abide by the guidelines and conditions laid down by the regulatory authorities.
6. Permission under Regulation 111(3) of the Metalliferous Mines Regulations, 1961 to work within 7.5m of the common boundary between Sukinda Chromite Mine of TSML and Jindal Chromite Mine of JSL has already been obtained from Directorate General of Mines Safety, (DGMS) vide letter no. 180050 SEZ Bhubaneswar Region, Perm/2022/238108 dated 06.06.2022, along with approved Mining Plan by Indian Bureau of Mines.
7. **Location and connectivity:** Jindal Chromite Mine is located at village Kaliapani, Sukinda Tehsil, Jajpur District, Odisha. The Mining Lease falls within the Latitude – 21° 01' 04.39824" to 21° 02' 03.53184" (N) & Longitude – 85° 45' 18.17352" to 85° 46' 31.69704" (E). It falls on Survey of India Topo Sheet No - F 45 N16. The nearest rail head is TOMKA, which is about 30 km from the Mine lease area. National Highway (NH-200) passes at a distance of 30 km from the lease area; Jajpur district head quarter is about 85 km from the area.
8. **Topography:** The Chromite lease area of JSL is situated in Sukinda valley, with Mahagiri hill range on the southern side is largely covered with alluvium and thick horizons of laterite. The valley lies between the Mahagiri hill (707.69 m) on the south side and Daitari range (782.42 m) on the north side. The area exhibits peneplained topography, marked by linearly disposed mounds of low relief. The maximum elevation in the area is 310 MRL on the southern side, while the minimum elevation is 116 MRL on the north-west portion of the area. The overall slope of the area is from SE to NW.
9. There is no national park, wild life sanctuary, national monuments or places of interest for tourist existing in the lease hold area as well as in buffer zone, as per DFO, Cuttack Forest Division vide memo no. 2198 dated 27.4.2010.

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10. **Reserves:** Total Mineral Resource (Geological Reserve & Resources) is 11.246 Million tonnes and Movable Reserve is 3.8157 Million tonnes.
11. **Production Capacity:** As per existing Environment Clearance (EC22B001OR115726 date 04.04.2022 by SEIAA, Odisha) production capacity is 0.215 MTPA along with 60000 TPA from COBP.
12. **Proposed Mining Method:** The existing opencast mechanised mining method shall be continued for Common Boundary Mining in the safety zone area in Band – 1 (Quarry -1) with M/s Tata Steel Mining Limited & M/s Balasore Alloy Limited. Mining in Quarry-1 and Quarry-2 within the ML area shall continue, additionally.

Band- 1 (Quarry – 1)

- Mining shall be carried out in safety zone area on a common development programme with adjacent mine of Tata Steel Mining Limited & Balasore Alloy Limited. Both lessees (M/s TSML & M/s JSL) have obtained the permission from concerned regulatory authorities.
- The ore will be excavated in safety zone along common boundary, following safe and scientific mining method keeping in view the conservation and optimum utilisation of minerals.
- The depth of working in Safety Zone area along Common boundary adjoining with M/s TSML will be up to 25 mRL and top being at 140 mRL will be depressed by 115 m.
- The depth of working in Safety Zone area along Common boundary adjoining with M/s BAL. will be up to 32 mRL and top being at 140 mRL shall be depressed by 108 m
- There is no top soil in the proposed mining area. However if top soil is found elsewhere during the course of mining, will be stored and used for plantation purpose.

Band VI (Quarry – 2)

- The floor of the quarry has reached the 122 mRL.
- As per Modification of Mining Plan, mining will be carried out till the ultimate Pit Limit is reached by opencast method of mining. Backfilling and reclamation will be done once the UPL is achieved, with overburden/waste generated from Quarry-1 and Quarry-2 during process of mining.

13. Existing mining method:

Sl. No.	Particulars	Band – I (Quarry-1) (Common boundary mining with TSML & BAL)	Band VI (Quarry -2)
i)	Method of mining	Open cast mining : Fully Mechanised	Open cast mining : Fully Mechanised
ii)	Type of ore	Friable chromite ore with intermediate waste and overburden comprising of laterite , silicified chert and ultramafics etc.	Lumpy chromite ore with intermediate waste and overburden comprising of Quartzite and ultramafics etc.
iii)	Means of raising	Excavator and dumper combination	Excavator and dumper combination
iv)	Bench height and width	Height of the benches are maximum 8m each with minimum	Height of the benches are 8m each with width 12m

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		8 m width	
v)	Overall slope angle	< 35°	< 35°
vi)	Size/co-ordinate/floor mRL	Present Quarry-356m X 305 m /E-371806,S-2325734,Top 153 mRL& bottom 57 mRL. Back filled area – 280 m X 230 m/558S to 850S – 800E to 1120E,Top 160 mRL& bottom 70 mRL The common boundary mining will be done from 140 mRL to 25 mRL with TSML and from 140mRL to 32mRL with BAL.	Present Quarry – 305 m X 370.5 m/ E-372505, S-2324908, top 305 mRL& bottom 122mRL.

14. **Water requirement:** Total water required for the proposed project is 815 KLD (48 KLD = ground water + 767 KLD = Mine quarry accumulated water).
15. **Power requirement:** For the proposed project, power requirement is 650KVA.
16. **Manpower:** 395 nos. of persons will be employed for the proposed project
17. **Project cost:** The project cost is Rs. 1900 lakhs .This is not a green-field project. So 1% of the capital investment has been estimated towards CER and Rs. 19.00 lakhs per annum will be spent.
18. The proponent made a presentation on the proposal before the Committee.
19. The SEAC in its meeting held on dated 13-06-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Submit the Forest clearance to carry out mining in safety zone and further plan for compensation for any kind of damage to the environment.	Enclosed the approval copy Forest Clearance U/s. 2 (ii) of Act, 1980 to MoEF & CC, New Delhi vide letter no 8-68/2000- FC(pt.), date: 20.04.2023 (Enclosed as Annexure - 1) MoEFF & CC has accorded the approval for diversion of 66.20 ha, including safety zone area of 1.899 ha under section 2 (ii) based on the State Govt's recommendation vide FE-DIV-FLO-0115 2021, 15632/FE & CC, dat: 03.09.2021 (the purpose of utilization of total forest area at apge no.6 of state Govt's recommendation, Enclosed as Annexure -2.) Non forest Govt. land for compensatory afforestation against the safety zone of 3.141	Copy submitted

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		<p>ha (to be used for non-forestry activity), has been considered in the proposal. Additionally, 1.5 times of degraded forest land i.e. 3.0 ha against the 1.899 ha has been identified and considered for plantation while granting the Forest Clearance.</p> <p>It may be noted that the green belts on northern sides of ML will not be disturbed. However, we will develop green belt, in phased manner over the entire 3.141 ha at the final stage of mining. This, along with the green belts of neighboring mining leases shall act as a shield to arrest propagation of fugitive materials, beyond the mining cluster.</p>	
ii)	Approval copy from DGMS to carry out mining in safety zone.	Enclosed the approval copy of DGMS u/s 111(3) to carry out Mining to safety Zone vide letter no. 180050/SEZ/Bhubaneswar Regionn/perm/2022/238108, Date 06.06.2022 (Enclosed as Annexure-3)	Copy submitted
iii)	RL of ground water table during pre and post monsoon period to be reported along with RL of the surface of the mining site post mining as per the approved mining plan.	<p>I. RL of ground water table during pre and post monsoon period is (Enclosed as Annexure - 4)</p> <p>II. RL of the surface of the mining site post mining as per the approved mining plan by Indian Bureau of Mines for the period 2022-2023 to 2025-2026 vide letter no. BBS/JJP/CR/2174/MPM/2022-23, date 17/08/2022 (Enclosed as Annexure -5)</p>	Copy submitted
iv)	Level of chromium, manganese and other heavy metal elements in the ground water samples of the EIA study area.	Monitoring report of Ground Water sample of EIA study area carried out by NABL accredited laboratory and is Enclosed as Annexure -6.	Monitoring report of Ground Water sample is submitted.

After detailed discussion, the Committee decided to defer the proposal to next meeting as information submitted by the proponent requires more deliberation.

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J Nayak
Environmental Scientist, SEAC

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR TANTRA BAUXITE MINE WITH PROPOSED EXCAVATION OF 1000000 TPA OF BAUXITE HAVING OVER AN AREA OF 106.138 HA. LOCATED AT VILLAGE: TANTRA, SUB-DIVISION- BONAI, DISTRICT SUNDARGARH OF SRI PRABHU DAYAL AGRAWAL - 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. This proposal is for Terms of Reference to obtain Environmental Clearance for Tantra Bauxite Mine with proposed excavation of 1000000 TPA of Bauxite having over an area of 106.138 Ha. Located at Village: Tantra, Sub-division- Bonai, District Sundargarh of Sri Prabhu Dayal Agrawal.
3. **Category:** As per the EIA Notification S.O. 1533, dated 14th September 2006 and subsequent amendments, this project falls under Category B1 (Minor Mineral Projects).
4. Originally the mining lease was granted in favour of Shri Prabhu Dayal Agrawal on 08.07.1991 over an area of 106.138 hectares or 262.271 acres for 20 years. But as per the Mines and Minerals (Development and Regulation) Amendment Act 2015 read with rule 66 of OMMC Rule 2016, the period of lease has been extended up to 20 years i.e., 07.07.2031 through Renewal Mining Lease Deed dtd. 08.07.2011.
5. The Tantra Bauxite Mine is a Mining Lease area was executed for Mining of Bauxite ore in favour of Shri Prabhu Dayal Agrawal over an area of 106.138 ha. or 262.271 acres comes under village Tantra, Bandhal & Rengua in Koida Tahasil of Sundargarh District, Odisha.
6. The copy of representation letter no. Tantra/108 dt. 20.01.2023 received from Sri P.D. Agrawal to inform that the aforesaid mining lease was executed on 08.07.1991 for a period of 20 years in favour of Sri P.D. Agrawal. The term of a said lease expired on 07.07.2011. The lessee has filed 1st RML application on 16.03.2010 over the entire area for Bauxite, Iron & Manganese Ore under the provision of rule 24A (1) of MC Rules, 1960 in due time which is pending for disposal. The mining operation in the leasehold area was discontinued due to expiry of original lease w.e.f. 08.07.2011 & remained non-operational for continuous period of 2 years up to 07.07.2013 which attracts the provision of section 4A (4) of MMDR Act, 1957. As such the State Govt. declared the said lease as lapsed w.e.f. 07.07.2013 under section 4A (4) of MMDR Act, 1957 read with rule 28(1) of MC Rules, 1960 vide Govt. Proceeding No. 9625/SM dt. 29.09.2015.
7. The lessee preferred Revision application against the said lapsing order of State Govt., where in the Revisional authority set aside the impugned order of State Govt. dt. 29.09.2015 and directed the State Govt. to re-consider the lapsing in view of observations of Hon'ble Supreme Court of India in its order dt.04.04.2016 in WP(C) No. 114/2014 (Common Cause) which is being re- examined by the State Govt. through personal hearing of the lessee. Moreover, under section 8A (3) of MMDR Amendment Act, 2015, the State Govt. have not extended the validity of lease period i.e. up to 07.07.2041. As such the said lease would be deemed to be consider as subsisting lease.

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8. In pursuance to the judgment dt. 02.08.2017 of Hon'ble Supreme Court of India, the DDM, Koira has issued Demand notice vide his letter No. 4356/Mines dt.18.11.2021 to the lessee for payment of compensation amount of Rs.14,23,524/- under section 21(5) of MMDR Act, 1957 in violation for production of minerals show raised without lawful authority or in excess of the lower of approved limit under statutory clearance for the period from 2000-2001 to 2010-2011 in respect of the mine, which has already been paid by the lessee through e-challan on 03.01.2022.
9. The lessee has processed before the concerned authorities for obtaining of valid statutory clearances such as Mining Plan, Forest Clearance, Environmental Clearance etc. in respect of the mines which is pre-requisite for extension of the validity period of the said lease under section 8A (3) of MMDR Amendment Act, 2015.
10. As per the documents submitted by the lessee, 3rd meeting of Project Screening Committee of the proposals in respect of Tantra Bauxite Mine held on 18.01.2023 for processing as per F.C Rules, 2022 through VC, wherein the lessee was directed to file approval of Mining Plan online for FC. Approval of Review of Mining Plan without such clearance the extension of validity of lease period under section 8A (3) of MMDR Amendment Act, 2015 is not feasible.
11. Earlier, Terms of Reference (TOR) issued by MoEF & CC, New Delhi vide letter number J-11015/178/2009-IA. II(M) dated 19th August 2010 for undertaking mining operation in the lease area.
12. Consent to establish has been obtained from State Pollution Control Board, Odisha vide letter no. 1739/III-CON (NOC)-296/2009-10 dtd. 21.06.2011 and for 100 TPH crusher unit, Consent to Establish has been issued vide letter no.11459/IND-I-CON-5654 dated 20.07.2009.
13. Earlier, public hearing for renewal of mining lease and enhancement of Bauxite ore 1.2LTPA to 1.0 MTPA in production was conducted on 12.05.2011.
14. The present proposal for environment clearance is proposed for enhancement in production of bauxite from 3,786,75 TPA to 9,997,02 TPA from the lease area.
15. The entire area is DLC forest land having kissam - pahad as per land schedule.
16. **Location and connectivity:** Tantra bauxite mining lease area is situated in village Tantra of Bonai Tehsil in Sundargarh district, Orissa. The area forms a forest land. This area falls under latitude 21° 53' 46" N to 21° 54' 33" N and Longitude 85° 10' 18" E - 85° 11' 10" E in the toposheet no. 73 G/1. The total area of the mining lease is 106.138 Ha. The highest altitude of the area is 784.0 m from M.S.L and the lowest altitude is 643.1 M.S.L.
17. **Reserves and production:** The revised mineable reserve of useable bauxite in the lease area is 1,63,45,127 MT. Keeping in view the production of bauxite @ 9,99,702 per annum, life of the mine will be 16.3 years or say 16 years after this modified scheme period.
18. **Mining method:** Presently the mining is being carried out by semi mechanized opencast method. However, with the existing proposal there is the planning for fully mechanized mining operation

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in the lease area. There is an existing 200 TPH crusher present in the lease area and proposal for installation of another 200 TPH crusher in the lease area. The crushing screening and sorting will be carried out within the lease area. The saleable bauxite will be raised and stacked near earmarked stack yard after being crushed as per the requirement. The usable refractory grade and steel grade bauxites will be transported by hiring trucks. The trucks will be loaded by pay loaders.

19. **Waste generation and management:** A quantity of 1884450m³ of swollen waste will be generated due to mining during the conceptual period. The waste generated during excavation will be utilized for mine road construction and other allied infrastructure and if required will be shifted to the proposed dump. At the end of the conceptual period a total area of 45.1175 hectare is to be degraded under mining. As no part of the lease area is getting exhausted, no backfilling proposal has been proposed in this scheme period.
20. **Water requirement:** Water requirement for the project is 15 KLD and will be met from ground water.
21. **Greenbelt:** Till date 0.5 Ha. of plantation zone with 1000 saplings has been made within the ML area. Huge plantation has been carried out within the lease area i.e., along the Safety Zone, OB dump and dump Slope. During this monitoring period 1000 nos. of plantation has been done over an area of 0.5 Ha.
22. **Manpower:** Total 116 nos. of workers will be indirectly employed, and 30 nos. will be directly employed for mining of Bauxite ore in the lease area.
23. **Project cost:** The cost of the project will be 14 Crores.
24. **Environment Consultant:** The Environment consultant M/s Green Circle. INC., Vadodara along with the proponent made a presentation on the proposal before the Committee on 07.07.2023.
25. The SEAC in its meeting held on dated 07-07-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Certified copy of the production limit set for the unit prior to 1994 and after 1994.	The authenticated Production prior to 1994 as well as after 1994 is attached as Annexure- 1. Authenticated production since 1994 is Nil as mention in the DDM, Koira letter vide No.- 6820, Dtd.18.11.2017 is attached as Annexure- 2.	Authenticated year wise Production details duly certified by DDM, Koira from year 2000-01 to 2010-11 is submitted.
2.	Certified copies of year-wise production details prior to 1994 and after 1994 from mining officer.	DDM, Koida letter showing production w.e.f. 2001 wherein production prior to 1994 is shown Nil. Hence the total production from 2001 has been demanded U/s 21 (5) of MMDR ACT. The same is attached as Annexure- 2.	Authenticated year wise Production details duly certified by DDM, Koira from year 2000-01 to

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Trayak
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
			2010-11 is submitted.
3.	Copy of approved mining plan prior to 1994.	Not applicable.	
4.	Copy of letter of Steel and Mines Department, Govt. of Odisha to the lessee validating the grant of extension of the mining lease in favour of the lessee.	The DMG, Steel & Mine Department letter requiring Mining Plan EC & FC for extension, Vide letter no.- DMO-MCIIMISC-0005-2023-2562 / DoMG, Dtd. 21.02.2023 is attached in Annexure- 3.	In the above said letter it is mentioned that extension of the mining lease in favour of the lessee is not extended.
5.	The lease lapses in 2011 but, mining operation was continued after 2011 and concerned DFO stopped mining operation for not having Environmental Clearance and Forest Clearance. In pursuance to the judgment dt. 02.08.2017 of Hon'ble Supreme Court of India, the DDM, Koira has issued Demand notice vide his letter No. 4356/Mines dt.18.11.2021 to the lessee for payment of compensation amount of Rs.14,23,524/- under section 21(5) of MMDR Act, 1957 in violation for production of minerals show raised without lawful authority or in excess of the lower of approved limit under statutory clearance for the period from 2000-2001 to 2010-2011 in respect of the mine, which has already been paid by the lessee through e-challan on 03.01.2022. Justification that why it should not be considered as a violation case? With supporting documents of Notification along with the production figures.	Lease laps w.e.f. 07.07.2013. The said letter Vide No.9625, Dtd.29.09.2015 is attached in Annexure- 4.	----
6.	Earlier, Terms of Reference (ToR) issued by MoEF&CC, New Delhi vide letter number J- 11015/178/2009-IA. II(M) dated 19 th August 2010 for undertaking mining operation in the lease area. Earlier, public hearing for renewal of mining lease and enhancement of Bauxite ore 1.2 LTPA to 1.0 MTPA in production was conducted on 12.05.2011 and final EIA report was submitted to MoEF&CC, Govt. of India for Consideration of EC. Reason for non-consideration of EC by MoEF&CC, Govt. of India for the proposal at that	The EC can't processed at MoEF &CC due to lapsing of mines w.e.f. 07.07.2013. The said letter Vide No.- 9625, Dtd.29.09.2015 is attached in Annexure- 4.	----

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J. Nayak
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	time with supporting documents.		
7.	Copy of all Consent to Establish and Consent to Operate obtained from the Pollution Control Board, Odisha.	Copies CTE no.- 10082/Ind-II-NOC-5782, Dtd. 18.06.2015 & CTO letter no. 11459/IND-I-CON-5654, Dtd. 20.07.2009 are Annexure- 5 & Annexure- 6.	submitted
8.	Detailed note on history of the mine chronologically and details of statutory clearances obtained for operation of the mines.	Detailed note on history of the mine chronologically and details of statutory clearances obtained is attached in Annexure- 7.	---
9.	Supporting documents that the mining lease has not lapsed and is in name of Lessee. Copy of the extension of the mining lease from the Steel and Mines Department.	The DMG, Steel & Mine Department letter requiring Mining Plan EC & FC for extension, Vide letter no DMO-MCIIIMISC-0005-2023-2562/DoMG, Dtd. 21.02.2023 is attached in Annexure- 3.	---
10.	Receipt of Royalty paid (if any).	Royalty challan is attached in Annexure- 8	Challan is attached
11.	Approved mining plan of Bauxite mine along with Cross sectional Sketch plan of Bauxite mine.	IBM Approved Cross sectional sketch map is attached in Annexure- 9	submitted
12.	Current Status and supporting documents that the applicant has applied for Forest Clearance for the project.	FDP has been applied. The supporting documents are attached herewith as Annexure- 10.	Application submitted for Forest clearance on dated 15.02.2023 vide proposal no. sw/108381/2022
13.	Details analysis of quantity and quality of bauxite present in mine.	Approved page No.- 09 of Mining Plan showing the quantity of reserve 16345127 Tones and NABL quality analysis report are attached as Annexure - 11 & Annexure - 12 respectively.	submitted
14.	Note on blasting management, slope study analysis and water management.	The details of blasting management at page no. 21, 22, 26 & 27, slope study analysis at page no. 19 and water management at page no. 09 (PMCP) are described in approved mining plan. The pages of approved mining plan attached herewith as Annexure - 13.	submitted

After detailed discussion, the Committee decided to defer the proposal to next meeting as information submitted by the proponent requires more deliberation.

ITEM NO. 06

PROPOSAL FOR AMENDMENT ENVIRONMENTAL CLEARANCE FOR PANDIAPATHAR DECORATIVE STONE MINE OVER AN AREA OF 23.67 ACRES 9.579 HA AT VILLAGE PANDIAPATHAR TAHASIL ASKA DISTRICT GANJAM OF MD MAHAMMAD RAZZAK - MOD EC

1. This proposal is for Amendment of Environmental Clearance for Pandiapathar Decorative Stone Mines over an area of 23.67 acres 9.579 ha at Village Pandiapathar Tahasil Aska District Ganjam of MD Mohammad Razzak.
2. **Category:** As per EIA notification 2006 and subsequent amendments, this project is coming under Category B1 schedule 1(a) - Mining of minerals.
3. Pandiapathar Decorative Stone Mines over an area 23.67 Acres of 9.579 hectares had been granted and executed in my favour of Md Irfan Razzak which is valid up to 19-12-2047 for 30 years lease period from the date of execution date 20-12-2017.
4. Environmental Clearance obtained on the above said mines vide letter No. SEIAA/2119 on dated 26-10-2016 for production capacity of 20,100 cum upto the lease period.
5. The Mining Plan of the project has been approved by the Director of Mines, Odisha, Bhubaneswar vide his letter no. 8084/DM date 19-09-2015 for 5 (five) years the Mineral Reserve as per approved Mining Plan are 3,23,380 cum with production capacity of 20,100 cum for the lease period as stated in the approved Mining Plan. The Mining Plan was valid upto 31-03-2023.
6. The Consent to Operate (CTO) issued by the Regional Office, State Pollution Control Board, Berhampur vide his letter No. 343/CTO – 1614/2018 and CTO Order 260/2017-18 on dated 20-01-2018 the approved quantity is 4533 cum/annum. The Consent Order valid up to 31-03-2020.
7. The Modified Mining Plan has been approved by the Director of Mines, Odisha Bhubaneswar vide letter No. 306/DM on dated 13.01.2020. Again, the CTO issued by the Regional Office, State Pollution Control Board, Berhampur vide letter No. 1253/CTO- 1614/2018 and CTO order 260/2020-21 on dated 20-05-2020 and the approval quantity is 4533 cum and the CTO valid for the period up to 31-03-2023.
8. The Project proponent had submitted the Scheme of Mining for next five years that is from 2023-24 to 2027-28 which has been approved by the Directorate of Mines and Geology, Odisha Bhubaneswar vide letter No. 4944/DoMG dated 03-04-2023. The production capacity is 4008 cum per Annum. In the Scheme of Mining there is no change in mining technology as well as scope of working keeping the production level same as per previous approved Mining Plan submitted.
9. The Project proponent have applied the CTO to the Regional Office, State Pollution Control Board, Berhampur for next five years from 2023-24 to 2027-28 and the capacity is 4008 cum per annum as per approved by Scheme of Mining along with PMCP.
10. The Regional Office, State Pollution Control Board, Berhampur issued the CTO for the period upto 31-03-2024 and the approval quantity is 670 cum per annum.
11. In the above context project proponent has requested to clarify that Environment Clearance which has been granted on 26-10-2016 for the capacity of 20,100 cum for Mining Plan/Scheme of Mining would be valid for 5 (five) years or co-terminous with the lease period.

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T. Nayak
Environmental Scientist, SEAC

12. The SEAC in its meeting held on dated 12-06-2023 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by a detailed presentation before the SEAC by 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
i)	Copy of Mining Plan approved by the Director of Mines, Odisha, Bhubaneswar vide his letter no. 8084/DM date 19-09-2015.	The Mining Plan of Pandiapathar Decorative Stone Mines over an area of 9.579 ha of M/s. MD. Irfan Razzak was initially approved on date 19-09-2015 vide letter no.8084/DM for a plan period of 5 years with a production capacity of 20,100 cum & the mineable reserve has been estimated in the tune of 3,23,380 Cum. (Ref page no. 10 & 17 of the approved mining plan attached as Annexure – I.)	Annual capacity 5040cum (maximum) and Total production capacity is 20000cum for 5 years.
ii)	Copy of modified Mining Plan approved by the Director of Mines, Odisha Bhubaneswar vide letter No. 306/DM on dated 13.01.2020.	A modified mining plan over the same area has approved by Director of Mine and geology vide letter no. 306/DM dated 13.01.2020 for a production quantity of 20,088 cum. (Please refer page no. 24 Table – 4.1) with a revised mineable reserve of 2,24,322m ³ (Please refer page no.16 (para 3.9) & page no.25 (para 4.5) attached as Annexure-II)	Modified mining plan - Annual capacity 5022cum (maximum) and Total production capacity is 20088cum for 5 years.
iii)	Copy of Scheme of Mining for next five years that is from 2023-24 to 2027-28 which has been approved by the Directorate of Mines and Geology, Odisha Bhubaneswar vide letter No. 4944/DoMG dated 03-04-2023.	On dated 03.04.2023 vide letter no. MXX11 (b)-14/2022/4944/DoMG the scheme of mining is approved by Director of Mine and Geology for Pandiapathar Decorative Stone Mines for a production capacity off 20,040 cum for the plan period (2023-2028) with average production of 4050 cum per year. The up-to-date reserve has been estimated with a tune of 2,16,691m ³ , with a life of mine for 27 years. (Please ref page no. 15 table 5.2, & page no.6 attached as Annexure III.)	submitted
iv)	Clarification letter from Director, Mines, Odisha, Bhubaneswar that the quantity as approved in Mining Plan vide his letter no. 8084/DM date 19-09-2015 is for plan period (i.e. 5 years) not for entire lease period (i.e. 30 years).	The clarification letter sought by you to be brought from DMG government of Odisha is attached as Annexure IV. In which it has been stated that the mineable reserve is 3,23,380 cum which is for the "lease period", with a	submitted

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T. Jayak
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		production capacity of 20,100 cum for the "plan period".	

13. The SEAC observed and opined the following:

- The Environmental Clearance was granted to the mines upto lease period (30 years) with a production capacity of 20,100 cum upto the lease period.
- This production capacity had been fixed by the SEIAA, Odisha based on the mining plan approved by the Director, Mines, Odisha, Bhubaneswar vide letter no. 8084/DM, date 19-09-2015.
- The proponent has requested for amendment of Environmental Clearance for the production capacity of 20100 cum for 5 years and not for entire lease period as mining plan had been approved for production capacity for plan period i.e. for 5 years and not for entire lease period.
- The Director of Mines and Geology, Odisha, Bhubaneswar clarified that the mineable reserve is 3,23,380 cum which is for the "lease period", with a production capacity of 20,100 cum for the "plan period", which have been approved in Mining Plan vide letter no. 8084/DM date 19-09-2015. Moreover, the scheme of mining is approved by Director of Mine and Geology vide letter No. 4944/DoMG dated 03-04-2023 for Pandiathar Decorative Stone Mines for a production capacity of 20,040 cum for the plan period (2023-2028) with average production of 4050 cum per year.
- Generally, the mining plan approved for production capacity of plan period i.e. 5 years not for entire lease period.

After detailed discussion, the committee recommended for amendment in Environmental Clearance granted vide letter no. SEIAA/2119 on dated 26-10-2016 for a production capacity of 20,040 cum for the plan period (i.e. 2023-28) with average production of 4050 cum per year.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF TURKANIGUDA SAND BED OVER AN AREA OF 5.058 HA. / 12.50 ACRE LOCATED AT VILLAGE- TURKANIGUDA, TAHASIL- GUNUPUR, DISTRICT – RAYAGADA OF TAHSILDAR GUNUPUR - EC

- This proposal for Environmental Clearance of Turkaniguda Sand Bed over an area of 5.058 Ha. / 12.50 acre located At Village- Turkaniguda, Tahasil- Gunupur, District – Rayagada of Tahsildar Gunupur.
- Category:** As per EIA Notification, 2006 and its subsequent amendments, this proposed project falls under B1 category in activity 1(a)-Mining of Minerals.
- The mining lease has been granted for & on behalf of Tahasildar Gunupur vide letter no – 2177 on dated 09.07.2020 for long term basis (5 years).
- The mining lease has been approved by joint director of Geology Zonal Survey, Koraput vide letter no – 2401 on dated 03.09.2020 for long term basis (5 years).

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Environmental Scientist, SEAC

5. **TOR details:** Terms of Reference (TORs) has been granted by SEIAA, Odisha prescribed the Reference No: 3665/SEIAA dated 27- 12-2021.
6. **Public hearing details:** Public hearing was successfully executed on date 14.09.2022 in the Town Hall, Gunupur under Gunupur Municipality in Rayagada District as per the guidelines given in EIA Notification 14th September' 2006 and its subsequent amendment. Issues raised during public hearing plantation, road development, peripheral development, environmental protection, dust suppression measure, sand transportation and sand mining from river bed. Budget for Corporate Environmental Responsibility (CER) is Rs 1,20,000.
7. **Location and connectivity:** The mine lease area is in Village – Turkaniguda, Tehsil – Gunupur, District – Rayagada, is on Khata no- 68, Plot no- 339/A of Bansadhara river covered in the Survey of India Topo Sheet No – E44F16 and is bounded between the Latitude - 19° 03' 24.76" N to 19° 03' 34.79" N and Longitude – 83° 47' 10.28" E to 83° 47' 16.68". Nearest Railway Station is Gunupur Railway Station, approx 2.8 km towards NE direction. Nearest Airport is Bhuwaneshwar Airport, approx 255 km towards ENE direction. Nearest Highway: is SH-4, approx 2.8 km in NE direction.
8. **Topography and drainage:** The topography of the area is more or less flat with highest elevation of 80-81m RL. The lease area here is a river sand quarry. Drainage system in the region is dendritic. General flow direction of Bansadhara River is from North to South. Work will continue only during summer months when there is no water in the leasehold. Mining will be restricted to a 1.0m depth.
9. **Total production and reserves:** The production is proposed to be 25,100 cum/year and 1,25,500 cum is the total production during the plan period. As estimated, geological reserve and mineable reserve is 50,580cum and 44,040cum respectively.

Year	Vol. of Sand in (cum)
1st	25,100
2nd	25,100
3rd	25,100
4th	25,100
5th	25,100
Total	1,25,500

10. **Replenishment study:** For the said project replenishment study has been done by UAV/Drone survey (volumetric survey) method. Pre-monsoon Survey was carried out on 10.05.2022 and Post- monsoon Survey was carried out on 25.11.2022. The volume of sand available after post monsoon is around 25821.8 m³, which can be treated as safe extractable within the framework of the study after arrival of river level as it was in pre-monsoon. Further volume of sand also computed which can be extracted as on date (Pre-monsoon survey date) is 38540 m³. As it is a new mine no excavation has done in this year. So, total minable reserve available for mining is 44040 + 25821.8 = 69861.8 m³ whereas, approved production capacity for the year is 25,100 m³.
11. **Method of mining:** The sand will be excavated by open cast manual method. Since the depth of mining is 1.0 m, excavator, handpicks, spade, hand shovel will be used by laborers for extracting

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& loading of sand. The maximum depth of mining will be 1.0 m. The mine will be developed in North direction. At the end of plan period the quarry floor will be 179 m RL.

12. **Water requirement:** Water requirement for workers for drinking purpose will be around 0.21 KLD & the total water requirement will be around 2.0 KLD.

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10 lpcd per labor $10 \times 21 / 1000 = 0.21$ KLD	0.21
Dust Suppression	Total approach road to be water sprinkled = 100 m $100 \text{ m} \times 6 \text{ m} \times 0.5 \times 2 \text{ times} / 1000 = 0.60$ KLD	0.60
Plantation	506 plant (during plan period) @ 2 L/per plant = $506 \times 2 \text{ lts} = 1012 / 1000 = 1.012$ KLD	1.012
Total		1.822 ~ 2.0

13. **Greenbelt:** The management will provide free saplings of fruit and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains. About 506 number of trees will be planted along approach road & in village during the first year. Plantation will be done with suitable local species like Teak, Mango, Neem, Jammun, Jhaun etc after consultation with the local authorities.

Year	No of plants along both side of approach road	No. of plants in buffer zone consulting local authorities	Total Plantation
1 st	100	406	506
2 nd	Maintenance	Maintenance	Maintenance
3 rd			
4 th			
5 th			
Total	100	406	506

14. **Baseline summary:** Baseline monitoring was carried out for various parameters for a study period of 3 months (October, 2021 to December, 2021).

a) **Air quality:** Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM10 for all the 8 AQ monitoring stations were found to be 57.59 $\mu\text{g}/\text{m}^3$ at AQ2 and 87.39 $\mu\text{g}/\text{m}^3$ at AQ1, respectively. The minimum & maximum concentrations of PM2.5 were found to be 23.03 $\mu\text{g}/\text{m}^3$ at AQ2 and 47.17 $\mu\text{g}/\text{m}^3$ at AQ1, respectively. As far as the gaseous pollutants SO2 and NOx are concerned, the prescribed CPCB limit of 80 $\mu\text{g}/\text{m}^3$ for residential and rural areas has never surpassed at any station. The minimum & maximum concentrations of SO2 were found to be 5.41 $\mu\text{g}/\text{m}^3$ at AQ4 & 16.91 $\mu\text{g}/\text{m}^3$ at AQ7, respectively. The minimum & maximum concentrations of NOx were found to be 9.24 $\mu\text{g}/\text{m}^3$ at AQ2 & 24.9 $\mu\text{g}/\text{m}^3$ at AQ1, respectively.

b) **Ground water:** Analysis results of ground water reveal that pH varies from 7.20 at GW1 to 7.67 at GW5 during study period. Total hardness varies from 247 mg/l at GW2 to 284

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J. Jayakumar
Environmental Scientist, SEAC

mg/l at GW1 during study period. Total dissolved solids vary from 332 mg/l at GW3 to 367 mg/l at GW2 during study period.

- c) **Surface water:** The analysis results of surface water indicate that the pH ranges between 7.34 and 7.91. Dissolved Oxygen (DO) was observed in the range of 6.6 to 6.9 mg/l against the minimum requirement of 4 mg/l. BOD values were observed to be in the range of 4.0 – 4.2 mg/l. The chlorides and Sulphates were found to be in the range. Based on the results it is evident that most of the parameters of the samples comply with 'Category 'B' standards of CPCB indicating their suitability for Drinking water source after conventional treatment and disinfection.
- d) **Soil study:** Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.17 to 7.62, which shows that the soil is alkaline in nature. Potassium is found to be from 51.82 mg/kg to 60.20 mg/kg. The water holding capacity is found in between 28.45 % to 32.18 %.
- e) **Noise study:** Noise monitoring reveals that the minimum & maximum noise levels at day time were recorded as 42.25 Leq. dB (A) at NQ5 & 61.13 dB (A) at NQ1, respectively. The minimum & maximum noise levels at night time were found to be 33.81 dB (A) at NQ5 to 51.65 dB (A) at NQ1. There are several other sources in the 10 km radius of study area, which contributes to the local noise level of the area. Traffic activities as well as activities in nearby villages and agricultural fields add to the ambient noise level of the area.
15. **Manpower requirement:** A total of 21 nos. of manpower are to be employed in the lease area for mining 25,100 cum/year of sand. 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.
16. **Project cost:** The estimated cost of project is around Rs. 60 Lakhs. Budget for Corporate Environmental Responsibility (CER) is Rs 1,20,000 and, budget for Occupational Health is Rs.2,21,000. Budget allotted for the Environmental Management Plan includes capital cost of Rs.1,26,200 and recurring cost of Rs.3,32,400

Table: CER budget

Sl. No.	Activity	Capital Cost (in Rs./annum)
a)	Financial aid for medical camp in Turkaniguda village. @ Rs. 20,000/ camp (2 camp in a year)	40,000
b)	Distribution of books & educational kits to the student of Turkaniguda village	30,000
c)	Skill development program camps like computer learning, sewing etc. in Turkaniguda village. @Rs 25,000/trainer (2 trainer)	50,000
TOTAL		1,20,000

Table: Environmental Management Plan Budget

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J. Nayak
Environmental Scientist, SEAC

Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
a)	Pollution Control Dust Suppression /Water Sprinkling	--	50,000
b)	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	--	50,000 40,000 20,000 10,000
c)	Green belt development	1,01,200	1,00,000
d)	Maintenance of haul road	25,000	62,400
Total			1,26,200 3,32,400

17. **Environment Consultant:** The Environment consultant M/s P and M Solution, Noida, along with the proponent made a presentation on the proposal before the Committee on 03.05.2023.

18. The SEAC in its meeting held on dated 03-05-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	In the public hearing, most of the public opposed the proposed mining activity. Revised action plan as there are no commitments taken up in action plan according to the public hearing demands.	Action plan has been attached for your reference as Annexure -1 .	Copy submitted
ii)	KML file shows lease area surrounded by water. Transportation route from proposed quarry to public road along with layout map with permission/NOC from the concerned authority for the same to be submitted.	Transportation route map certified the Tahasildar, Gunupur has attached for your reference as Annexure 2 . Permission copy from Gram Panchayata per using the road has attached for your reference as Annexure 3 .	Copies submitted
iii)	Cluster certificate from concerned Tahasildar.	Cluster certificate from Tahasildar, Gunupur.	Copy submitted

Considering the information furnished and the presentation made by the consultant, M/s P and M Solution, Noida, along with the project proponent, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – C** and following specific conditions:

- Mining Plan has been approved for extraction of sand for quantity of 25100 cum/annum. However, Replenishment Study Report reveals that 25821.8 cum/annum sand can be extracted. Hence, EC may be recommended for extraction of 25100 m³/annum of sand based on capacity approved in mining plan as replenishment sand capacity is more than approved capacity.
- Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure – D**.

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- c) Sand extraction shall be limited to quantity and depth as per replenishment study report. Regular replenishment study as per guidelines to be conducted and report to be submitted.
- d) Provision of Bio-toilet shall be made at the site.
- e) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- f) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.
- g) The KML file (as per Nov 22) shows the lease area is surrounded by water. So EC may be approved with a condition that mining & transportation of the sand may be start after the water flow ceases naturally on north side of the lease area.

ITEM NO. 08

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR BAURIAKAN SAND QUARRY ON RIVER BAURIAKAN, OVER AN AREA OF 9.55 HA./23.60 ACRE IN VILLAGE LATAHARAN, UNDER KAKATPUR TAHASIL OF PURI DISTRICT OF MRS SAKUNTALA KABU - EC

1. This proposal is for Environmental Clearance for Bauriakan Sand Quarry on River Bauriakan over an area of 9.55 Ha. /23.60 Acres in village - Lataharan, under Kakatpur Tahasil of Puri district of Mrs Sakuntala Kabu.
2. **Category:** As per EIA Notification 2006 and subsequent amendment, the proposed project falls under Category B2 under item 1(a) - Mining of Minerals.
3. **TOR details:** Terms of reference has been granted by SEIAA, Odisha vide letter no 9682 dated 23.11.2020.
4. Mining plan was approved by Deputy Director Geology, Bhubaneswar vide letter no 661/19, 4822/DZ dated 06.07.2020.
5. The lease has been granted by Tahasildar Kakatpur for five years to the successful bidder vide letter no. 4667 Dated.19.11.2018.
6. **Public hearing details:** Public hearing was conducted on 02.06.2022 at 11.00 A.M near Jouban Danda in Lataharan Mouza under Lataharan G.P under Kakatpur Tahasil of Puri District. Issues raised during public hearing are damage to river embankment, dust pollution, loss of trees, safety of school children due to sand transportation and flood due to damage of river embankment etc. Total expenses to be incurred for action plan of public hearing is 4.10 lakhs.
7. **Location and connectivity:** The lease area is in survey of India topo sheet no. (73L/4 & 73L/8) & between latitude of 20°02'03.7"N to 20°02'09.4"N and longitudes of 86°14'18.6"E to 86°14'24.2"E bearing Khata no. 1608 and plot no 1780 and 1690(P). Nearest Railway station is Puri Railway Station at a distance of 47 Km from the project site. The nearest road is Kakatpur-Astaranga road located at a distance of 4.5 Km. The haul road from the lease will connect to Dahanikhia village Road through a distance of 80m that connecting to Kakatpur- Astaranga road. The site is well connected to NH-60 & SH-43 at a distance of 16 Km & 5.2 Km. Nearest airport is Bhubaneswar airport at a distance of 80 Km from the mining lease area. There is no human

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J Nayak
Environmental Scientist, SEAC

settlement within the lease area. Nearest River Embankment is 0.5 Km and nearest Railway bridge / road bridge Talada Bridge is 0.80 Km away from the project site.

8. **Total production and reserves:** Total production of the proposed sand quarry is 50,210cum for 5 years. As estimated Geological Reserve and mineable reserve of the project is 131012cum and 50210cum.

Table: Yearwise production of sand

Sl. No.	Year	Production plan (cum)
i)	1st	10,000
ii)	2nd	10,080
iii)	3rd	10,060
iv)	4th	10,020
v)	5th	10,050
Total		50,210

Category	Surface Area (m ²)	Thickness of the deposit (m)	Volume of the Excavation sand at 100% incidence (m ³)
Geological Reserve	95506	2m	131012
Mineable reserve	25105	2m	50210

9. **Baseline study:** Base line study was carried out during December 2020 to February 2021

PERIOD	March 2021 to May 2021	Applicable Standards
AAQ PARAMETERS AT 8 LOCATIONS	PM2.5 – 20.8 to 34.5 µg/cu.m	60 µg/cu.m
	PM10 – 35.2 to 67.3 µg/cu.m	100 µg/cu.m
	SO ₂ – 5.3 to 10.4 µg/cu.m	80 µg/cu.m
	NO _x – 10.3 to 22.4 µg/cu.m	80 µg/cu.m
Ground water Quality at 6 Location	pH – 7.0 to 8.0	6.5 to 8.5
	Total Hardness – 16-212 mg/l	600 mg/l
	Chloride - 20 to 260 mg/l	250 mg/l
	Fluorides – 0.19 to 0.90 mg/l	1.5 mg/l
	TDS – 140-600 mg/l	1000 mg/l
	Heavy metals (Cd <0.001, As <0.001, Hg<0.0005) mg/l	Heavy metals (Cd <0.003, As <0.01, Hg<0.001) mg/l
Surface water at 3 locations	pH – 5.5 to 6.2	
	Dissolved Oxygen – 6.0 to 6.8 mg/l	

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	Biochemical Oxygen Demand – < 1 mg/l	
	Chemical Oxygen demand – < 5 mg/l	
Noise at 8 locations	Day (dBA Leq) 32.4 to 48.6	55
	Night (dBA Leq) - 25.6 to 36.4	45
Soil Quality at 4 locations	pH – 6.7 to 7.2, Potassium – 161.3 to 241.9 Kg/ Ha, Phosphorous – 19.6 to 28.3 Kg/ Ha, Nitrogen – 377 to 477 Kg/Ha, Electrical Conductivity- 440 to 600 ms/Cm	

10. **Replenishment study:** The lessee will extract 10080cu.m of sand at their peak level of extraction within three months of dry period which is very less than the annual replenished quantity of sand of 28833cum within the lease hold area of 9.550 Ha. So, the quantity of sand extraction is about 34.95% of the replenished sand in the lease area. The sand depth in the area is 2.10m and the mining operation in the area will go up to maximum depth of 2.00 m.

Area in m2	Pre monsoon RL in m	Post Monsoon RL in m	Difference in RL in m
58843	10.05	10.54	0.49

11. **Mining method:** Mining shall be undertaken manually to extract sand, mainly through an open pit spread over the river course devoid of water or nominal water that may be encountered below. Mining will be done with manual excavation & loading into trucks/ tractors and transported from Devi River sand bed to the users/destination through trucks/tractors. The mining will be undertaken on single shift basis.

12. **Water requirement:** Water requirement for the project will be 3 KLD. For drinking & domestic purpose, water requirement will be 1 KLD, water requirement for Green belt development and dust suppression will be 2 KLD. Ground water will be used for drinking and domestic purpose whereas surface water will be used for green belt development and dust suppression.

Sl. No.	Activity	Requirement of water (KLD)
i)	Domestic Purpose	2.0
ii)	Greenbelt Development	0.5
iii)	Water sprinkling for dust suppression during transportation of material & finished product	0.5
Total		3

13. **Employment Generation:** Due to the proposed sand mining, there will be generation of employment for 05 persons.

Category	Post	Nos.
Semi-Skilled	Supervisory Personnel	01
Un-skilled	Laborers	04
Total		05

14. **Greenbelt:** There is the proposal for development of green belt along the road side, river bank and village waste land.

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Jayak
Environmental Scientist, SEAC

Sl. No.	Year	No. of Saplings proposed	Area covering in Ha.	Type of saplings
1.	1st	500	Plantation will be carried out safety zone of the lease	Teak, Mango, Jammu, Neem, Jhaun etc.
Total		500		

15. **Project cost:** Estimated cost of the proposed project is Rs. 10,00,000/-.

Table- Environmental management cost

Sl. No.	Particulars	Cost/ Annum (in Lakhs)
i)	Environmental Monitoring: Air, Noise 3 Points each and Water 2 points (Twice yearly)	Rs. 1.50
ii)	Water sprinkling on the haul road	Rs. 1.00
iii)	Green belt development in river bank	Rs. 1.00
iv)	Occupational health	Rs. 0.50
Total		Rs. 4.00

16. **Environment Consultant:** The Environment consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee on 13.06.2023.

17. The SEAC in its meeting held on dated **13-06-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Revised Replenishment study report along with correct figures as there is gross mistake in figures used for calculation of volume of sand.	The revised replenishment study attached as Annexure – 1 .
ii)	Relook on the action plan of public hearing and find the possibility to cover all the issues raised during the public hearing.	Revised action plan for public hearing is attached as Annexure – 2 .
iii)	Layout map of road connectivity to the site.	Layout map and transportation details is attached as Annexure – 3 .

Considering the information furnished and the presentation made by the consultant, **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar**, along with the project proponent, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – C** and following specific conditions:

- Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure – D**.
- Sand extraction shall be limited to quantity and depth as per replenishment study report. Regular replenishment study as per guidelines to be conducted and report to be submitted.

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Jayjak
Environmental Scientist, SEAC

- c) Provision of Bio-toilet shall be made at the site.
- d) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- e) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

ITEM NO. 09

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S PENGUIN TRADING AND AGENCIES LTD FOR SARGUNA DECORATIVE STONE DEPOSIT OVER AN AREA 3.680 HA LOCATED IN VILLAGE SARGUNA, BINIKA TEHSHIL OF SUBARNAPUR DISTRICT OF SRI RAMAN RASHMI NAYAK - EC

1. This proposal is for Environmental Clearance of M/s Penguin Trading and Agencies Ltd. for Sarguna Decorative stone Deposit over an area 3.680 ha. located in village - Sarguna, Binika Tahasil of Subarnapur District of Sri Raman Rashmi Nayak.
2. **Category:** As per EIA Notification 2006 and subsequent amendment, the proposed project falls under Category B2 under item 1(a) - Mining of Minerals.
3. The mining lease was granted in favour of M/s Penguin Trading & Agencies Ltd. over an area of 9.093acres or 3.68 ha. in village - Sarguna No. 30 under Binika Tahasil of Subarnapur District, Odisha.
4. Letter of Intent was granted vide letter no 5935 dated 05.08.2021 which is valid for 30 years and the proposed project site doesn't fall under DLC land as certified by DFO, Subarnapur vide memo no 1760/3F dated 15.04.2023.
5. There are no existing / operating mines within 500m and 1km around the lease area and the same has been certified by Tahasildar.
6. Modified checklist is approved by Mining Officer & Tahasildar.
7. Mining plan was approved by Additional Director of Mines, Bhubaneswar, Odisha vide letter no 8093 dated 21.09.2022.
8. **Location and connectivity:** The applied M.L. area is located towards northern - west side of village - Sarguna of lease area in khata no. 193 & Plot no 944/P. The land is Abada Ajogya Anabadi category and kissam is pathar chattan. The proposed project comes under the Survey of India Toposheet No. E44 R166 (64O/16). It is bounded by geo coordinates - Latitude N 21° 05' 02.03" to N 21° 05' 10.02" and Longitude E 83° 46' 53.60" to E 83° 47' 02.90". The Murmuri Nala is flowing Northern side off the lease area at distance of 2.5 km. The Singhijuba Reserve Forest boundary passes at distance of 2.14km from western side of the applied M.L area. The said area is coming under Non-forest land. The highest and lowest elevations of the area are 161 mRL and 149 mRL respectively. Overall slope of the area is due north.
9. **Total reserves and production:** As estimated, geological reserve is 78,905 cum and mineable reserve is 49,755 cum. Volume of recoverable decorative stone for 5 years is 6800 cum.

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T. Nayak
Environmental Scientist, SEAC

Year	Volume of Rock Zone	Volume of Blocks (20%)	Volume of saleable (10%)	Volume of waste (70%)
	(m ³)	(m ³)	(m ³)	(m ³)
1st Year	12500	2500	1250	8750
2nd Year	13000	2600	1300	9100
3rd Year	13500	2700	1350	9450
4th Year	14000	2800	1400	9800
5th Year	15000	3000	1500	10500
Total	68000	13600	6800	47600

10. **Mining method:** Mining lease area is spread over an area of 3.680 Ha. The mining operation shall be in semi-mechanized method to achieve the production level.
11. **Water requirement:** The water requirement in ML area will be 3.6KLD, The project will not consume any fresh water except for drinking, dust suppression and plantation. Rainwater harvesting in quarry pits by natural percolation method is proposed for the present project.
12. **Power requirement:** Minimal power required for office shall be taken by using D.G set (Capacity 225 KVA).
13. **Greenbelt:** It is proposed to develop a green belt in and along the periphery of the quarry lease area during the plan period. 194 number of saplings each year (970 numbers for 5 years) along the safety zone will be planted in area of 6050 sqm. (Species to be planted are Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo).

Year	Area to be planted (m ²)	No. of Saplings	Type of species to be Planted	Location
1st Year	1210	194	Amla, Neem, Mango, Gamhari, Kasi, Bahada, Jamun, and Bamboo	Along the Safety Zone
2nd Year	1210	194		
3rd Year	1210	194		
4th Year	1210	194		
5th Year	1210	194		
Total	6050	970		

14. **Solid waste management:** 47600 cum of waste will be generated during total plan period. About 40% of the generated waste will be utilized for maintenance and construction of the haul road, approach and existing roads in the surrounding areas periodically. Therefore, a total of 19040 cum of waste will be utilized for construction and maintenance of roads and remaining 28560 cum of waste will be dumped in the proposed temporary waste dump in the earmarked site of the lease. During the plan period, retaining walls and garland drains will be constructed for the proposed

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Jayak
Environmental Scientist, SEAC

dump. In the first-year programme, retaining wall of dimension - 384 m x 0.75 m x 1m and garland drain of dimension - 370m X 0.5m x 0.5m will be constructed. Settling tank will be constructed to arrest the wash off water.

15. **Manpower:** Total number of employees in the proposed mine will be around 20.

16. **Project cost:** Estimated project Cost for this mine is Rs 2 crores. Estimated cost for environmental management is Rs.5.6 Lakhs / annum.

SL NO.	PROPOSED ACTION PLAN	EXPENSES PER YEAR (IN RS.)
i)	Air Pollution Measures	90000
ii)	Water Pollution Measures	60000
iii)	Noise Pollution Measures	30000
iv)	Green Belt (Plantation)	70000
v)	Maintenance of Mining Equipments & Vehicles	200000
vi)	Environmental monitoring	50000
vii)	Health Check Up and Drinking Water Provision	60,000
		Rs. 5,60,000Annum

17. **Environment Consultant:** The Environment consultant M/s **Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee on 13.06.2023.

18. The SEAC in its meeting held on dated **13-06-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Copy of approved DSR after inclusion of proposed identified sairat source to be submitted. EC to be considered once DSR is approved.	DSR report is under preparation by State Mining & Revenue Department, which will be approved & submitted shortly. Attached as Annexure 1.	Letter from District Magistrate & Collector to Sub-Collector, Sonapur for preparation of DSR has been submitted.
ii)	Layout of dump, stack, garland drain, settling pond along with their capacity details.	Layout of dump, stack, garland drain & setting pond have been reflected in the surface plan of approved mining plan. Capacity of Dump -17680m ³ wastes over an area of 0.416 Ha. Garland drain -370m x 0.5m x 0.5m Setting Pond – 15m x 14m x3m	-
iii)	Explore the possibility for usage of waste (fine sand) generated, for manufacture of sand.	The waste (fine sand) will be generated during the mining activity. A stone crusher will be installed inside the mine for crushing the waste materials to produce construction grade sand/ material. Total waste generation - 47,600m ³ in 5 years. As per calculation approximately 96T/day	-

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Trayak
Environmental Scientist, SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		waste will be generated. Considering 4 hr. operation in stone crusher, capacity of the crusher is estimated as 50 TPH. CTE & CTO will be taken from state pollution control board. Air pollution measure like installation of dry for systems will be installed at hopper, screen, crusher & all transfer points of crusher plant.	
iv)	Detailed note on water management – water source, permission to be obtained/granted for using in mining purposes, plan to discharge the waste water and its treatment.	Water will be made available from the nearby village Sarguna. The water requirement for the mine is 6.1 KLD. Water tank of the local area. The surface run off from the lease area will carry silt which will be settled in the setting pond (630m ³). Silt material will be removed from the setting tank before & after monsoon every year. Further the retaining wall provided along the dump slope will retain the silts in water during rainy season.	-
v)	The waste water will be generated while cutting granite, which is loaded with fines/silt, hence the project proponent shall suggest mitigation measures to protect the nearby nala from siltation due to surface runoff. Detail plan for surface water management also needs to be submitted.	Approximately 50 Ltr water is being used in cutting of 1m ³ granite, 75% waste water generates, which is loaded with silt / fines. On an average 2000 ltr/day of waste water will be generated during the cutting of 45m ³ of granite per day, which will store in the setting pond. After settlement of silts/fines, water will be reused for cutting of stone again.	-
vi)	KML file shows already mining activity has been carried out earlier and hence, copy of Environmental Clearance for the same if obtained earlier.	During prospecting of the area the weathered material has been scraped and samples taken for resting purpose. So, no, mining activity has been carried out earlier on the said area.	-

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 upto lease period with stipulated conditions subject to its inclusion in approved DSR as per Annexure – A and following additional conditions;

- i) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.
- ii) 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 decorative stone quarry for ensuring that working personnel are not affected by silicosis.

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J Nayak
Environmental Scientist, SEAC

- iii) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure. Accordingly, specific condition to be stipulated in EC of individual lease.

ITEM NO. 10

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S JATIA STEEL LTD. FOR GREENFIELD PROJECT FOR PRODUCTION OF 750,000 TPA ROLLED PRODUCTS AT KALINGANAGAR INDUSTRIAL COMPLEX, VILLAGE – JAKHAPURA, TEHSIL – DANAGADI, DISTRICT – JAJPUR, ODISHA OF SRI SIDDARTH SHARMA (SENIOR PROJECT MANAGER) - EC

1. This proposal is for Environmental Clearance of M/s Jatia Steel Ltd. for Greenfield project for Production of 750,000 TPA Rolled Products at Kalinganagar Industrial complex, Village – Jakhapura, Tehsil – Danagadi, District – Jajpur, Odisha of Sri Siddarth Sharma (Senior Project Manager).
2. **Category:** This is a Category – B project which falls under schedule 3(a), Metallurgical Industries (ferrous & nonferrous) for Rolling Mill plant as per the EIA Notification 2006 and amendments thereafter.
3. **TOR Details:** The proposal for ToR was presented before the State Expert Appraisal Committee (SEAC) on 23.12.2022 and ToR was granted by the concerned authorities vide F. No. SIA/OR/IND1/404835/2022, dated: 15th February, 2023 for the proposed project.
4. **Public hearing details:** Public Hearing meeting was held on 29.04.2023 (at 11:00 A.M.) at Danagadi bhavan, Danagadi of Jajpur district proposed by Sri Siddartha Sharma for Environmental Clearance in respect of M/s Jatia Steel Limited. Greenfield project for production capacity of 7, 50,000 TPA Rolled Products at Kalinganagar Industrial Complex in Village Jakhapura under Danagadi tehsil of Jajpur district. Issues raised during public hearing are employment, local area development, plantation, drink water, women empowerment and environment protection.
5. **Location and Connectivity:** M/s Jatia Steel Limited located at Kalinganagar Industrial complex, Village – Jakhapura, Tehsil – Danagadi, District – Jajpur, Odisha. The nearest railway station is the Jakhapura Junction (1.74 km, SE) from the site. The nearest airport is at Bhubaneswar International Airport (79.50, SSW) from the site. The site is approx. 3.5 Km away from nearest town Danagadi. Brahmani River is at 4.73 Km south from the project site. The National Highway i.e., NH 200 runs at 4.46 Km WSW of the site.
6. **Topography:** The coordinates of the plant area are 20°55'48.90"N to 20°56'5.68"N & 86° 3'4.63"E to 86° 3'24.66"E. It is situated at Kalinganagar Industrial complex, Village – Jakhapura, Tehsil – Danagadi, District – Jajpur, Odisha. The topography of the plant area is flat in and the slope is downward towards the South direction. The average elevation of site is 45 m AMSL. Range between: 42 m AMSL to 47 m AMSL. The perennial river Brahmani flows about 4.73 km in the South direction of the lease area and forms the main drainage system of the vicinity.
7. **Seismicity:** The project is under very feeble to Zone – III (moderate damage risk zone) [as per IS 1893 (Part-I): 2002]

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J. Nayak
Environmental Scientist, SEAC

8. **Status of Statutory Clearances** –The total land has been acquired from IDCO to M/s Jafia Steel Limited vide letter No_024/ALO/JRD, Dated 11/10/2022. No forest land clearance is obtained from Cuttack Forest Division vide letter No- 3716/6F, dated 16/05/2023.

9. **Project Details:**

Project Configuration

Sl. No.	Equipment	Configuration	Capacity (TPA)
i)	Re-Heating furnace	1 x 115 TPH	7,74,000
ii)	Roughing Mill 1	4 x 660 x 480 mm	7,50,000
iii)	Roughing Mill 2	4 x 660 x 480 mm	
iv)	Inter Mill	4 x 600 x 400 mm	
v)	Continues Mill (Pre Finishing)	4 x 480 x 320 mm	
vi)	Continues Mill (Finishing)	6 x 400 x 270 mm	
vii)	Cooling Tower (TMT)	2 x 100 TR	
		2 x 250 TR	500 TR
		2 x 350 TR	700 TR
viii)	Crane	2 x 5 + 3 x 10 + 3 x 15 Ton	85 T
ix)	Transformer	1 x 12,000 KVA + 1 x 2000 KVA	14,000 KVA
x)	UTM Machine	1000 KN	1000 KN
xi)	Lathe machine	-	5 nos.
xii)	Shaper machine	-	1 nos.
xiii)	Drilling machine	50 mm	1 nos.
xiv)	Air compressor	1 x 132 KW/7 BAR +	132 KW/7 BAR
xv)		1 x 132 KW/ 8 BAR	132 / 8 BAR

10. **The land utilization plan:** In total 17.806 Ha. (44.00 Acres) of land will be adequate to accommodate the entire planned facilities. The land utilization plan is given below.

Sl. No.	Particulars	Total Area			
		Acres	Hectares	%	
i)	Admin Block	0.074	0.03	0.166	
ii)	Generator Area	0.03	0.012	0.066	
iii)	H.T Power Supply Area	0.432	0.175	0.968	
iv)	Temple	0.048	0.02	0.108	
v)	Fire Fighting Room	0.099	0.04	0.221	
vi)	Water Reservoir	0.445	0.18	0.996	
vii)	Rain Water Storage	0.198	0.08	0.443	
viii)	Security Room 1	0.003	0.001	0.007	
ix)	Security Room 2	0.003	0.001	0.007	
x)	Plant Area	10.651	4.312	24.207	
	A	Stock yard & Dispatch bay	2.663		1.078
	B	Cooling & Finish storage of TMT	2.663		1.078
	C	TMT Rebar Mill	2.663		1.078
	D	Billet Storage bay & Reheating Furnace	2.663		1.078
xi)	Utility Buildings	3.718	1.505	8.450	
	A	Guest House	0.473		0.191

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	B	Portable WTP	0.578	0.234	
	C	Cooling Tower & CA Station	0.777	0.314	
	D	Water Storage & Pimp House	0.473	0.191	
	E	Oil Storage Electric Control Room	0.473	0.191	
	F	Electrical Control Room	0.473	0.191	
	G	Transformer, DB & PCB	0.473	0.191	
	xii)	Greenbelt Area	14.997	6.071	34.084
	xiii)	Truck Parking & Weighment Area	0.309	0.125	0.692
	xiv)	Admin Building	0.096	0.039	0.216
	xv)	Car Parking Area	0.074	0.03	0.166
	xvi)	Roads	5.237	2.12	11.902
	xvii)	Assembly Point	0.022	0.009	0.050
	xviii)	Future Expansion Area	7.589	3.071	17.248
	TOTAL AREA		44.00	17.806	100

11. Production and Waste Generation details:

Input	Specific consumption	Quantity in TPA	Output	Specific consumption	Quantity in TPA
	T/T of product			T/T of product	
Billet	1.032	7,74,200	Rolled Products	1	7,50,000
-		-	Scrap & End cuttings	0.025	18,750
			Mill scale	0.001	750
			Other Losses	0.006	4,700
Total	1.032	7,74,200	Total	1.032	7,74,200

12. **Manufacturing Process:** Rolling Mill will be used for Production of Rolled products (TMT Rebars & Wired Rod): Proposed (750,000 TPA); 100% will b sold in market. Rolling is a process used to shape metal into a thin long layer by passing it through a gap of two rollers rotating in different directions. At first billet from yard send it to reheating furnace where LSHS fuel used for heating and then processed to roughing mill than it passes to intermediate mill and finishing mill respectively. From there it will send it to QTB system for pinch roll & dividing shear and then to cutting with cold shear and bundle it for final dispatch.

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13. Waste Generation and Management:

Solid Waste					
Rolling Mill	Scrap	-	-	18,750 TPA	Will be disposed through trucks & sold to SMS Plant.
	Mill scale	-	-	750 TPA	Will be disposed through trucks & sold to Sinter Plant.
Hazardous Waste					
Used oil	Cat. 5.2	-	-	3.60 TPA	Storage in containers over impervious floor under well ventilated covered shed followed by disposal through actual users having valid authorization from SPCB, Odisha

- 14. Water requirement:** The total water required is 373 KLD. The source of water will be Brahmani River. The pickup point is estimated to be approximately 4.73 km aerial distance from the plant boundary. The length of the water pipeline will be approximately 8 km. During Monsoon the total requirement of water will be changed. The total water requirement in Monsoon is 267 KLD from Surface water and Rain water harvesting pond and re-circulating water from ETP respectively.
- 15. Wastewater management:** The sewage & sanitary wastewater from toilets, washrooms and canteen shall be treated in septic tank and waste water, if any shall be used for horticulture. STP of 20KLD with MBBR technology will be used to treat 16 KLD of domestic sewage. Primary Effluent Treatment Plant of capacity 200 KLD will be installed to treat the 168 KLD effluent.
- 16. Power Requirement:** Total power requirement for proposed project is 14 MW per hour and it will be sourced from TPNODL.
- 17. Flora/Fauna:** The area is sparsely populated and is undulated and interspersed with small hillocks and hilly terrain. The forest in the region is tropical dry deciduous forest but excessive biotic influences have caused retrogression to tropical Thorny scrubs. Agriculture is produced at large scale with major products grown here are Maize, pulses and a little amount of vegetables like brinjal, ladies finger, tomato etc. for household consumption. The dominant ground vegetation are Shorea robusta, Aegle marmelos, Cassia tora, Tectona gradis, Delonix regia, Parthenium hysterophorus, Sida rhombifolia, Tridax procumbens etc. Grasses like Saccharum spontaneum, Cynodon dactylon and Heteropogon contortus are generally found in the area. There is no national park, Wildlife sanctuary or wildlife corridors present in the study area of the proposed project. However, the project site is surrounded by protected forests. The nearest is Danagadi protected forest which is 4.50 km, where the dominant species is Sal, babul and Gandho palas.
- 18. Green belt:** In the proposed project of M/s Jatia Steel Limited Green belt shall be developed at least in 33% of total plant area in and around the plant premises for environmental protection as per CPCB/OPCB guidelines. In the proposed project 14.52 Acres of land i.e., 33% of total land proposed plant area of 44 Acres shall be provided a natural barrier for attenuation of noise and air pollution.

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19. **Baseline study details:** Baseline data was collected during winter season from March to May 2022.

- a) **Ambient Air Quality:** The monitored results show PM10 levels were in the range of 57.2 µg/m³ to 93.4 µg/m³, PM2.5 levels were in the range of 28.7 µg/m³ to 49.6 µg/m³, SO₂ levels were in the range of 9.6 µg/m³ to 21.6 µg/m³, NO_x levels were in the range of 19.4 µg/m³ to 31.4 µg/m³ & CO remained below detection level which are well within the prescribed limit of Central Pollution Control Board.
- b) **Noise Quality:** The noise levels were measured at eight stations in core and buffer zone located in residential areas. The noise levels observed during day time varies from 35.4 to 69.3 dB(A) and at night time varies from 32.4 to 52.3 dB(A). All the noise values observed are well within the limits prescribed by National Ambient Air Quality Standards for Noise.
- c) **Surface water quality:** The physico-chemical characteristics of surface water were analysed. In fresh water, the pH values of are varies from 7.15 to 7.81, Colour below 5 Hazen, Dissolve Oxygen 6.7 to 7.7 mg/l, BOD is 2.3 to 3.7 mg/l and COD is 11.5 to 18.5 mg/l.
- d) **Ground water quality:** The physico-chemical characteristics of ground water samples were analysed. The levels of total dissolve solids varied from 178 to 198 mg/l, total hardness from 97 to 138.4 mg/l, chloride from 27.5 to 33.6 mg/l and alkalinity from 52-64 mg/l.
- e) **Soil quality:** Top soil samples were collected from core & buffer zone, from 7 locations. From the above analysis report, it is found that the bulk density ranges between 1.26 to 1.47 gm/cm³. The soil texture is almost sandy & clayey. The soil is very much fertile for agriculture purpose.

20. **Manpower:** Total man power required during the construction phase will be 60, out of which 5 persons will be on permanent basis and the rest on contractual basis. The estimated manpower requirement is 150 numbers. Locals will be given preference in employment as per their qualification and experience. The indirect employment generation will be above 250.

21. **Project Cost:** The expected cost of the project is Rs. 220 crores. EMP cost includes a capital cost of 7.95 crores and a recurring cost of 1.27 crores.

22. **Environment Consultant:** The Environment M/s Visiointek Consultancy Services, Bhubaneswar along with the proponent made a presentation on the proposal before the Committee on 31.07.2023.

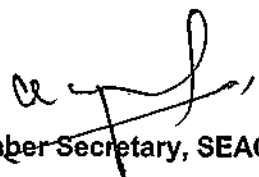
23. The SEAC in its meeting held on dated 31-07-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Plot No. 858 and 860 of the land proposed for the project is coming under "Sal Jungle and Jhati Jungle", Certificate along with supportive documents from the concerned DFO as well as IDCO that forest land involved in the project area has	As per the letter received from IDCO vide letter no. IDCO/HO/P&A-LA-E-8427/2022/22/16658 dated 26.05.2023 There is no forest land involved within 44 Acres area allotted in favor of M/s Jatia Steel Limited. This land has already been diverted	Copy submitted

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Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	already been diverted and will be utilized as per conditions of Forest Clearance.	for the purpose of iron ore-based industries by MoEF & CC Govt. of India vide Forest clearance letter no.3 /4- 2-1993 dated 14th / 17th January 2005 Further to that, DFO Cuttack Forest Division vide letter no. 3716/6F dated 16.05.2023 has also confirmed from field verification that the said land is barren and there is no forest growth over it. Copies of IDCO letter DFO letter and Forest clearance letter are enclosed as Annexure-A .	
ii)	Details of stack height along with the calculation according to CPCB norms and other details with composition of emission.	Stack height calculation chart with stack emission control process has been attached as Annexure-B .	Stack height is calculated 60meters.
iii)	Timeline to use Natural gas replacing LSHS.	Undertaking for replacing LSHS to Natural gas, at least two years' timeline frame, has been attached as Annexure-C .	Undertaking submitted
iv)	Quantity of mill scale generation and its end use.	Jafia Steel Limited certifies that it will generate 750 TPA of Mill Scale. The Company will dispose mill scale through trucks and Sale to Sinter Plant (it is used as a raw material in the sinter plant). The mill scale calculation chart is attached as Annexure-D .	Detail submitted in report.
v)	Details of Air Pollution Control Measures.	Air Pollution Control Measures for both Construction & operation phase summarized in Annexure-E .	complied
vi)	Traffic study report vetted by Institute of repute.	Traffic study report vetted by reputed institute is attached as Annexure-F .	Traffic study report vetted by CET and LOS is A

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services, 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 – E.


 Member Secretary, SEAC

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 Environmental Scientist, SEAC

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

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 adapted 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

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

5.5. HAZARDS AND RISK MANAGEMENT

5.5.1 Explosives

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

5.5.1.1. Storage and Handling

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

5.5.1.2. Blasting

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

5.5.1.3. Drilling

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

5.5.2. Loading

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



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

5.5.3. Transportation

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

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

5.5.4. Unstable face

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

5.5.5. General safety measures

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

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

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

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



ANNEXURE- C

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

Stipulated Conditions:

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

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

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

safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1st day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

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

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as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

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

Annexure - D

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

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

ANNEXURE - E

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S JATIA STEEL LTD. FOR GREENFIELD PROJECT FOR PRODUCTION OF 750,000 TPA ROLLED PRODUCTS AT KALINGANAGAR INDUSTRIAL COMPLEX, VILLAGE – JAKHAPURA, TEHSIL – DANAGADI, DISTRICT – JAJPUR, ODISHA OF SRI SIDDARTH SHARMA (SENIOR PROJECT MANAGER) - EC

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. (in case 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/ Committee.
- v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi) The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
- vii) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.
- viii) All the compliances submitted/ committed by PP (s) shall be strictly adhered to by them

II. Air quality monitoring and preservation

- i) The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission and connect to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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- ii) The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii) The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)
- iv) The project proponent shall submit monthly summary report of continuous stack 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.
- v) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.
- vi) The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii) Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- viii) Recycle and reuse of collected material from pollution control devices and vacuum cleaning devices in the process.
- ix) The project proponent shall use leak proof trucks / dumpers carrying coal and other raw materials and cover them with tarpaulin.
- x) The project proponent shall provide covered sheds for raw materials.
- xi) The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- xii) Design the ventilation system for adequate air changes at the melting furnaces.

III. Water quality monitoring and preservation

- i) The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connect to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii) 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.

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- iii) The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv) Adhere to 'Zero Liquid Discharge'.
- v) Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi) The project proponent shall provide the ETP for effluents.
- vii) 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
- viii) The project proponent shall practice rainwater harvesting to maximum possible extent.
- ix) The project proponent shall make efforts to minimize water consumption in the plant complex by segregation of used water, practicing cascade use and by recycling treated water.

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 SEIAA, Odisha and Regional Office of the Ministry 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) The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of melting furnaces.
- ii) Provide solar power generation on rooftops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- iii) Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

- i) Used refractories shall be recycled as far as possible.
- ii) Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iii) 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the SEIAA, Odisha and Ministry's Regional Office.

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- iv) The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
- v) Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)

VII. Green Belt

- 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.

VIII. Public hearing and Human health issues

- i) Emergency preparedness plan based on the Hazard identification and Risk
- ii) Assessment (HIRA) and Disaster Management Plan shall be implemented.
- iii) 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.
- iv) 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.
- v) 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-IA.III dated 1st 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 SEIAA, Odisha and MoEF&CC, Govt. of India 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 report 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

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progress of implementation of action plan shall be reported to the SEIAA, Odisha and Regional Office of Ministry along with the Six 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 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 project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (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.
- v) 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.
- vi) 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.
- vii) The project proponent shall inform the SEIAA, Odisha and Regional Office of the Ministry, 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.
- viii) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the State Level Expert Appraisal Committee.

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- x) No further expansion or modifications in the plant shall be carried out without prior approval of the SEIAA, Odisha.
- xi) 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.
- xii) The SEIAA, Odisha may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii) The SEIAA, Odisha reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv) The Regional Office of MOEF&CC, Govt. of India shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv) 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.
- xvi) 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.