

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL
COMMITTEE, ODISHA HELD ON 19TH JUNE 2023**

The SEAC met on 19th June 2023 at 10:30 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

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

Draft proceedings of the meeting were finalized by the members through e-mail and final proceedings of the meeting was confirmed by the members through e-mail. The agenda-wise proceedings and recommendations of the committee are detailed below.

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR M/S PENGUIN TRADING & AGENCIES LIMITED OF EXPANSION OF RAIKELA AND TANTRA IRON MINES FROM 2.16 TO 3.024 MTPA THROUGH OPENCAST MINING METHOD WITH MAXIMUM EXCAVATION OF 3.27 MTPA (ROM + OB) OVER AN ML AREA OF 49.372 HA IN VILLAGES – RAIKELA, TEHSIL - KOIDA OF SUNDARGARH DISTRICT OF SRI RAMAN RASHMI NAYAK - EC

1. This proposal is for Environmental Clearance for M/s Penguin Trading & Agencies Limited of Expansion of Raikela and Tantra Iron Mine from 2.16 to 3.024 MTPA through Opencast mining method with maximum excavation of 3.27 MTPA (ROM + OB) over an ML area of 49.372 Ha in villages – Raikela, Tehsil - Koida of Sundargarh district of Sri Raman Rashmi Nayak.
2. **Category:** The project falls in category B1 of the schedule 1(i) (a) mining of minerals as per EIA notification 2006 and its amendments. The Project Proponent has proposed expansion of 40%, in Raikela and Tantra Iron Mines from 2.16 to 3.024 MTPA and has applied for EC under 7(ii) (a) as per MoEF & CC OM dated 11th April, 2022.
3. **Project Details:** Raikela and Tantra Iron Ore Mines is located in village - Raikela, Tahasil - Koida, District - Sundargarh, State - Odisha, over an area of 49.372 ha in which 48.632 ha land is forest land. Proposed Expansion of Raikela and Tantra Iron Ore Mine from 2.16 to 3.024 MTPA through Opencast mining method with maximum excavation of 3.27 MTPA over an ML area of 49.372 Ha in villages – Raikela, Tehsil - Koida of Sundargarh district in Odisha.
4. Mining plan is approved by IBM vide letter no. BBS/SNG/IRON/2201/MRMP/2022-23 dated 14.02.2023.

Proceedings of the SEAC meeting held on 19.06.2023

Environmental Scientist, SEAC

5. Forest Clearance (Stage II) obtained over an area of 45.585 ha excluding Safety Zone vide letter no. 8-23/2007-FC dated 15.07.20215. Forest Clearance over Safety Zone Area over 3.047 ha. For Change of land use from safety zone to mining, Clearance granted over 0.218 ha under safety zone obtained vide letter no. 10F (Cons) 25/2020/12478/F&E dated 17.08.2020.
6. Mining Lease of Raikela and Tantra Iron Mines was granted in favor of Sri Ramji Lal Bathwal for 20 years on 03.12.1986. The lease was transferred to M/s Penguin Trading & Agencies Ltd on 23.06.1991.
7. 1st Renewal of lease was applied on 22.02.2005. Under Section 8(A) of MMDR Act of 12.01.2015, lease period was extended up to 02.12.2036.
8. M/s Penguin Trading and Agencies Pvt. Ltd. had obtained Environmental Clearance for production of 2.16 MTPA of Iron Ore vide EC Identification No. - EC22B001OR172761, File No.- 215287/64-MINB1/12-2021, Date of Issue 17.03.2022.
9. Consent To Establish issued vide letter No. 3406/IND-II-CTE-6281/2022 dated 04.03.2022 and after amendment, letter issued vide.10085/IND-II-CTE-6281/2022 dated 09.06.2022 for Production of 2.16 MTPA Iron ore with crushing plants of 300 TPH and screening plants of 750 TPH from the State Pollution Control Board (SPCB), Odisha and is valid for 05 Years.
10. Consent To Operate was issued vide letter No. 11015/IND-I-CON-4573 dated 24.06.2022 for production of 2.160 MTPA with Iron ore crushing plants of 300 TPH and screening plants of 750 valid up to 31.03.2026.
11. Certified Report of EC Compliance from RO, MOEF&CC, Govt. of India vide File no. 109 – 93 dated 10-06-2022 has been issued and there was no non-compliance. For a period of October 2022 to March 2023, compliance report has been submitted and Project Proponent has asked for 2 months for submitting the certified EC Compliance report.
12. Site Specific Wildlife Conservation plan 1st approved plan vide. 27551WL-C-SSP-197/10 dated 13.04.2010.
13. NOC from Ground Water for 48 KLD approved vide letter no. CGWA / NOC / MIN / REN / 3 / 2021 / 6169 dated 10.10.2021 and has been renewed which is valid upto 09.10.2023.
14. Surface Water withdrawal permission of 0.123 cusec obtained from Department of Water Resources, Government of Odisha vide letter no. 8632/WR dated 01.05.2020.
15. DGMS Approval for Joint Mining between JSPL and Penguin Trading Ltd. vide letter no. 330209/SEZ/Chaibasa Region/Perm/2020/5846 dated 28.08.2020.
16. MoU between JSPL and M/s PTAL, for joint mining was done on dated 15.10.2016
17. Power approval from WESCO for 533 KVA was done on dated 01.11.2018 for 5 years.
18. DGPS Approval by ORSAC done by vide map no. 1746/1, dated 19.04.2017.
19. **TOR Details:** Proposed expansion of Raikela and Tantra Iron Mine from 2.16 to 3.024 MTPA is based on MoEF & CC OM dated 11th April 2022, ToR is exempted for expansion up to 40% under 7(ii) (a) of EIA notification 2006. Final EIA/EMP report is prepared on the basis of standard TOR as per the said notification.

20. **Public hearing details:** The Public Consultation was conducted successfully on 21.10.2021 at 11.00 AM. Proceeding of Public Consultation issued letter vide Letter no-19360/IND-II-PH-926 dated-06-12-2021. Proposed expansion of Raikela and Tantra Iron Mine from 2.16 to 3.024 MTPA is based on MoEF&CC OM dated 11th April 2022, public hearing is exempted for expansion up to 40% under 7(ii) (a) of EIA notification 2006.

21. **Eligibility of the Project under clause 7(ii) “a”:**

Sl. No.	Criteria to be fulfilled	Reply by PP
Point-1 :	The project should have gone through the public hearing process, at least once, for its existing EC capacity on which expansion is being sought, except those category of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments	Public hearing was conducted on 21.10.2021, for enhancement in production from 1.080 million TPA to 2.160 million TPA. Issues raised in PH including education, health and employment etc., and action plan to address the issues was prepared for a period of 5years. Till now Rs. 4.78 Cr. has been spent.
Point-2 :	There should not be change in Category of the project from 'B2' to 'B1' or 'A' due to proposed modernisation or expansion.	The project falls in category B1 of the schedule 1(i) (a) “Mining of Minerals” as per EIA notification 2006 and its amendments. Post expansion of 40% the project will still remain in same category as per MoEF & CC OM dated 20th April, 2022.
Point-3 :	There is no additional land acquisition or forest land diversion involved for the proposed expansion or there is no increase in lease area with regard to mining vis-à-vis the area mentioned in the EC, based on which public hearing has been held earlier.	There is no change in land area after expansion of the proposed project with respect to forest land diversion or increase in lease area. The land is distributed as 48.632 ha of Forest land and 0.740 ha of Non-Forest Govt. Land.
Point-4 :	The proposed expansion shall not be more than 50% of production capacity as mentioned in the prior EC, issued on the basis of public hearing held and the same shall be allowed in minimum three phases.	The existing EC has been granted for enhancement in production from 1.08 MTPA to 2.16 MTPA vide EC Identification No.-EC22B001OR172761, F.No.-215287/64-MINB1/12-2021 dated 17th March 2022. The proposed expansion is from 2.16 MTPA to 3.024 MTPA i.e., 40% enhancement in capacity. The enhancement shall be under taken in 2 phases as per MoEF & CC OM dated 11th April, 2022.
Point-5 :	Predicted environmental quality parameters arising out of proposed expansion/modernization shall be within the prescribed norms and the same shall be maintained as per prescribed norms	Baseline parameters have been studied as per MoEF & CC and CPCB norms. Impacts have been predicted and mitigation measures have been proposed to maintain the environmental quality parameters well within the prescribed limits.
Point-6 :	The proposed expansion should not result in reduction in the greenbelt area as stipulated in the earlier EC, or if the existing ratio of greenbelt is more than	Greenbelt development after end of the plan period which is more than 33%. It is a running Mines and in approved mining plan it has been indicated for year wise

Sl. No.	Criteria to be fulfilled	Reply by PP
	33%, after expansion it should not reduce below 33%.	reclamation. Accordingly it is being done. Also Financial assurance has been submitted to the Regional Controller of Mines, IBM, Bhubaneswar for this purpose
Point-7 :	The project proponent should have satisfactorily complied the conditions stipulated in the existing EC(s) and satisfactorily fulfilled all the commitments made during the earlier public hearing/consultation proceedings and also the commitments given while granting previous expansion, as may be applicable. This shall be duly recorded in the certified compliance report issued by the IRO/CPCB/SPCB, which should not be more than one year old at the time of submission of application.	The condition stipulated in existing EC has been complied with satisfactorily issued raised in public hearing included education, employment and medical facility etc., and action plan for address the issue was prepared for a period of 5 years. A certified compliance report from MoEF & CC, IRO has been obtained vide File No.109-93, dated 10.06.2022.
Point-8 :	Public Consultation shall be undertaken (if applicable as per table below) by obtaining response in writing, as per para 7 III (ii) (b) of EIA Notification 2006, except those category of projects which have been exempted as per para 7 III (i) of EIA Notification 2006 and its amendments.	Not Applicable. Project Submission under MoEF & CC OM dated 11th April 2022, clause7(ii) (a) of EIA notification 2006, for 40% Expansion.
Point-9 :	Effluent monitoring including air quality monitoring systems as specified in the existing EC, if stipulated, should have been installed.	All conditions are complied and effluent monitoring and air quality monitoring photographs are attached.

22. Location and Connectivity: The Raikela & Tantra mining lease area is located in village Raikela & Tantra of Bonai Sub-division in Sundergarh District and is easily accessible from Tensa town, which is at a distance of 0.7km connected through public motorable road. The ML area is covered under the SOI toposheet No. 73 G/1 and has the following coordinates - Latitude- 21°52' 18.98232" to 21° 53' 00.94342" N Longitude - 85°10' 43.37875"to 85° 11' 05.86014" E. The nearest railhead are Barsua (17 km) and Roxy (40 km) in SE. The nearest National Highway and State Highway roads are NH-215 (Panikoli-Rajamunda) at 6.6 km NE and SH-10 (Koida Barsuan Road) at 0.16 km SW. The nearest airport is Biju Patnaik International Airport at 191 km SE. Nearest water bodies are Karo Nala at 0.1km in SE. Sarkanda Nadi at 4.71km in S. There are no National parks, Wildlife Sanctuary, Biospheres reserves within 10 km radius. There are four Reserve Forest within 10km radius Sarkanda R.F. 1.54 km S, Kathamala R.F. 6.61km NE, Torha R.F. 2.38 km N, Bhabani Pahar R.F. 5.74 km E. There is presence of Schedule-I species like Elephant in the study area.

23. Topography: The ML exhibits undulating hilly topography varying from 620 m AMSL on the southern part to 840 m AMSL on the norther part of the ML area. Out of the total 49.372 ha. 48.632 ha., is forest land and balance 0.740 ha. non-forest land. An area of 46.165 ha has already been utilized due to the mining and ancillary activities. The topography of the study area

(10 km around the ML boundary) exhibits plain as well as hilly topography. The general gradient of the area is towards north. Study area shows plain topography towards eastern side whereas northern, southern and western side of the study area shows undulating topography.

24. **Drainage:** The area falls within the Baitarini river Basin and watershed of the Karo nala which flows at a distance of 0.1km on the southern side of the ML area. There is no perennial streams/nalas flowing across the ML area. Drainage system of the study area exhibits dendritic pattern. The Karo nalla which flows at a distance of 0.1 km is the principal drainage system of the area and it finally drains into Baitarini River.

25. **Seismicity:** The project is under very feeble to Moderate Risk Zones (Zone-III). The project area is not prone to floods, landslides or cloudburst etc.

26. **Baseline study:** Baseline data was collected during winter season from Dec. 2020 to Feb. 2021.

a) **Ambient Air Quality:** The project is an expansion project, and the study area is scattered with rural area. The area has cluster of Iron mines. The monitored results show PM10 levels were in the range of 25 µg/m³ to 82µg/m³, PM2.5 levels were in the range of 12 µg/m³ to 46 µg/m³, SO₂ levels were in the range of 4.1 µg/m³ to 10.2 µg/m³, NO_x levels were in the range of 9.1 µg/m³ to 23.2 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 64.3 to 31.9 dB(A) and at night time varies from 45.9 to BDL<30 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 analyzed. In fresh water, the pH values of are varies from 7.3 to 7.82, the dissolved solids are 96 to 106 mg/l, chlorides are 30.2 to 36.4 mg/l, fluorides are 0.23 to 0.32 mg/l, Sulphate 15.6 to 26.2 mg/l respectively. The MF technique involves direct plating for detection and estimation of total coliform densities. The total coliform density in fresh water are varies from 79-97 MPN/100 ml, which are within the limit as per IS-2296, for surface water quality.

d) **Ground water quality:** The physico-chemical characteristics of ground water samples were analyzed. The levels of total dissolve solids varied from 132-219 mg/l, total hardness from 124-152 mg/l, chloride from 24.7-39.2 mg/l, Sulphate from 19-43 mg/l and alkalinity from 97-135 mg/l.

e) **Soil quality:** Top soil samples were collected from core & buffer zone, from four locations. From the above analysis report, it is found that the bulk density ranges between 1.12 to 2.24 g/cm³. The soil texture is almost clayey. The soil is very much fertile for agriculture purpose.

27. **The land utilization plan:** The mine lease area is spread over 49.372 Ha. The land utilization plan is given below.

Sl. No.	Type of land use	At the beginning of plan period (in ha.)	At the end of plan period (in ha.)
1.	Mining	29.73	32.40
2.	Mineral storage	2.61	4.64
3.	Roads	2.05	2.62
4.	Infrastructure (Workshop, Administrative building etc.)	0.13	0.27

Sl. No.	Type of land use	At the beginning of plan period (in ha.)	At the end of plan period (in ha.)
5.	OB/waste dump	6.13	8.34
6.	Top soil preservation	0.00	0.00
7.	Greenbelt	2.989	1.03
8.	Others	5.731	0.07
	Total	49.37	49.37

28. Production and waste generation:

Sl. No.	Year	Pit ID	Total Topsoil Volume (m ³)	Total Over Burden Volume (m ³)	Total Over Burden Quantity (t)	Total ROM Volume (m ³)	Total ROM Quantity (t)
Phase I - 20% Increase							
1	2022-2023	Joint Mining Pit	0.00	19847.70	39695.40	386720.53	1121489.52
2		Raikela & Tantra Pit	0.00	220.42	440.84	386720.53	117010.48
3	2023-2024	Joint Mining Pit	0.00	3523.01	7046.02	149447.89	415465.14
4		Raikela & Tantra Pit	0.00	47550.90	95101.80	821775.13	2284534.86
Phase II – 40% Increase							
5	2024-2025	Joint Mining Pit	0.00	19931.97	39863.94	62167.53	167852.34
6		Raikela & Tantra Pit	0.00	106965.37	213930.74	1023708.84	2856147.66
7	2025-2026	Joint Mining Pit	0.00	12637.98	25275.96	271985.59	775158.94
8		Raikela & Tantra Pit	0.00	64175.57	128351.14	780847.59	2248841.06
Total			0.00	2,74,852.92	5,49,705.84	38,83,373.63	99,86,500.00

29. **Mining method:** Mechanised opencast mining method with large HEMM will be carried out to increase the production from a level of 2160000 T to 302400 T. Further the mining operations is now proposed to be on 3 shift basis as against 2 shifts joint mining was earlier proposed along the northern boundary with Jindal Steel Power Ltd. joint mining along the common boundary is now being proposed with National Enterprises and Korp Resources Pvt. Ltd. and Gitarani Mohanty Necessary permission will be obtained. Life of Mines is estimated as 10.45 years.

30. **Waste Generation and Management:** Waste dump already reclaimed technically and biologically. This dump area is already proven barren by drilling. This dump has waste materials which are of grade below 45% Fe of laterite, shale, BHJ, BHQ, etc. This dump is already reclaimed by coir matting and subsequently plantation has been done surrounded by retaining wall of 1.5m height & 1m width and garland drain. Any rain cut which may develop in dump slope is proposed to be checked by no. of small check dams. Garland drains at the toe of the dump is connected to settling tank. Backfilling has already been initiated and till now 2.820 ha area has already been backfilled with waste material after proving the area as barren by

putting bore holes. Retreating method is adopted for backfilling. During the futuristic mining activity, tentatively out of the total waste 40% of waste material shall be utilized for road maintenance purpose and balance 60% shall be used for backfilling covering an area of 5.874 ha till the conceptual period. The reclamation plan as envisaged during the next five year till 2025-26 shall be as follows:

Sl. No.	Year	Waste Generation (Cub M)	Utilization		Backfilling Area (Sq.M)	Surface Level (Top RL/Bottom RL)
			Road Maintenance (Cub M)	Backfilling (Cub M)		
1.	2021-22	192875	67506	125369	8226	715/700
2.	2022-23	192900	67515	125385	8300	730/700
3.	2023-24	203575	71251	132324	15635	737.5/700
4.	2024-25	235725	82504	152221	18429	7745/700
5.	2025-26	257150	90002	167148	18902	752.5/700
Total		1082225	378778	703447		

31. **Water requirement:** About 348 KLD water will be required for dust suppression, plantation, workshop & wheel wash, drinking & domestic activities, etc. Mine pit water will be used for dust suppression and plantation activities. Ground water from borewell will be used for drinking and domestic use. Necessary permission from CGWA and permission for drawl of surface water from Karo Nala obtained.
32. **Wastewater management:** Wastewater & sanitary sewage from domestic use in the mine site is being discharged to septic tank and soak pit and in no circumstances discharged to any water body. There will not be any garage with washing facility within the leasehold area and hence the chance of generation of effluent from workshop does not arise.
33. **Power Requirement:** A total of 533 KVA power is required for mining operation. Power supply will be drawn from WESCO.
34. **Flora/Fauna:** Within core zone 20 species of trees, 4 species of shrubs, 3 species of climbers and 2 species of grasses are present. Common native species such as Arjun, Bel, Char, Kendu, Jamun, Neem, Palas, etc. are also present in the core area. Avifaunal species found are House Crow, House Sparrow and Pigeon etc. Mammals found are squirrel, cat, mongoose and rat. Reptiles reported are krait and rat snake. Only one Schedule I species found namely Elephant.
35. **Green belt:** Schedule planned for green belt development to be checked after every year and any alternation required will be implemented. Post plantation status will be regularly checked in every season. Plantation will be undertaken over the life of mine in a phase wise manner. The plantation will start from the first year of mining. Total existing plantation in 5.925ha, area and proposed plantation area will be 3.445 ha. And 5515 tree will be planted over 5 year of plan period.
36. **Manpower:** The estimated total manpower requirement (direct or indirect) for the mining project is 442 persons (221 persons for phase-I and 221 persons for phase-II).
37. **Project Cost:** The expected cost of the project is Rs. 47.19 crores.

38. **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.

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 the following:

- A. Only 20% increase in production capacity may be considered in first phase under 7(ii) (a) of EIA notification 2006 as per MoEF&CC, Govt. of India OM dated 11th April 2022 and after successful compliance to phase-I, rest 20% increase in production capacity will be considered under 7(ii) (a) of EIA notification 2006 as per MoEF&CC, Govt. of India OM dated 11th April 2022.
- B. Final EIA/EMP report may be prepared on the basis of standard TOR as per MoEF&CC, Govt. of India OM dated 11th April 2022 and also public hearing may be exempted as per the said OM dated 11th April 2022.
- C. Following may be included in the final EIA/ EMP report:
 - i) Traffic Study Report vetted by reputed institute.
 - ii) Whether mining activity has been carried out in safety zone or has maintained the safety zone area of 7.5 metres surrounding the mining activity zone?
 - iii) Layout map of Overburden and current status of different grades of mineral rejects.
 - iv) Comparative tabulated form between present magazine management and proposed plan due to expansion.
 - v) A brief note on FMCP.
 - vi) Chemical analysis report of the ore.
 - vii) Status of implementation of Site-Specific Conservation Plan.
 - viii) RL of ground water level during summer and rainy season as well as RL of surface post mining as per the approved mining plan
 - ix) Contents of chromium, manganese and heavy metal elements in the ground water samples of EIA study area.
 - x) Green belt area is getting reduced. Does not look like 33% as stipulated in point No. 6 of Eligibility of the Project under clause 7(ii) "a": This shall be clarified with detailed calculation of greenbelt existing and proposed.

ITEM NO. 02

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S PENGUIN TRADING & AGENCIES LIMITED FOR EXPANSION OF RAIKELA AND TANTRA IRON MINE FROM 2.16 TO 3.024 MTPA THROUGH OPENCAST MINING METHOD WITH MAXIMUM EXCAVATION OF 3.27 MTPA (ROM + OB) OVER AN ML AREA OF 49.372 HA IN VILLAGES – RAIKELA, TEHSIL - KOIDA OF SUNDARGARH DISTRICT OF SRI RAMAN RASHMI NAYAK - TOR

The Project Proponent has requested to reject the TOR proposal. The Project Proponent has proposed for expansion in production of Iron Ore for 40% i.e. from 2.16 to 3.024 MTPA from Raikela and Tantra Iron Mines and has directly applied for Environment Clearance under 7(ii) (a) category, as per MoEF&CC, Govt. of India OM dated 11th April, 2022. The Committee recommended for delisting the proposal.

ITEM NO. 03

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

The proposed project is in cluster approach with 7 stone quarries. Out of 7 stone quarries, earlier Environmental Clearance for two quarries had been granted by DEIAA and one from SEIAA. As per the MoEF&CC, Govt. of India OM dated 28.04.2023, the previous EC granted from DEIAA, needs to be re - approved by SEIAA after re-appraisal from SEAC.

In view of the above, the SEAC recommended to return the proposal to SEIAA, Odisha with a request to ask the project proponent to apply a fresh for EC for 7 quarries in cluster along with revised EIA study before expiry of the lease period.

ITEM NO. 04

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR JHARIPADAR- I & II STONE QUARRIES CLUSTER OVER AN AREA OF 18.00 ACRES OR 7.2846 HECTARES IN VILLAGE JHARIPADAR, TAHASIL- DIGAPAHANDI, DISTRICT- GANJAM OF TAHSILDAR, DIGAPAHANDI - EC (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 2 STONE QUARRIES)

1. This proposal is for Environmental Clearance for Jharipadar- I & II Stone Quarries Cluster over an area of 18.00 acres or 7.2846 hectares in village Jharipadar, Tahasil- Digapahandi, District- Ganjam of Tahasildar, Digapahandi.
2. **Category:** As per the EIA notification 2006 and its subsequent amendment, proposed project fall in category B under schedule of Item 1(a)-Mining of minerals.
3. Jharipadar Stone Cluster Quarry lease located at Village- Jharipadar, Tahasil – Digapahandi, District- Ganjam, Odisha over a cluster area of 7.2846 ha. The proposed project is in cluster situation as two leases are within 500m radius The ML has been allotted to Sri. Saroj Kumar Sahu & Smt. B. Swapna vide letter no. - 2137 & 2138 dated 30.04.2022.
4. The proposed site doesn't come under DLC as approved vide letter no 3423 dated 31.03.2021.
5. The mining plan for the Quarry I & II has been approved by the Joint Director, Geology South Zone, Berhampur vide Memo no 319/SZ dated 16.03.2022 & vide letter no- 279 dated 07.03.2022 respectively.
6. The proposed production capacity is 12,852 cu.m/annum (Mine 1 -7,380 cu.m/annum and Mine 2- 5,472 cum/annum).
7. **Letter of Intent details:**

S no.	Name of Quarry	Name of the leasee	Khata/plot no.	Lease area (Ha.)	LOI/ Form F letter no	Mining plan approval letter

S no.	Name of Quarry	Name of the leasee	Khata/plot no.	Lease area (Ha.)	LOI/ Form F letter no	Mining plan approval letter
1	Jharipadar Stone Quarry I	Sri. Saroj Kumar Sahu	Khata no-980, Plot no-05, 06	4.8564	Letter no.- 2137 dated 30.04.2022	Letter no- 319/SZ dated 16.03.2022
2	Jharipadar Stone QuarryII	Smt. B. Swapna	Khata no-980, Plot no-08	2.4282	Letter no.- 2138 Dated 30.04.2022	Letter no- 279 dated 07.03.2022
Total				7.2846ha		

8. **TOR details:** The Terms of Reference (ToRs) has been granted by SEIAA vide letter no 5151 and 5155 dated 19.08.2022.
9. **Public hearing details:** Public hearing was conducted on 18.01.2023 at Chatramandir Mouza of Digapahandi Tahasil of Ganjam district. Issues raised during public hearing are mining activity should abide all rules and regulation, transportation vehicles shall be covered by tarpaulins, water sprinkling should be carried out on transportation roads, plantation, control blasting and local employment. Budget kept under CER is Rs.1,60,000.00.
10. **Location and connectivity:** The proposed Jharipadar Stone Quarry (I & II) comes under the village Jharipadar, Tahasil- Digapahandi, District- Ganjam, in the State of Odisha on Khata no-980, Plot no- 05, 06, 08. Geographically the ML area of Mine 1 (Sri. Saroj Kumar Sahu) extends from 19°19'41.95"N to 19°19'48.11"N and 84°35'28.65"E to 83°57'35.03"E and the ML area of Mine 2 (Smt. B. Swapna) extends from 19°19'28.98"N to 19°19'38.47"N and 84°35'48.20"E to 84°35'51.59"E. The proposed area falls in SOI top sheet No. E45A11(74/11). The elevation of the site ranges from 92 mRL to 146 mRL. The Mine Lease area is approx. 45 kms of aerial distance from the district headquarters Chatrapur. The proposed ML area can be approached by SH-29 which is approx.4.0 km away from ML area. Nearest Airport Bhubaneswar Airport, approx. 163 km in NE direction. Nearest Railway Station Berhampur Railway Station, approx. 22 km in SE direction. Nearest reserve forest Ramagurha Reserve Forest, approx. 3.5 Km in SE direction. Nearest water body Ghodahara River is flowing at distance of 11.3 km in NW.
11. **Baseline data :** Data for baseline study was collected during pre-monsoon season March 2022 to May 2022
- a) **Ambient air quality:** The minimum and maximum level of PM10 recorded within the study area was in the range of 42.5 µg/m³ to 68.9 µg/m³ with consolidated 98th percentile range between 52.7 to 67.7 µg/m³. The 24 hourly average values of PM10 were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 100 µg/m³ for PM10 in industrial , residential, rural and other area. PM2.5 recorded with in the study area is in the range of 17.1 µg/m³ to 31.6 µg/m³ and 98 percentile range between 22.9 µg/m³to 30.6 µg/m³. The 24 hourly average values of PM2.5 were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 60 µg/m³ for PM2.5 in industrial , residential, rural and other area. The minimum and maximum levels of SO₂ recorded with in the study area was in the range of 5.4 µg/m³ to 11.6 µg/m³ and 98th percentile was recorded between 8.4 µg/m³ to 10.9 µg/m³. The 24 hourly average values of SO₂ were compared with the

National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 80 µg/m³ for SO₂ in industrial , residential, rural and other area. The minimum and maximum levels of NO_x recorded within the study area was in the range of 7.8 µg/m³ to 17.9 µg/m³ with 98th percentile range between 11.6 µg/m³ to 16.8 µg/m³. The 24 hourly average values of NO_x were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 80 µg/m³ for NO_x in industrial , residential, rural and other area.

- b) Noise monitoring reveals that the minimum & maximum noise levels at day time were recorded between as 48.6 dB(A) & 51.4 dB(A) respectively. The minimum & maximum noise levels at night time were found to be 38.5 dB(A) & 42.3 dB(A) respectively. It is observed that the noise levels are well within the prescribed Ambient Air Quality Standards with respect to Noise.
- c) Ground water : The analysis results indicate that the pH ranges from 7.36 to 7.59.Total Dissolved Solids ranges from 479 to 515 mg/l.Total Hardness (as CaCO₃) ranges from 276 to 308 mg/l.Fluoride (as F) ranges from 0.5 to 0.8 mg/l.The chlorides and Sulphates were found to be in the range.
- d) Surface water: The pH ranged from 7.34 to 7.52. Chloride varied from 67 to 83 mg/l. Dissolved Oxygen (DO) ranged from 6.9 to 7.4 mg/l. BOD (3 Days at 27 0C) ranged from 1.7 to 3.3 mg/l. COD varied from 10 to 22 mg/l.
- e) Soil analysis: The analysis results show that soil is basic in nature as pH value ranges from 6.76 to 7.13 with organic carbon 0.76 to 0.91%. The concentration of Nitrogen, Phosphates & Potassium has been found to be in good amount in the soil samples. Results of soil sampling analysis showed best for fertility.

12. **Reserves and Production details:** As estimated geological reserves is 13,43,519 Cum (Mine 1- 9,73,747 cu.m. & Mine 2 - 3,69,772 cu.m.) and mineable reserves is 7,48,702 Cum (Mine 1- 5,26,111 cu.m. & Mine 2 -2,22,591 cu.m.). The total ML area is 7.2846 ha. Proposed production is 12,852 cu.m/year (Mine 1 -7,380 cu.m/annum and Mine 2- 5,472 cum/annum) of stone.

Year	Mine 1 (Sri. Saroj Kumar Sahu)	Mine 2 (Smt. B. Swapna)
	Volume of RockMass, 90% (cum)	Volume of RockMass, 90% (cum)
1 st	7380	6080
2 nd	7380	6080
3 rd	7380	6080
4 th	7380	6080
5 th	7380	6080
Total	36900	30400

13. **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. Bench height & width of bench is 5 m & width will be more than 5m. The excavated rock

mass will be loaded in to 20 t capacity of trippers or truck by excavator. The life of the mine is 70 years (mine 1) & 40 years (mine 2) respectively.

14. **Waste generation:** Waste generation for Mine 1 is 4100 cum(5 years) and for mine 2 is 3040 cum(5 years)
15. **Water requirement:** The total requirement of water will be 5.5 KLD, which will be met from nearby village; NOC need to be obtained from Gram Panchayat.
16. **Greenbelt:** About 1530 number of trees will be planted in safety zone, 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	Total Plantation	Mine 1 (Sri. Saroj Kumar Sahu)			Mine 2 (Smt. B. Swapna)		
		Plantation in safety barrierzone (0.2 ha)	Plantation along approach road	At other places in the village	Plantation in safety barrier zone (0.09 ha)	Plantation along approach road	At other places in the village
1 st	780	250	150	100	130	50	100
2 nd	750	250	150	100	100	50	100
3 rd	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance
4 th							
5 th							
Total	1,530	500	300	200	230	100	200
		1000			530		

17. **Employment potential:** Besides the direct and indirect employment to 33 persons, the company will provide vocational skill training to the unemployment youth of the neighbouring villages through outside agencies. Local villagers residing in the nearby villages shall be employed as semi-skilled workers
18. **Project cost:** The estimated project cost is 80 lakh. The CER budget will be 2% of total project cost of Rs 1.6 Lakh. Rs. 14.6 lakh as capital cost & 5.6 lakhs/annum (for cluster) as recurring cost is allocated for environmental protection activities

Table: Budget for Environmental protection Action plan

S.No	Particulars	Amount per Annum (Lakh)	
		Capital	Recurring
1	Dust suppression	5.0	0.5
2	Plantation and its protection (@ Rs. 400/sapling-including fencing)	6.2	1.0
3	Personal Protective Equipment (@ Rs. 2000/PPE kit)	0.7	0.7
4	Environmental Monitoring (Air, water, soil, noise)	-	1.2 (0.5 lakh, 0.4 lakh, 0.20 lakh, 0.10 lakh)

S.No	Particulars	Amount per Annum (Lakh)	
		Capital	Recurring
5	Garland drain & settling tank	2.0	1.0
6	Haul road construction/maintenance (Approach road, approx. 0.34 km for both mines)	0.7 (@ Rs 2.0 Lakh/km)	1.2 (@ Rs. 300*200 days* 2 labor)
7	Patra Fencing Around the lease Cost 250/m ²	5.9	
	Total	20.5	5.6

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

Considering the information furnished and the presentation made by the consultant, **M/s Cognizance Research India Private Ltd., Noida** along with the project proponent, the SEAC decided to take the decision on the proposal after receipt of the following from the proponent

- Brief note on Blasting and magazine management i.e. frequency and time of blasting, mitigation measures followed during blasting, protocol followed during blasting and storage of explosives. Exact distance of nearest habitation from the project site.
- Brief note on management of flying rocks.
- There is a difference in EMP budget submitted in documents online (capital cost – Rs.14.6 lakhs and Rs. 5.6 lakhs as recurring cost) and presentation (capital cost – Rs. 20.5 lakhs and Rs. 5.6 lakhs as recurring cost). Which one is correct? This shall be clarified.
- RL of ground water during the summer and rainy season as well as RL of the surface post mining as per the approved mining lease.

ITEM NO. 05

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR BENIPALLI & GIRISOLA SAND QUARRIES CLUSTER OVER AN AREA OF 30.750 ACRES OR 12.4445 HECTARES IN VILLAGE BENIPALLI & GIRISOLA, TAHASIL BELLAGUNTHA, DISTRICT GANJAM OF TAHASILDAR BELLAGUNTHA - EC (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 2 SAND QUARRIES)

The SEAC decided to defer the proposal to next SEAC meeting, as the concerned project proponent (i.e. the Tahasildar, Belaguntha) was absent during the presentation made by the Environment Consultant.

ITEM NO. 06

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S TRISHNA SKYSCRAPER LTD FOR DEVELOPMENT OF A TOWNSHIP "TSL SPRING CITY " OVER A BUILT-UP AREA 284708.84 SQM LOCATED AT VILLAGE - KANTABADA, TEHSIL – BHUBANESWAR, DISTRICT – KHURDHA OF SRI SATYABRATA DHIR – VIOLATION TOR

Proceedings of the SEAC meeting held on 19.06.2023

Environmental Scientist, SEAC

The project proponent did not attend the meeting and requested to defer the proposal to next meeting. The SEAC decided to defer the proposal to next meeting.

ITEM NO. 07

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S SAHEJ TOWERS PVT. LTD FOR PROPOSED RESIDENTIAL BUILDING OF '7S+22' STORIED OVER AN BUILT-UP AREA 33364.526 SQM AT MOUZA- PATIA, TAHASIL- BHUBANESWAR, DIST- KHORDHA OF SRI UJJWAL SINGH - EC

1. This proposal is for Environmental Clearance of M/s Sahej Towers Pvt. Ltd for Proposed Residential Building of '7S+22' storied over an built-up area 33364.526 sqm at Mouza- Patia, Tahasil- Bhubaneswar, Dist- Khordha of Sri Ujjwal Singh.
2. **Category:** The project falls in item 8(a) of Building and construction project as per the EIA Notification, 2006 and 2009 and subsequent amendments thereof of MoEF & CC.
3. **Project Details:** The proposed construction is a multi-storeyed Residential Building comprising of 1 no. (one) block which is of configuration 7S+22 Floors over a total plot area of 4046.86 Sqm or 1.00 Acre in favour of M/s Sahej Towers Pvt. Ltd. The multistoried residential project will be developed at Plot No-306/1813, Khata No- 474/101 in Mouza- Patia, Tahasil - Bhubaneswar of Khordha district. A tinshed structure of previous land owner of approx. 130 sqm builtup area is present in the plot area which will be dismantled after obtaining EC of the proposed proposal.
4. **Location and connectivity:** The proposed residential building project site is located at Plot No. 306/1813 in Khata No. 474/101, Mouza- Patia, Tahasil- Bhubaneswar, Dist- Khordha, Odisha. The location of the project area can be seen in Survey of India Topo sheet no. F45T15. The geographical co-ordinates of proposed project site is bounded between Latitude 20° 21' 16.36" N to 20° 21' 18.08" N and Longitude 85° 49' 43.97" E to 85° 49' 44.99" E. The Project site comes under Bhubaneswar Development Authority. The project site is not located within ESZ, ESA and CRZ area. The project site is connected to NH-16 at a distance of 6.5 km and Nandankanan Road at a distance of 0.2 km. The residential project is easily approachable and commercially viable as the project site is connected to an external PWD road with a road width of 24.0 m. A 60.0 m wide C.D.P road is proposed which is connected to the existing PWD road. Adjacent roads of 11.0 m wide in the western side and 7.0 m wide in the eastern side of the boundary of the proposed project is present.

5. Area Details:

S. No	Details of Land Use	Area in Sqm
1.	Plot Area	4046.86
2.	Net Site Area	3395.28
3.	Total Proposed FAR Area	23617.504
4.	Total Proposed Non-FAR Area	9747.022
5.	Total Built-up Area	33364.526
6.	Total Green Area	877.82
7.	Height of the Building	109.05 Mts

6. Approval from Bhubaneswar Development Authority, Bhubaneswar vide Letter No-17629/BMC, Bhubaneswar dated 13-04-2023 has been received by the project proponent.
7. NOC for water supply is obtained vide NOC No. CGWA/NOC/INF/ORIG/2023/18347, valid from 26/04/2023 to 25/04/2028.
8. **Power requirement:** The daily power requirement for the proposed residential project is assessed to be 1548.72 KW which will be fed from 800 KVA transformer (2 Nos.) and sourced from TP Central Odisha Distribution Limited .Provision of DG set having 450 KVA capacity (2 Nos.) for power back up in the residential complex proposed. Solar power contribution will be 10.3% (160 KVA) which will be generated from solar panels.

Description	Energy Required (KW)	Energy Saved (KW)	Energy Saved (KW) in %
Compact Fluorescent Lamp (CFL)	152	152	13.7
Light Emitting Diodes (LED)	78		
Conventional Street Lights	3.12	2.88	
Solar Street Light	2.88		
Electrical Water Heaters	198	58	
Solar Water Heaters	87		
Other Energy Requirements	1027.72	-	
Total Energy Requirement in Project	1548.72	212.88	

9. **Water requirement:** The total water requirement of the project during occupational stage is 136 KLD, out of that the fresh water requirement is 83 KLD will be sourced from Bore well and the recycled water is 53 KLD.

SI. NO.	REQUIREMENT	QUANTITY (KLD)
1	Domestic Water	83
2	Flushing Water	39
3	Gardening	3.5
4	Fire,S.Pool & Others	10.5
Total		136

10. **Wastewater/STP details:** It is expected that the project will generate approx. 101 KLD of wastewater. The wastewater will be treated in onsite STP of 125 KLD capacity. The treated effluent will be reused for flushing, greenbelt and miscellaneous uses. Surplus treated effluent will be discharged to existing drain near the project site.
11. **Parking details:** The total parking required for the project is 5904.376 sqm and the total parking area provided is 7342.37 sqm. Visitor's parking provided is 734.23 sqm. In terms of ECS @ 32 Sqm: Cars 136 + E.V. Parking 70 = 206 ECS. Bike parking - 234 Nos. D.A. Parking – 2Nos.

Total parking Required @ 25% of FAR area	5904.37 Sqm
Total Parking Provided	7342.34 Sqm
First Stilt Parking (Ground Floor Parking)	911.89
Second Stilt Parking (First Floor Parking)	1101.93

Third Stilt Parking (Second Floor Parking)	1147.31
Fourth Stilt Parking (Third Floor Parking)	1145.96
Fifth Stilt Parking (Fourth Floor Parking)	990.16
Sixth Stilt Parking (Fifth Floor Parking)	1046.65
Seventh Stilt Parking (Sixth Floor Parking)	998.44

12. Rainwater harvesting: The total no. of rain water harvesting pits provided is 14.0 nos. and volume of rainwater to be harvested will be 78.75 Cum. Peak hourly rainfall has been considered as 140 mm/hr. The recharge pit of dimensions diameter 1.8 m and depth 3.0 m is constructed for recharging the water

13. Fire fighting installations: Fire fighting system will be installed as per recommendation of Odisha Fire Service Department and as per the guideline of NBC. NOC for the same is applied to and is in process.

14. Green belt development: Green belt will be developed over an area of 877.82 Sqm (25.85 %) of the plot area; by planting 85 nos. of the local species like *Aracaceae*, *Cupressus Sempervirens*, *Washingtonia Robusta*.

S.No.	Scientific Name	Common Name	No of Plants
1	<i>Aegle marmelos</i>	Bael	10
2	<i>Emblica officinales</i>	Amla	10
3	<i>Azadirachta indica</i>	Neem	10
4	<i>Mimusops eleugi</i>	Maulsari	10
5	<i>Lagerstromea parviflora</i>	Dhaura, Lendia, Bakli	10
6	<i>Syzygium cumini</i>	Jamun	10
7	<i>Adina cordifolia</i>	Kadamba	10
8	<i>Saraca indica</i>	Asoka tree	10
9	<i>Pongania pinnata</i>	Karanja	5
Total			85

15. Solid waste management: From the residential building the total solid waste will be about 455.0 kg/day. The generated solid waste from the residential building will be segregated as biodegradable and non-biodegradable. Proper waste management practices will be adopted during collection, storage and disposal of the generated solid waste, construction and demolition waste.

WASTE SOURCE	DISPOSAL
Garbage – 418 Kg/day	<ul style="list-style-type: none"> ▪ Segregation at Source & Disposed properly as per SWM Rules 2016 ▪ Bio-Degradable – 250.8 Kgs/day – Organic Waste Convertor ▪ Non-Bio-Degradable – 167.2 Kgs/day – (Authorized Re-cyclers/vendors)
STP Sludge – 14.14Kg/day	<ul style="list-style-type: none"> ▪ Which is used as manure
Landscape waste -0.043	<ul style="list-style-type: none"> ▪ Which is used as manure

16. Project cost: Estimated cost of the project is Rs 97.65 Crores. Environment Management Cost is Rs 64.0 Lakhs.

Table: ENVIRONMENT MANAGEMENT - BUDGET DURING OPERATIONAL PHASE

Sl. No	Activity	Capacity /Area/Nos.	Capital Cost (Lakhs)	Recurring Cost (Lakhs)
1	STP	125 KLD	35.0	4.0
2	Landscaping & Planting trees	80.0	3.0	0.5
3	Solid waste Management	455 Kg/Day	5.0	1.5
4	RWH Pit Installation	14.0	4.0	1.0
5	Environmental Monitoring*	Air, Water, Soil & Noise	5.0	2.0
Total			52.0	9.0

17. Environment Consultant: The Environment consultant **M/s Rightsource Industrial Solutions Pvt. Ltd.** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant **M/s Rightsource Industrial Solutions Pvt. Ltd.** along with the project proponent, the SEAC recommended the following:

A. The proponent may be asked to submit the following for further processing of EC application:

- i) Revised KML file showing the project area boundary.
- ii) Supporting documents regarding ownership of land with kisam of land.
- iii) Undertaking by Project proponent in Notary stamp paper that the proposed project area doesn't come under any litigation as encroachment is seen in the KML file presented.
- iv) Detailed drainage plan, internal drainage details, drainage permission with supporting documents and NOC for drainage from concerned authority.
- v) Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water.
- vi) Status of NOC/permission letter from CGWA/WR Deptt, Govt. of Odisha respectively for drawl of ground water.
- vii) Layout plan and width of road for movement of Fire Tender.
- viii) Site layout w.r.t location of DG set and Stack including calculations of stack height and its connection layout plan beyond the height of building.

- ix) Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.
- x) Letter approved by BMC in support of management of household waste.
- xi) There is a difference in EMP budget submitted in documents online (Rs. 64 lakhs) and presentation (capital cost – Rs. 52.0 lakhs and Rs. 9.0 lakhs as recurring cost). Which one is correct? This shall be clarified.
- xii) RL of the bottom of the rainwater discharge pit as well as RL of ground water table during rainy and summer season
- xiii) Detail plan of drainage for discharging excess treated sewage water
- xiv) Source of water for use during construction phase.

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

- i) Environmental settings of the project site.
- ii) Construction activity, if any started at the site.
- iii) Road connectivity to the project site.
- iv) Drainage network at the site.
- v) Discharge point for discharge of treated water and distance of the discharge point from the project site.
- vi) Any other issues including local issues.

ITEM NO. 08

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF TUMUSINGA SAND QUARRY OVER AN AREA OF 12.50 ACRES/ 5.06 HA. AT VILLAGE - TUMUSINGA, TAHASIL - KAMAKHYANAGAR, DISTRICT -DHENKANAL, STATE - ODISHA BY SRI. MANORANJAN PATRO - EC

1. This proposal is for Environmental Clearance of Tumusinga Sand Quarry over an area of 12.50 acres/ 5.06 Ha. at Village - Tumusinga, Tahasil - Kamakhyanagar, District -Dhenkanal, State - Odisha by Sri. Manoranjan Patro.
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. Intimation of Successful Bidder has been given to Sri Manoranjan Patro, vide letter no. 1488 on dated 29/03/2022.
4. Tumusinga Sand Quarry is a sand mining project over an area of 12.50 acres/ 5.06 Ha. located in village - Tumusinga , Tahasil - Kamakhyanagar in District -Dhenkanal of Odisha. The mining lease granted by Tahasildar, Kamakhyanagar, Dhenkanal and has been auctioned and leased out to the successful bidder Sri. Manoranjan Patro, At/PO – Alipur, PS – Aska, Dist – Ganjam after obtaining statutory 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.
5. The Mining plan has been approved by the Joint Director Geology Zonal Survey Dhenkanal vide letter no. 427 dated 29.04.2020.

Proceedings of the SEAC meeting held on 19.06.2023

Environmental Scientist, SEAC

6. The mining lease area is listed as an identified sand minor mineral in the DSR, Serial no – 29 of the Dhenkanal district
7. **TOR Details:** Terms of Reference (TOR), was issued by SEIAA, Odisha vide F.No. SIA/OR/MIN/78057/2022 dated: 19.8.2022
8. **Public hearing details:** The public hearing in respect of the above project was held on 22.11.2022 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 of this project are scarcity of sand, employment to local people and road maintenance. The budget incurred for the action plan of public hearing is Rs.3,50,000.
9. **Location and connectivity:** The area under discussion is featured in Survey of India Topo Sheet No – (F45T5, F45T6, F45T9, F45T10) and is bounded between the Latitude -20° 46' 48.51" N to 20° 46' 54.32" N & Longitude – 85° 28' 15.34" E to 85° 28' 24.15" E. The Lease area is located at a distance of 18.9 km from Dhenkanal town, 17 km from Tehsil Kamakhyanagar and 69 kms from the State Capital Bhubaneswar. Mahadia Railway Station is the nearest railway station located at a distance of 2.7 km from the lease area in south direction. Metal road connecting to the lease area with the at distance of 1.30 km. NH – 42 is the nearest national highway which is at distance of 4.5 km in South direction.
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. The total geological reserve has been estimated as 202400 m³. Similarly, the mineable reserve of river bed sand is worked out to be 174960 m³. The project has been proposed for a total production of 91050 m³ of Sand from this Quarry. During the plan period average of 18210 Cum of sand will be produced per annum by Open Cast Semi mechanized mining method. Excavation and loading of sand into the dumpers and tipper/tractors.
12. **Mining Method:** The sand will be excavated by open cast semi mechanised method and thickness of sand deposit for mining is taken as 2.0m. Mining will be done with semi - mechanized method of excavation & loading into Haiwa/Trucks/tippers for transport to the user's destination. The mining will be undertaken on single shift basis. Keeping in view of the market demand and resource availability in respect of reserves, proposed sand quarry is scheduled to produce @ 18,210 cum/year for the plan period
13. **Replenishment study:** As per the replenishment study, Estimated Movable area is 43740 Sq.m. Pre-Monsoon and Post-Monsoon Standard Elevation are 48.00 and 48.93 respectively. Difference in Elevation is 0.93. Estimated Annual replenishment Volume is 40678.2 m³. The Annual proposed production is 18210 cubic meters.
14. **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.
 - a) Air Quality:

PM₁₀:- The maximum value for PM₁₀ observed at near NH 42 location 74.2 µg/m³ and minimum value for PM₁₀ observed at Kantapal Village 52.8 µg/m³. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 100 µg/m³.

PM_{2.5}:- The maximum value for PM_{2.5} observed at near NH 42 location 37.1 µg/m³ and minimum value for PM_{2.5} observed at Kantapal Village 31.2 µg/m³. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 60 µg/m³.

SO₂:- The maximum value for SO₂ observed at near NH 42 location 8.9 µg/m³ and minimum value for SO₂ observed at Kantapal Village 4.3 µg/m³. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80 µg/m³.

NO_x: - The maximum value for NO₂ observed at near NH 42 location 15.9 µg/m³ and minimum value for NO₂ observed at Kantapal Village 6.2 µg/m³. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 80 µg/m³.

CO: - The maximum value for CO observed at near NH 42 location 0.71 mg/m³ and minimum value for CO observed at Kantapal Village 0.33 mg/m³. The 24 hours applicable limit for industrial, Residential Rural and Other Areas is 4 mg/m³.

b) Ground Water:

The analysis results of ground water samples showed the pH in range of 7.02-8.5 which are within the specified standard limits of 6.5 to 8.5.

Color and turbidity of the samples < 1.0 Hazens and <5.0 NTU respectively.

The total hardness of the samples ranged from 269 mg/l – 367.2 mg/l

Calcium and magnesium concentrations ranged from 45.6 mg/l -59.5 mg/l and 12.6 mg/l – 16.08 mg/l respectively.

The total dissolved solids of the samples ranged from 484.4 mg/l – 645.8 mg/l. The TDS values are within the stipulated 2000 mg/l

Range of chlorides and sulphates concentrations ranges from 43.8 mg/l- 70 mg/l and 34.4 mg/l – 66.8 mg/l respectively.

Fluoride concentration ranged from 0.06 mg/l – 0.38mg/l and is found to be within the permissible limits.

Iron concentrations in ground water varied from 0.03-0.3 mg/l. Zinc levels varied from 0.61mg/l to 0.82 mg/l respectively.

Aluminium concentration in ground water is <0.01 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 7.6 – 8.2 and 4500 - 4600 MPN/100ml.

d) Soil Quality:

It has been observed that the pH of the soil in the study area ranged from 7.21 to 7.48.

The electrical conductivity was observed to be in the range of 348.6 µmhos/cm to 361.3 µmhos/ cm.

The total nitrogen values range between 369 to 210 mg/kg.

The phosphorus values range between 17 to 37 mg/kg, indicating that the phosphorus content in the study area falls in less to medium category.

The potassium values range between 78.5 – 81 mg/kg.

e) **Noise Quality:**

The daytime (Leqday) noise levels are observed to be in the range of 49.7 –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 near NH 42 and the minimum noise level of 49.7 dB(A) was observed at Village Kateni 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 41.8 – 44.9 dB(A) Which are within the prescribed limit of 45 dB(A). The maximum noise level of 44.9 dB (A) was observed at near NH 42 and the minimum noise level of 41.8 dB (A) at Village Kateni 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).

15. **Water Requirement:** Water requirement for the project will be 2.5 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 shallow depth excavation on dry/ nominally wet sand has been proposed, which will have negligible or no impact on drainage. Abandoned stream channels on terrace and inactive flood plains have been preferred rather than active channels.
17. **Power Requirement:** No use of electric power as the operation will be done in day time.
18. **Employment Potential:** Employment Generation from the project is 13 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. **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.
20. **Project cost:** The project cost is estimated to be Rs. 30.0 lakhs and there is a budgetary provision of EMP is Rs.4.7 lakhs as capital cost and Rs.2.35 Lakhs as recurring cost

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

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

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 the following:

A) The proponent may be asked to submit the followings for further processing of EC application;

- a) Clarify the discrepancy regarding replenishment study report in submitted document and presentation.
- b) During Public Hearing, villagers opposed to use the village road for transportation of sand. In reply to this issue, the project proponent has come up with alternative approach road for transportation of sand. Details of transportation route along with layout plan needs to be submitted. An undertaking by project proponent to use and maintain the alternative road.

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

- a) Environmental settings of the lease area.
- b) Mining activity, if any carried out in the lease area as KML file shows already mining activity carried out in lease area.
- c) Road connectivity to the lease area.
- d) Distance of the road and railway bridge from the boundary of the lease area.
- e) Cluster approach if any.
- f) Distance of embankment from sand deposit.


Member Secretary, SEAC