

## Minutes of 176<sup>th</sup> Meeting of SEIAA, Odisha held on 25.10.2024

PARIVESH 1.0, AGENDA No. 176.17	
Proposal No.	SIA/OR/MIN/59663/2021
Date of application	04.01.2023
File No.	59663/309-MINB1/01-2023
Project Type	Proposal for EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for grant of EC for Kalyanpur Sand Cluster (Kalyanpur A & B) on River Kuakhai over an area of 34.475 Ha at village Kalyanpur, Tahasil: Bhubaneswar, District: Khordha, Odisha
Name of the company/Organization	Mis Minakshi Pradhan
Location of Project	village Kalyanpur, Tahasil: Bhubaneswar, District: Khordha, Odisha
ToR Date	07.06.2024
Name of the Consultant	M/s Kalyani Laboratories
Whether submitted scrutiny fee (Yes/No)	No
Whether submitted payment of receipt towards tree plantation (Yes/No)	NA

### **Proposal in brief:**

The highlights of the proposal as ascertained from the application and as revealed from proceedings/discussion held during the meeting of SEAC/SEIAA, are given as under.

1. This proposal is for Environmental Clearance of Kalyanpur - A and B Sand Bed Mines cluster on river Kuakhai over an area of 34.475 Ha. in village Kalyanpur, under Bhubaneswar Tahasil of Khordha District of Smt. Minakshi Pradhan.
2. **Category:** As per EIA Notification, 2006, and subsequent amendments, the project falls under category B1 of Schedule 1(a) - Mining of minerals as the lease area is more than 5.0 Ha.
3. **TOR Details:** Terms of Reference (TOR) issued by State Environment Impact Assessment Authority (SEIAA), Odisha vide letter no. 1486/SEIAA dated 07.06.2021.
4. **Public hearing details:** The Public Hearing meeting was held on 15.12.2021 at Block Conference Hall, Bhubaneswar situated under Bhubaneswar Tahasil in Khurda District, Odisha at 10.30 am. Major issues raised during public hearing are employment and skill development, making of pond as community bathing place, education, pollution control measures. A total expense to be incurred according to action plan of public hearing is 16 lakhs.
5. Tahasildar, Bhubaneswar has been granted the Quarry lease Kalyanpur A to Smt. Minakshi Pradhan (Successful Bidder) vide letter no.5210 on dated 06.08.2020 and the Quarry lease Kalyanpur B granted to Sri Sarat Behera, (Successful Bidder) vide letter no.9015 on dated 26.11.2020 for mining of river sand for five years.
6. **Mining plan:** The modification of mining plan has been approved by Authorized Officer & Deputy Director Geology, Bhubaneswar vide memo no. 4833/DG on dated 06.07.2020 for Kalyanpur A and vide memo no. 4835 on dated 06.07.2020 for Kalyanpur B.
7. **Location and connectivity:** The Lease Cluster is located in Khata no. 221 Plot no. 1058,947,948,949,950,951,952,953,954,955,956,957,958 for Kalyanpur A and Plot no. 1061 for Kalyanpur B, and falls within survey of India toposheet no. (F45T15). The geo coordinates of Kalyanpur A is - latitude of 20°22'08.04"N to 20°22'34.30"N and longitudes



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of 85°52'03.02''E to 85°52'15.76''E and Kalyanpur B is - latitude of 20°22'08.04''N to 20°22'34.30''N and longitudes of 85°52'03.02''E to 85°52'15.76''E. Nearest Railway station is Baranga Railway Station at 04 Km from the project site. The nearest roads are Nandankanan road at 4 Km and Baranga road at 5km. The site is well connected to NH-203 & SH-60 at 8 Km & 3.5 Km. Nearest airport is Bhubaneswar airport at a distance of 15Km from the mining Lease Cluster. Nearest river embankment at 100m, road bridge at 4.6km. Other than Kuakhai river, nearest water bodies are Kathajodi River at 3.5km and Mahanadi at 5km.

8. The study area within 10 Km of the project site is devoid of any Biosphere reserves, wild life corridors, tiger reserves etc. Chandaka Wildlife Sanctuary is located at a distance of 10Km from the project site. Nandankanan Zoo (National Park) is located at a distance of 6Km from the project site. The area is also devoid of any kind of vulnerable, endangered and critically endangered flora and fauna
9. **Topography and drainage:** The Kalyanpur Sand bed cluster represents a gently sloping to almost flat terrain with highest altitude of 22.00 mRL. The general slope is towards east. The drainage of the district is mainly controlled by rivers like Mahanadi, Kuakhai, Kushabhadra, Daya, Ran, Kalijiri, Sulia, Kharia & the Kusumi. Being a coastal district, the river basins are much wider and the sand sources are very much suitable for construction purposes. The lease cluster is on Kuakhai River. In buffer zone several water bodies are present. Serua River is present at a distance of 4km from the lease area at NE direction. Puri main canal is located at a distance of 600m from the project site. Jhumuka Nala is located at a distance of 7 Km from lease cluster.
10. **Cluster Certificate** - As per the certificate from Tahsildar, Kalyanpur Cluster consists of only two nos. of individual mines and no other mines located within 500m radius of this project.
11. **Reserves:** The geological reserve of the cluster is 999308 cum (Kalyanpur A - 196820 cum + Kalyanpur B - 802488 cum). The mineable reserve of the cluster is 521523 cum (Kalyanpur A - 93685 cu.m + Kalyanpur B - 427838 cum). As per the approved mining plan production capacity is **18700cum/year** and total production is **93500cum**.
12. **Benching Pattern:** Benching pattern is not feasible in case of sand, as the angle of repose of sand is 35°, based on this the Ultimate pit slope Limit has been taken as 35°. The maximum depth of mining will be of 2m or up to water table whichever is less.
13. **Replenishment Study Report** – The study was conducted in Pre and Post-Monsoon season (Survey was done in Month of June and November 2021) only the reserve has been assessed. The methodology of calculation as per approved mining plan was in surface area method but attempt has been taken to calculate Geological resources and mineable reserve in cross sectional area method. It was observed that for Kalyanpur- A ML, there is an average increase of river bed RL by 0.31 m due to sediment deposition during the monsoon season. So replenished quantity of sand available in each year within the sand bed =  $72000\text{m}^2 \times 0.31\text{m} = 22,320\text{m}^3$ . The post monsoon mineable reserve is 78,695 m<sup>3</sup> and the extractable amount is 47,217m<sup>3</sup> (60% of the mineable reserve). The replenishment study report (Pre and post monsoon surveys done during June and November 2021) for Kalyanpur-B mine has stated no replenishment of sand owing to absence of flooding on the riverbed sand (Ref. page 32/33).
14. **Water requirement:** For the Kalyanpur A, 2 KLD of water will be required (drinking & domestic purpose -1KLD, green belt development and dust suppression -1 KLD). For Kalyanpur B total water requirement will be 4 KLD (drinking & domestic purpose - 1.5 KLD and dust suppression and plantation purpose - 2.5 KLD). Total water requirement for cluster will be 6KLD.
15. **Fuel Requirement:** Tipper & Dumper will be used for transportation. The approximate quantity of the fuel/Diesel used per day is 100Lit/day.



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16. **Employment generation:** Due to the proposed sand mining, there will be generation of employment for 107 persons in Kalyanpur mines. Out of which 21 personnel will be engaged with Kalyanpur A and 86 persons will be engaged with Kalyanpur B cluster. From these 20 nos are skilled, 26 semiskilled, 53nos are unskilled.

### 17. Baseline study-

PERIOD	October to December 2020	Applicable Standards
AAQ PARAMETERS AT 7 LOCATIONS	PM2.5 – 18.8 to 34.4 µg/cu.m	60 µg/cu.m
	PM10 – 40.0 to 61.4 µg/cu.m	100 µg/cu.m
	SO <sub>2</sub> – 5.2 to 11.1 µg/cu.m	80 µg/cu.m
	NO <sub>x</sub> – 10.2 to 21.3 µg/cu.m	80 µg/cu.m
Ground water Quality at 6 Location	pH – 6.8 to 7.3	6.5 to 8.5
	Total Hardness – 132 to 188 mg/l	600 mg/l
	Chloride - 15.3 to 38.3 mg/l	250 mg/l
	Fluorides – 0.2 to 0.85 mg/l	1.5 mg/l
	TDS – 202 to 410 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 4 locations	pH – 7.5 to 8.2	
	Dissolved Oxygen – 6.8 to 7.3 mg/l	
	Biochemical Oxygen Demand – 1.2 to 2 mg/l	
	Chemical Oxygen demand – 6 to 10 mg/l	
Noise at 7 locations	Day (dBA Leq) 32.4 to 45.6	55
	Night (dBA Leq) - 25.6 to 35.6	45
Soil Quality at 4 locations	pH – 6.30 to 6.90, Potassium – 43 to 107.5 Kg/ Ha, Phosphorous – 16 to 51.7 Kg/ Ha, Nitrogen – 87.9 to 125.5 Kg/Ha, Electrical Conductivity- 102 to 435 ms/Cm	

18. **Project cost:** The total cost of the project is Rs. 20 lakhs and the updated capital cost and recurring cost (per annum) for the environmental facilities for the proposed mining project works out to be Rs. 6.5 lakhs which include 3.0 Lakhs for Kalyanpur A mines and 3.5 Lakhs for Kalyanpur B mines.

19. **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 17.02.2023.

20. The SEAC in its meeting held on dated 17.02.2023 recommended the following:

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

- i) 2.5 km inter-cluster certificate certified from Tahasildar.
- ii) Replenishment study report.



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- iii) Topography map based on grid points.
- iv) Revised Annual Production Report.

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

- i) Environmental settings of the lease area.
  - ii) Mining activity, if any carried out in the lease area.
  - iii) Sand deposit in lease area as KML file shows no sand deposit.
  - iv) Road connectivity to the lease area.
  - v) Distance of the road and railway bridge from the boundary of the lease area.
  - vi) Distance of embankment from sand deposit.
  - vii) Any other issues including local issues.
21. The proposed site was visited by Sub-Committee of SEAC on dated **03.06.2023** and following observations as mentioned below:
- a) PP, RI and Consultant were present along with other team members. The Mine is in Kuakhai River and there are no ongoing mining activities.
  - b) The area shown by the RI. It was observed that there is enough sand available in Bed A but Pocket sand available in Bed B. Both A and B beds are at opposite sides of the active channel of river.
  - c) Approach roads are available for both sand beds at their respective side. RI also confirmed that the approach roads are on Government land for both sand beds.
  - d) The bed B with pocket sands is mostly filling grade with some amount of construction grade sand. The lease area is filled with bushes and sand patches.
  - e) PP was advised to submit the Replenishment study report separately for both beds with a summary of mining quantity proposed based on replenishment study finding.
  - a) No road/ railway bridge or high-tension line nearby was observed.
  - f) PP was asked to submit required documents as asked during presentation.
22. The SEAC in its meeting held on dated **12-07-2023** recommended to consider the proposal after the proponent furnish the information / documents as pointed out by the Sub-Committee of SEAC in the site visit dated 03.06.2023 in addition to the information/ documents as sought vide SEAC letter no. 221(6)/ SEAC-(Misc)-28, dated: 03.04.2023.
23. 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)	2.5 km inter-cluster certificate certified from Tahasildar	Copy submitted	-
ii)	Replenishment study report	Copy submitted	RSP of Kalyanpur B sand Mine has been submitted.
iii)	Topography map based on grid points		-
iv)	Revised Annual Production Report		Revised Annual production has been calculated to 30000cum/annum for current period.

24. The SEAC in its meeting held on dated **16-05-2024** decided to take the decision on the proposal after receipt of the following from the proponent raised during site visit.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	PP was advised to submit the Replenishment study report separately for both beds with a summary of mining quantity proposed based on replenishment	Replenishment study reports of Kalyanpur-A & B has been submitted.	RSP of Kalyanpur A & B sand Mines has been submitted



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	study finding. The PP has submitted Replenishment study report of Kalyanpur-B sand Mine as asked during presentation.	separately.
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25. Any deficiencies/omission have been noticed in the above documents- **Not submitted scrutiny fee**

**Whether SEAC recommended the proposal** – Yes, the proposal was placed in SEAC meeting held on 25.07.2024 and the SEAC Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Kalyani Laboratories Pvt. Ltd., **Bhubaneswar**, on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Kalyanpur-A and B Sand Bed Mines (under cluster approach) without referring to SEAC with stipulated conditions as per Annexure-A after receipt of individual applications from the lessee in cluster along with following documents.
  - i) Filled in form-I of individual lease
  - ii) Prefeasibility report of individual lease
  - iii) EMP of individual lease.
  - iv) Approved Mining Plan of individual lease.
  - v) Previous production details of individual lease duly certified by Tahasildar.
  - vi) Replenishment Study Report of individual lease.
- b) Following specific conditions may be stipulated in individual Environmental Clearance.
  - i) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure – B**.
  - ii) In absence of proper Replenishment Study Report, the SEAC recommended sand for 1<sup>st</sup> year to a capacity of 60% of annual production capacity as approved in the mining plan.
  - iii) Sand extraction shall be limited to quantity and depth as per replenishment study report. The approved mining plan needs to be revised as per the findings of the replenishment study report of Kalyanpur-A ML. As per study report submitted it is concluded that there is no replenishment due to no flood in Kalyanpur B sand mine. Regular replenishment study as per guidelines to be conducted and report to be submitted.
  - iv) Provision of Bio-toilet shall be made at the site.
  - v) 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.
  - vi) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

### **Decision of Authority: ADS**

After detailed deliberation in the matter, the Authority **approved** the cluster EIA & EMP subject to condition that the project proponent(PP) is required to **submit scrutiny fee** and required documents for individual EC application.

**APPROVED BY**



**Member Secretary, SEIAA**



**Member, SEIAA**



**Chairman, SEIAA**