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AGENI	DA NO.151.16
Proposal No.	SIA/OR/MIN/406591/2022
Date of application	07.09.2023
File no.	406591/833-MINB1/09-2023
Project Type	Proposal for EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of Minerals
Name of the Project	Proposal for EC for Kharida Sand Bed Mining Project on junction of Rushikulya & Ghorahara River over an area 5.261 ha at Khata No-554, Plot No-4553/1 & 4532/1, Village- Kharida, Tehsil Hinjilicut, District- Ganjam
Name of the company/Organization	Sri Kiran Kumar Panda
Location of Project	Village- Kharida, Tehsil Hinjilicut, District- Ganjam
ToR Date	27.12.2021
Name of the Consultant	M/s Cognizance Research India Pvt. Ltd., Noida

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.

- This proposal is for Environmental Clearance for Kharida Sand Bed Mining Project on junction of Rushikulya & Ghorahara River over an area 5.261 ha at Khata No-554, Plot No-4553/1 & 4532/1.
 Village- Kharida, Tehsil Hinjilicut, District- Ganjam of Shri Kiran Kumar Panda.
- Category: As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Category B in Schedule in item 1(a)- Mining of Minerals.
- The Mining Lease has been granted vide letter no.1587dated 02.03.2021. The Successful Bidder is Sri.Kiran Kumar Panda. S/o-Late Gopinath Panda, Khalasi Sahi, Po: Berhampur, PS: Berhampur Sadar, Dist:Ganjam, State: Odisha.
- The Mining Plan of Kharida Sand Bed Mining Project has been approved by Deputy Director of Geology, O/o The Joint Director of Geology, South Zone, Berhampur, Odisha vide letter no1274 dated 06.10.2020.
- 5. This Mining lease Is an identified sairat source in the DSR Report Page no.56 and serial no. 5.
- TOR details: The Terms of Reference (TOR) letter was issued by SEIAA, Odisha vide letter No.3683/SEIAA Dated 27.12.2021.
- 7. Public hearing details: Public Hearing was conducted on 09/09/2022 at Debastali, Shri Maa Kurcisuni Thakurani Hata (Over Plot No.4728 in Khata No. 555) in Village Kharida under Hinjilicut Tahasil of Ganjam district. Issues raised during public having are environmental protection, covering of loaded transporting vehicles, local employment, local development and development of temple.
- Location and connectivity: The mine lease are a islocated in Village -Kharida, Tehsil-Hinjiticut,
 District-Ganjam, and is on Khata No-554, Plot No-4553/1& 4532/1 of Rushikulya & Ghorahara River.
 The project is covered in the Survey of India Topo SheetNo74A/15,74A/14andisboundedbetweenthel.atitude-19°30°.70"Nto 19°29′52.56"N and Longitude

84/46/40.02"Eto84°46'40.19"E. The Nearest Airport is Biju Patnaik International Airport approx., 136km towards NE. The Nearest Road Bridge is near about 2.5km in E Direction. Nearest River Inbankment is1.7km. Nearest Electric Transmission Line is 900m.

 Reserves and production: The total Geological reserves is 48729 cum and Mineable Reserves is 41779 cum and the Proposed Production for the Proposed Project is 15501 cum/year.

Year	Surface area in Sq.mt	Thickness of sand in mtr.	Volume of sand in cu.m	Recovery Factor (100%)	Production of sand in cu.m/Annum
i)	10334	1.5	15501	1	15501
ii)	10334	1.5	15501	1	15501
iii)	10334	1.5	15501	1	15501
iv)	10334	1.5	15501	1	15501
1)	10334	1.5	15501	1	15501
TOTA L					77505

- 10. Replenishment study details: The Replenishment study was done during Pre- and Post-Monsoon Period (May2022 & November 2022) by Physical Method Survey which was conducted with the help of Total Station Survey Instrument and two numbers of GPS (GARMINeTrex10) hand held GPS. After the Replenishment study it was found that 27,853 cum of sand have been proposed to be replenished annually.
- 11. Baseline study details: Baseline Study was conducted during December, 2019 to Feb., 2020.

Parameter	No. ef Locations	Environmental Baseline Study	
Ambient Air 7 locations Quality Monitoring		PM _{2.5} - 39.4 μg/m ³ to 55.9 μg/m ³ PM ₁₀ - 60.56 to 92.14μg/m SO ₂ - 4.5to 11.8μg/m ³ NO ₂ - 11.3μg/m ³ to 22.1 μg/m ³	
Noise level 4 locations monitoring		During daytime- 45.3 to 55.8Leq dB(A) During Night time- 38.4to 43.5 dB Leq dB(A) Results were found within permissible limits	
Water samples	Surface water – 2 locations	pH (7.2 to 7.8), Chloride (66 – 98 mg/l) DO (6.8 to 7.8 mg/l) etc. are found within permissible limits & fit for consumption.	
	Ground water- 4 locations	All parameters like TDS (412 mg/l to 505mg/l), pH (7.38 to 7.52), Chloride (76 mg/l to 118mg/l), Fluoride (0.40mg/l to 0.70 mg/l) etc. are found within permissible limits & fit for consumption.	
Soil Samples 5 locations		pH- 7.82 to 8.40 Conductivity - 124-141 µmhos/cm	

- 12. Mining method: The Method of Mining will be open east Manual Method. Extraction and loading into truck & Tractor will be done by manual means. The transportation from Sand Quarry site to destination shall be achieved by dumper/tractor.
- 13. Water requirement: Total water requirement for the proposed project willbe9.86KLD.

No.	Purpose	Manpower/Area	Water Demand (KLD)	Source
1)	Drinking	Manpower (18) 18*10I. =180 lpcd	0.18	Nearby village
ii)	For other (Toilet)	Manpower (18) 18*10L =180 lped	0.18	Private tanker (Treated Water /Pond Water)
iii)	Plantation	250trees *21, = 5001.	0.5	Private tanker (Treated Water /Pond Water)
iv)	Dust Suppression	Length= 900m Width= 5m Area= 900*5=4500m ² 4500*21. =9000 I.	9.0	Private Tanker (Treated Water /Pond Water
1		Total	9.86	

14. Greenbelt development: 250Plantsareproposedtobeplantedforthe Proposed project.

Year	No. of plants
1 st	50
2 nd	50
31d	50
4 th	50
5 th	50
Total	250

- 15. Manpower requirement: 18 nos of manpower are required for the proposed project.
- 16. Project cost: Estimated Project Cost is 55.90 lakh while EMP Cost is Rs 9,47,500.

Table- Budget for occupational health

S. No	Activity	Amount
i)	Doctors Visit	500*18*2= 18,000
ii)	Medicine Budget	500*18*2= 18,000
iii)	Quarterly pulmonary function test	600*4*18= 43,200
iv)	Extra Budget for medical test if required as per doctor's recommendation	60,000
Tot al		1,39,200/-

Table: Budget for environmental protection

Activities to be done		Amount
 Haulage Road Repair & Maintenance Filling, Leveling and widening of the road up to width of 5m and length of 900 m. Setting & Fixing of Cut Stone on the leveled road. 		1,00,000 (P.A)
Water Sprinkling on Haulage Road for Dust Suppression	Assuming Rs.1200/day for 260 days of working Tanker Cost: Rs. 600/Tanker Tanker Capacity: 4500 liter.	3,12,000 (P.A)

	No. of Tankers required: 2	
Plantation along the road side & post plantation care	Plantation@100/sapling (50 sapling/Year) Post plantation care @500/day Note: Annual cost will increase with increase in no. of sapling.	5000 (P.A) 1,30,000 (P.A)
Environmental Monitoring & Compliances.	 Half Yearly Monitoring of Environmental Parameters viz. Air, water, Noise & Soil. Half Yearly Submission of Compliances. 	4,00,000 (P.A)
➤ TOTAL		9,47,000

Table: CER Budget

Sr. No.	Activity	Capital Cost (In Rs.)
	Development of Temple in Kharida Village	1,12,000/-

- 17. Environment Consultant: The Environment consultant M/s Cognizance Research India Pvt. Ltd., Noida along with the proponent made a presentation on the proposal before the Committee.
- 18. The SEAC in its meeting dated 22-09-2023 decided to return the proposal to SEIAA for the following compliances from the proponent.
 - a) Replenishment study report of the proposed project is not accepted. Details of GCPs not given. Basis of P1 to P11 points is not there in the study report. Cross-sectional depiction of deposition and erosion for each section in pre and post monsoon season, supported by relevant field study data and plan, not given. The proponent shall redo the replenishment study report from authorized agency for further consideration of the proposal.
 - b) RL of the mining area and groundwater table in rainy season should be furnished.
- 19. The proposal was placed in the 141st meeting of SEIAA held on 1st and 2nd November, 2023 and the authority perused the recommendation of SEAC and decided that the PP is required to submit the following documents / explanation:
 - a) Replenishment study report of the proposed project is not accepted. Details of GCPs not given. Basis of PI to PII points is not there in the study report. Cross-sectional depiction of deposition and erosion for each section in pre and post monsoon season, supported by relevant field study data and plan, not given. The proponent shall redo the replenishment study report from authorized agency for further consideration of the proposal.
 - RL of the mining area and groundwater table in rainy season should be furnished.
 - c) The proposed lease area contained a confluence point of Ghodahada River and Rusikulya River. The PP is required to submit an action plan for protection of river channel in the confluence point.
- 20. Now the PP has submitted the necessary clarification for consideration of EC.
- The proposal is placed 144th Meeting of SEIAA, Odisha held on 30.11.2023 & 01.12.2023 the SEIAA decided to referred back the proposal to SEAC for further examination.
- 22. The SEAC has gone through the compliances furnished by the proponent and have following details in the report:

- Pre and post monsoon surveys have been carried out in June and October months respectively in the
- Photogrammetry drone survey method has been used to arrive at the difference in elevations of the riverbed sand during the survey periods using Digital elevation model / Surface terrain model.
- iii) Ground control points have RMS errors of 2.727 meters, 1.116 meters and 2.589 meters in X, Y and Z directions respectively. These errors are significant compared to the reported difference in riverbed sand elevation.
- iv) The replenished volume of sand has been reported to be 50,135 cum based on average estimated elevation difference of 1.2 meters.
- Whether SEAC recommended the proposal The proposal was placed in the SEAC meeting held on 01.12.2023 and the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure – A and following specific conditions:
 - a) 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. Therefore, no mining shall be carried out upto 500 meters of the bridge.
 - Extraction of sand 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.
 - 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. No mining shall be undertaken in the central part along the confluence point with a minimum width of 10 meter.

Decision Of Authority: ADS

The Authority peruse the reply dt. 21.11.2023 of the Tahasildar, Hinjilicut enclosing an action plan for protection of River channel in confluence point which is very sketchy and devoid of any technical details and measurement.

After detailed deliberation in the matter, the Authority decided that the PP should prepare a concrete plan and estimate for protection of river channel in the confluence point of River Ghodahada and River Rusikulya and obtain NOC from the Water Resource Dept. for the mining proposal along with technical approval of the action plan.

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

AGENI	DA NO.151.17
Proposal No.	SIA/OR/MIN/437539/2023
Date of application	20.07.2023
File no.	437539/823-MINB1/07-2023
Project Type	Proposal for EC
Category	BI
Project/Activity including Schedule No.	1(a) Mining of Minerals
Name of the Project	Proposal for EC for Baitarini Sand Bed over extent of 8.284 Ha Anandapur Village, Tehsil - Anandapur, Dist- Keonjhar, Odisha
Name of the company/Organization	Sri Manas Kumar Barik
Location of Project	Anandapur Village, Tehsil - Anandapur, Dist- Keonjhar, Odisha
ToR Date	01.02.2021
Name of the Consultant	M/s EHS 360 Labs Private Limited, Chennai

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.

- This proposal is for environmental clearance for Baitarani Sand Bed, Anandapur over an area of 20.47
 acres (8.284 ha.) is in Village- Anandapur, Tahasil Anandapur, in district Keonjhar of Sri Manas
 Kumar Barik.
- Category: The project is categorized in Category-B1 of Schedule under item 1(a)-Mining of Minerals in the EIA notification, 2006 and its subsequent amendments.
- The Mining plan has been approved for a period 2020-21 to 2024-25 by The Joint Director of Geology, Keonjhar. Vide letter no – 2390/CZ, dated 30.07.2020 in favour of Tahsildar, Anandapur.
- The lease was granted toMr. Manas Kumar Barikbeing the successful bidder for tenure of 5(Five)
 years from the date on which this executed deed is registered.
- 5. Mining lease is a running mine identified sairat source in the DSR page no 4, Sl No. 34, annexure II.
- 6. Public hearing details: Public hearing was conducted on 22.06.2022 at village Anandapur, Keonjhar district. Issues raised during the public hearing were selling of sand with appropriate price, regular maintenance & monitor of transporting vehicles, PM Indra Aawas & Biju Pucca Ghar beneficiaries shall get sand at reasonable price, protection of dam road & demarcate the area of lease, employment of labour class in sand mining. Budget earmarked for action plan of public hearing amounts to 5 lakhs.
- TOR details: Terms of Reference (ToRs) was issued by SEIAA vide letter no. 241/SEIAA dated 01.02.2021.
- 8. Location and connectivity: The proposed lease area of Baitarani River sand bed quarry situated at village Anandapur, Tahasil- Anandapur, District Keonjhar. The lease area is under reference featured in the Survey of India Topo sheet no.73K/4 is on Khata No. 1281, Plot No.3377, Kissam- Nadi. The geo coordinates of the lease area is 21°12′53.78″N 86°07′07.37″E 21°12′58.89″N 86°07′02.63″ E. The proposed area is located 6.37 km from District Headquarters Keonjhar and 150 Km from State Capital Bhubaneswar. Nearest railway station is at Tingripal railway station at an distance of 25.0Km. The lease area can be approached from National Highway NII-215(Gumla-Barkote) is at 0.7 Km away from the ML area. State Highway SH-53 (Banarpal-Pallahara) is 1.0 km away (Aerial Distance). Nearest Airport is Bhubaneswar Airport which is at 150Km. The area over 8.284 ha is a non-forest Govt. land

- of Nadakissam, having ground elevation of 35 mRL.River bridge is at 1.8 km away and river embalanent is 1km away from the proposed lease area.
- Topography and drainage: The general topography of the area around the mine site is general plan agricultural land along the river. The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The proposed area is undulating. The flow rate of the river varies with the quantity of precipitation in the catchment area.
- 10. Replenishment report: Considering all the mining constrains, the volume of sand available during pre and post monsoon survey in safe workable area is computed. It is estimated that during pre-monsoon and post-monsoon, the sand available in safe workable area is 14573.22cum and 9904.618cumrespectively. The volume of sand available during post monsoon survey around 9904.618m3 which can be treated safe volume to be extracted. Since as per guidelines 60% of extractable sand i.e.5942.77m3 may be allowed to extract, further permits may be decided by SEIAA, Odisha.
- 11. Reserves: As estimated, geological reserve of sand is 125780cum and mineable reserve is 51840cum.
- 12. Mining method: The open cast manual method and transportation through dumpers and tractors will be carried. No mining activity will be undertaken during the monsoon season. No drilling & blasting will be performed for production requirement. The bench height will be 1m and width will be along the base of deposit. There will be no under cuttings or over hangs. The average thickness of the deposit is 2m.
- Water requirement: Water requirement for the project is 5KLD for domestic, plantation &dust suppression which will be sourced from Govt sources of water.
- 14. Power requirement: The power required for the office is minimal, shall be taken from the General Electric supply of the area. However, if required for lighting in the project area at night power will be sourced from State Grid and for same it is estimate as 1.0 KVA.
- 15. Baseline study: Baseline studies was carried out during period March 2021 to May 2021, PM10 ranges within 65-37 μg/m³, PM2.5 ranges within 45.0-20μg/m³, SO₂ ranges within 6.4-4.0 μg/m³ &NOx ranges within 13.2-9.0 µg/m3. In Industrial areas daytime noise levels were about 50.3 dB (A) and 42.3 dB (A) during nighttime, which is within prescribed limit by CPCB (75 dB (A) Day time & 70 dB (A) Nighttime). In residential areas daytime noise levels varied from 46.6dB (A) to 55.3 dB (A) and nighttime noise levels varied from 42.3 dB (A) to 50.2dB (A) across the sampling stations. Surface water analysis showed the pH value ranging from 6.8 to 7.2 and within the limits (6.5 - 8.5) of 1S 2296:1992. The sulphate content in the collected surface water ranges 3.2 mg/l to 4.0 mg/l. The chloride content in the collected surface water sample ranges from 9.5 mg/l to 11.0 mg/l. DO of the collected surface water sample ranges from 6.0 mg/l to 7.0 mg/l. BOD of the collected surface water sample ranges from 1.4 mg/l to 1.8 mg/l. The ground water results of the study area indicate that the pH range varies between 6.6 and 7.4. It is observed that the pH range is within the limit of IS 10500:2012. The acceptable limit of the chloride content is 250 mg/l and permissible limit is 1000 mg/l. The chloride content in the ground water for study area ranges between 9 mg/l - 10.5 mg/l. It is observed that all are well within the permissible limit of IS 10500:2012. The desirable limit of the sulphate content is 200 mg/l and permissible limit is 400 mg/l. The sulphate content of the ground water of the study area varies between 2.3mg/1 - 3.1 mg/l. It is observed that all the samples are within the permissible limit of IS 10500: 2012

- *** Creenbelt: It is proposed to plant 50 Nos. per year of native species along with some fruit bearing and modernal trees during the plan period and a budget of Rs. 0.6 Lakh for plantation is given in EMP.Common species to be planted are Neem, Peepal, Mango, Shisham, Sirish, Babool, Chakunda.
 - Manpower requirement: In the mine for total production of 10368 Cu.m/Annum of River Sand 16 nos. of person are to be employed daily.
 - Project cost: The estimated cost of project is 50 Lakhs. EMP capital cost of the project is 11.0 Lakhs and recurring cost is 4.50Lakhs/Annum.
 - Environment Consultant: The Environment consultant M/s EHS 360 Labs Private Limited, Chennai along with the proponent made a presentation on the proposal before the Committee on 03.03.2023.
 - 20. The SEAC in its meeting dated 03-03-2023 decided to take decision on the proposal after receipt of certain information/ documents from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows.

SL No.	Information Sought by SEAC	Compliance furnished by the proponent
a)	Span and length of bridge and Anandapur barrage.	I. The nearest bridge is Salapada bridge is located at a distance of 1.8 km from the Baitarani Sand Bed Anandapur. The length of bridge is 682 m and span length is 52m II. The Anandapur barrage is located at a distance of 1.0 km. The length of barrage is 490m and spam length is 16 m The distance of bridge and barrage and their spam length as authenticated by Tahasildar, Anandapur is enclosed as Annexure—A.
b)	Rainfall data of last year June from the concerned authority.	The Date wise rainfall data as down loaded from website, SRC Odisha validated data is enclosed as Annexure-B.
c)	Previous production details and distance of proposed quarry from nearest sanctuary.	Total production during last five year was 30,123 CuM. The nearest sanctuary is Hadagarh Wildlife sanctuary located at a distance of 20 km from Baitarant Sand Bed, Anandapur. The authenticated annual production of the sand bed for last 5 years in enclosed As Annexure –A.
d)	The traffic study report vetted by a reputed institute.	The traffic report is attached herewith as Annexure-C.

21. The SEAC in its meeting held on dated 27.03.2023 decided to take decision on the proposal after receipt of the following clarification from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

1	Sl.	Information Sought by SEAC	Compliance furnished by the proponent
	i)	There is net loss of sand as per replenishment study. On what basis extraction is proposed.	This is a new mine and the auction was carried out by Tahasildar, Anandapur in 2020. After getting the Environmental Clearance the mining operation will be carried out. From 2020 there is no mining operation in the applied area. Whatever the Replenishment study carried out in 2022, is only to ascertain the extractable sand deposit not the replenishment as there is no mining
			operation before the previous monsoon season. As per the 2020 Sand Guide line, Drone Survey has been carried out and the
			reserve has been calculated after deducting the mine safety zone as well as the safety zone from the embankment.
			As per approved Mining Plan, the Geological reserve of Sand of this lease area is 1,25,780 CuM and Mineable reserve is 51,840 CuM. However, from the drone survey, it is reveals from the post-monsoon survey data that about 9,904.618 CuM (Sand present during the preparation of mining plan) of extractable sand available in the applied lease area. Out of 9,904.618 CuM of total extractable sand, 5,942.77 CuM of Sand @ of 60 % of 9,904.618 CuM may be consider for the 1st year production.
	ii)	Bridge is of 682meter length and about 1.8km from the lease area. As per Enforcement and Monitoring Guidelines for Sand Mining 2020 "Sand and gravel shall not be extracted upto a distance of 5X of the length of the bridge on the upstream side". Taking this criteria sand extraction is not permissible as bridge length is 682 meter.	As per the Enforcement and monitoring Guide lines for the sand mining 2020, "Sand and gravel shall not be extracted up to a distance of 5X of the length of the span of the bridge on the upstream side. As the spam distance of the bridge is 52m, a distance of minimum 260m to be maintain as non-extractable in the upstream side.
			But here, the Salapada bridge is located on the upstream side of the lease area at a distance of 1.8 km and the lease is in the downstream side of the bridge.

Hence, the criteria of sand extraction as per Enforcement and monitoring Guide lines for the sand mining 2020 is not an impediment for the sand extraction from the lease area.

- 22. The SEAC in its meeting held on 10-05-2023 decided to reject the proposal as follows:
 - a) In view of net loss of sand as per replenishment study submitted sand mining cannot be allowed at present. PP may submit next replenishment study, as due, to consider the proposal.
- The Project Proponent has freshly applied for Environment Clearance bearing File No. SIA/OR/MIN/437539/2023.
- 24. The Project Proponent has submitted revised replenishment study report and intimated as follows:

SL No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	In view of net loss of sand as per replenishment study submitted sand mining cannot be allowed at present. PP may submit next replenishment study, as due, to consider the proposal.	The Project Proponent has submitted revised replenishment study report and clarified the following in Replenishment study report: Just before the post monsoon drond survey, the Anandapur barrage which is present in the upstream side of the least area discharged water. Due the discharging the water from barrage some part of sand deposit washed aware causing erosion of the area. However, we have undertaken the drone surved during 24.05.2023 after receding the water level which show a quantity of 3,854.37cum sand has been replenished during the monsoon 2022. The PP has requested for recommendation of EC for extraction of 3854.37cum of sand for 1 Year Mining operation.

- 25. The SEAC in its meeting held on dated 31.07.2023 observed and recommended the following:
 - The lessee indicated in the compliance furnished that they have conducted Post Monsoon Study in the month of June. Post monsoon study of June month cannot be considered for undertaking mining. Hence, replenishment study report is rejected.
 - In view of net loss of sand and unsatisfactory revised replenishment report, this proposal is not accepted and it is recommended to return the proposal to SEIAA to take further action
- 26. The proposal was placed in the 134th meeting of SEIAA held on 07.09.2023 & 08.9.2023 and after detailed deliberations, the Authority agreed to the recommendation of SEAC and decided that the PP is required to submit the replenishment study reportof sand through ORSAC empanelled agency afresh for further consideration of this proposal for EC.
- 27. Now, the PP has submitted fresh ARRS study report as per EDS raised by SEIAA, Odisha.
- 28. The proposal was placed in the 143rd Meeting of SEIAA, Odisha held on 23.11.2023 & 24.11.2023, the SEIAA observed that the PP has now submitted revised ARRS through ORSAC empanelled agency by considering the data of 01.06.2023 as pre-monsoon survey and submitting data of 01.11.2023 as

bost-moneoon survey. After detailed deliberation the Authority decided that the case is referred to

The SEAC has gone through the revised replenishment study report and have following details in the report:

- Pre and post monsoon surveys have been carried out in 05th June and 01st November months respectively in the year 2023.
- Photogrammetry drone survey method has been used to arrive at the difference in elevations of the riverbed sand during the survey periods using Digital elevation model. Surface terrain model.
- iii) Ground control points locations and error estimates have been reported to be 1.67961 cms, 0.938584 cms and 0.871064 cms in X, Y and Z directions respectively. These errors are significant compared to the reported difference in riverbed sand elevation.
- iv) The replenished volume of sand has been reported to be 5622 cum in the safe workable area based on average estimated elevation difference of 0.27 meters.
- v) Calculation error is there i.e. Average thickness is 0.27 mt. and Safe workable area to be 20568 sqm. Then Volume comes to 5553 cum instead of 5622 cum what has been mentioned in the revised replenishment study report.
- Whether SEAC recommended the proposal The proposal was placed in the SEAC meeting held on 01.12.2023 and after detailed discussion, the SEAC decided to recommend the proposal for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure – A and following specific conditions.
 - a) 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. Therefore, no mining shall be carried out upto 500 meters of the bridge.
 - Extraction of sand 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.
 - 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.

Decision Of Authority: Approved

After detailed deliberations, the Authority decided to grant Environmental Clearance with usual stipulated conditions as applicable for sand quarry.

- Maximum depth of mining 1.0 meter and maximum quantity of extraction shall be limited to 5553 cum/annum as per replenishment study report.
- The validity of EC allowed subjected to validity of DSR or validity of lease period, whichever is earlier.
- The Grant of EC for further period will be considered after submission of approved DSR by SEIAA as per the MoEF& CC, Govt. of India Notification S.O. 3611(E) dated 25.07.2018, Sustainable sand mining guidelines-2016 and Enforcement & Monitoring Guideline for sand mining-2020 and also as per the Hon'ble Supreme Court order vide its order dated 10.11.2021 in Civil Appeal Nos. 3661-3662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others).



The Project Proponent (lease holder) shall deposit Rs.4,50,000/-, with the respective District Environment Society for raising 900 plants (minimum @100 trees per Ha) of native species within 2 years in a suitable location adjoining to quarry.

The PP will implement the EMP cost of Rs. 11.0 Lakhs capital cost and recurring cost is 4.50Lakhs/Annum along with CER cost of Rs. 5.0 Lakh as per commitment made in Public

Hearing based on issues.

APPROVED BY

Member Secretary, SEIAA

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AGENI	DA NO.151.18	
Proposal No.	SIA/OR/MIN/433694/2023	
Date of application	08.08.2023	
File no.	433694/829-MINB1/08-2023	
Project Type	Proposal for EC	
Category	B1	
Project/Activity including Schedule No.	1(a) Mining of Minerals	
Name of the Project	Proposal for EC for Baitarini Sand Bed, Habaleswar over an area of 5.26 ha at mouza -Habaleswar under Hatadihi Tahsil of Keonjhar district, Odisha	
Name of the company/Organization	Sri Krushna Chandra Swain	
Location of Project	Habaleswar under Hatadihi Tahsil of Keonjhar district, Odisha	
ToR Date	09.04.2021	
Name of the Consultant M/s Srushti Seva Private Limited, Nagpur		

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.

- This proposal is for Environmental Clearance for Baitarini Sand Bed, Habaleswar over an area of 5.26 ha at mouza - Habaleswar under Hatadihi Tahsil of Keonjhar district of Sri Krushna Chandra Swain.
- Category: As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Category B in Schedule in item 1(a)- Mining of Minerals.
- The lease is granted (Successful Bidder) in the name of Sri Krushna Chandra Swain, At Brahmanigan, Baranga in the district of Cuttack for a lease period of 5 (five) years by Tahasildar, Hatadihi vide letter no – 307 on dated 28.01.2021.
- The Mining plan has been approved for a period of five years by the Joint Director of Geology, Keonjhar, Vide letter no – 2402/CZ, on dated 30.07.2020 in favour of Tahsildar, Hatadihi.
- This is a new mine and mining lease is an identified sairat source in the District Survey Reportfor River Sand in respect of Keonjhar district which has been prepared in accordance with Appendix – x, Para – 7 (iii) (a) of S.O. No – 3611(E) dated 25.07.2018 of MoEF& CC, New Delhi and approved by Collector, Keonjhar on dated 28.01.2020 and the said area has been marked in Annexure – II, Sl. no – 88 of DSR Report.
- ToR details: Terms of Reference (ToR) was issued by SEIAA, Odisha vide Letter no. 1247/SEIAA (File no. SIA/OR/MIN/60800/2021) on dated 09.04.2021.
- 7. Public hearing details: Public hearing was conducted on 01.10.2022 at 11.0 AM at Khata no 1/1, Plot no 146 of Habaleswar village in Keonjhar district, Odisha. Issues raised during public hearing are Environmental issues like Pollution Control measures for smoke and dust nuisance during transportation and Operation of sand mining as per Govt. guidelines and Peripheral issues like proper water sprinkling for dust suppression & adequate plantation, river bank crosion & flood threat for village and the shiv temple of Habaleswar village, support for livelihood of tractor owners /local shopkeepers etc, development of roads, accident problem due to transportation, education facilities for students.
- 8. Location and connectivity: The mine lease area is located in Plot no 1225/1240, Khata no 165.

Moura – Habaleswar, Tahsil – Hatadihi, Dist – Keonjhar, Odisha. The proposed site is bounded by Latitude: 21°2°02.02" to 21°02°11.26" N, Longitude: 86°16′00" to 86°16′10.96" E bearing Topo Sheet No. - F45 O/4, Kissam - Non- Forest Govt. land of Nadi kissam. The Lease area is accessible from Habaleswar village road at a distance of 0.50 km, which is well connected to Habaleswar Chhaka and then Highways. Nearest NH is NH 215 - 15.0 Km; SH 53 - 13.0 Km. Nearest Airport is Bhubaneswar Airport - 120.0 Km. The lease area lies on Baitarini River. Salandi R.F. is 27.0 Km; Hubaleswar road bridge -is 2.0 Km; Dulukhapatana Railway bridge is 3.0 Km; River Embankment is 0.6 Km and Electric transmission pole is 0.5 Km away from the project site.

 Reserves and production: The total Geological reserves is 126240 Cum and Mineable Reserves is 110518 and the Proposed Production for the Proposed Project is 13260 Cum/Annum.

Year	PRODUCTION (M3)
1 ST YEAR	13260
2 ND YEAR	13260
3 RD YEAR	13260
4 TH YEAR	13260
5TH YEAR	13260
TOTAL	66300

- Replenishment study details: The Study was carried out for pre-monsoon data on 14.06.2022 and post monsoon data on 13.11.2022 by using UAV/ Drone method as per the SSMG, 2020. As, per the calculation, 5452.46 m³ sand has been replenished.
- 11. Baseline study details: Baseline Study was conducted inOct'2021 to Dec'2021 (Post-Monsoon Season), 8 monitoring station for Air quality & Noise level monitoring, 4 sampling location for ground & surface water quality monitoring and 4 stations for soil quality has been monitored. The results are well within limit of statutory norm.
 - a) Air quality: The AAQ analysis indicates that the concentration of PM₁₀ varied from 37.1 to 65 μg/m3, PM₂ s from 11.7 to 44 μg/m3, SO₂ from BDL to 16.2 μg/m3, NOx from BDL to 19.1 μg/m3.
 - b) Surface water quality: p11 values varied between 7.2 to 7.41, Turbidity 10.8 to 14.8 NTU, Dissolved Solids -378 to 482 mg/L., Dissolved oxygen 6.4 to 7.2 mg/L, BOD 1.4 to 1.8 mg/L.
 - c) Ground water quality: pH values varied between 6.1 to 7.1, Turbidity 3.2 to 4.3 NTU. Dissolved Solids 96 to 118 mg/l, total hardness 80 to 99 mg/l. Chloride values 7 to 10.7 mg/l. Calcium 17.1 to 18 mg/l, Magnesium 8.6 to 10 mg/l.
 - d) Noise study: Noise level varies from 48 to 53 dB (A) during Day time and 40 to 43 dB (A) during Night time, which are below the prescribed limits of CPCB.
 - c) Soil quality: Texture of soil within the study area is sandy silt to sandy loam. Soil of the study area is slightly acidic in nature. The bulk density of soil samples varies from 1.38 to 1.68 gm/cm³ porosity varies from 34 to 42.5 %.
- 12. Mining method: The mining of sand will be done by open cast manual method for excavation & then loading into dumpers/ tractors/tippers for transport to the user's destination. The maximum depth of mining will be of 1.2 m or up to water table whichever is less. Mining will be carried out in lean period only; during monsoon the mining will be stopped.
- 13. Water requirement: Total water approx, 1.0 KLD will be required for different purposes like Domestic, Dust suppression, plantation purposes & sourced as per the availability.

- Greenbelt development: 250 nos. of plantation will be carried out along the roadside forthe Proposed project.
- 15. Manpower requirement: Total 18 nos of manpower will be required for the proposed project (1 number of supervisory personnel preferably Mining Mate with Certificate of Competency from DGMS; 1 skilled, 2 semi-skilled and 14 unskilled persons will be employed)
- 16. Project cost: Total cost of the proposed project is 20.0 Lakhs. A capital cost of 4.5 lakhs is proposed as EMP cost (including CER cost of 2.0 lakhs) & 0.5 lakhs as EMP recurring cost.

EMP BUDGET		
Particulars	Capital Cost (Rs. in Lakhs)	Recurring Cost (Rs. Lakhs/Annum)
Environmental Monitoring	2.0	0.2
Environmental Management	2.0	0.2
Green belt development	0.5	0.1
CSR	2.0	
Total	4.5	0.5

CER BUDGET	
Category	Cost in Lakh
Provide drinking water facility / Repairing of tube well etc.	0.5
Health Camp	0.5
Repair of Roads	0,5
Sports & Education	0.5
Total	2.0

- Environment Consultant: The Environment consultant M/s Srushti Seva Private Limited, Nagpur along with the proponent made a presentation on the proposal before the Committee.
- 23. The SEAC in its meeting held on dated 13-10-2023 decided to take decision 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.	The project proponent shall conduct analysis of the sediment deposit in NABL accredited labs according to the classification of content and size and furnish the report of the same.	The sediment deposit has been analyzed according to the classification of content and size. The analysis report is annexed as Appendix - 1.	submitted
2.	The project proponent shall submit the accuracy report of the drone survey along with the accuracy level,	The accuracy level of the drone survey was 0.67 cm in X axis, 1.11 cm in Y axis & 0.44 cm in Z axis. The data processing. Report is annexed as Appendix – 2.	submitted
3.	The project proponent shall provide the layout of the survey area over which drone survey is done.	Drone survey has been carried out within lease area and a buffer area of 50m from the lease boundary. A layout of survey	submitted

area is annexed as Appendix - 3 for reference.

Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 02.12.2023 and the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure – E and following specific conditions:

- a) 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 F.
- b) 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.
- 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.

Decision Of Authority: Approved

After detailed deliberations, the Authority decided to grant Environmental Clearance with usual stipulated conditions as applicable for sand quarry.

- Maximum depth of mining 1.0 meter and maximum quantity of extraction shall be limited to 5453 cum/annum as per replenishment study report.
- The validity of EC is subjected to validity of DSR or validity of lease period, whichever is earlier.
- The Grant of EC for further period will be considered after submission of approved DSR by SEIAA as per the MoEF& CC, Govt. of India Notification S.O. 3611(E) dated 25.07.2018, Sustainable sand mining guidelines-2016 and Enforcement & Monitoring Guideline for sand mining-2020 and also as per the Hon'ble Supreme Court order vide its order dated 10.11.2021 in Civil Appeal Nos. 3661-3662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others).
- The Project Proponent (lease holder) shall deposit Rs.3,00,000/-, with the respective District Environment Society for raising 600 plants (minimum @100 trees per Ha) of native species within 2 years in a suitable location adjoining to quarry.
- The PP will implement the EMP cost of Rs. 4.5 Lakhs capital cost and recurring cost is 0.3Lakhs/Annum along with CER cost of Rs. 2.0 Lakh as per commitment made by lessee in Public Hearing issues.

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

Chairman, SEIA

A COUNTY	1 NO 151 10
	A NO.151.19
Proposal No.	SIA/OR/MIN/404049/2022
Date of application	22.02.2023
File no.	404049/886-MINB2/03-2023
Project Type	Fresh EC
Category	B2
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for EC of Baddohel Sand Quarry over an area 12.30Acre or 4.977Ha in village Baddohel under Khariar tahasil of Nuapada district Odisha
Name of the company/Organization	Khariar Tahasil
Location of Project	village Baddohel under Khariar tahasil of Nuapada district Odisha
ToR Date	N/A
Name of the Consultant	N/A

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.
 - This is a proposal for mining of sand from fresh Baddohel Sand Quarry over an area 12.30Acre or 4.977Ha in village Baddohel under Khariar tahasil of Nuapada district Odisha.
 - (ii) The mining area is a part of Survey of India Toposheet No. F44W15, and the lease area bounded by Latitude: 20°15'12.35"N to 20°15'18.96"N and Longitude: 82°47'30.86"E to 82°47'48.61"E.
 - (iii) The mining lease is an identified sairat source in the DSR. The Baddohel Sand Quarry sairat source will be leased out under the OMMC Rules, 2016 by Tahasildar, Khariar to the successful bidder (lessee) on the basis of public auction for a lease period of 5 years.
 - (iv) Documents submitted: -Form-1, PFR, checklist, Mining Plan and approval letter, DSR, Village sheet, Cluster certificate from Tahasildar, topo map etc.
 - (v) Whether submitted KML file of the lease area-Yes
 - (vi) Whether submitted scrutiny fee-No, tahasildar is the applicant
 - (vii) Distance from nearest sanctuary/ESZ- Sunabeda WLS-25.0 Km
 - (viii) Whether the lease area coming in DLC report-No, N/A
 - (ix) Whether the lease area reflecting in DSR-Yes
 - (x) Method of mining-manual
 - (xi) River- Sundar, Depth of sand deposition-1.2 m
 - (xii) Distance from nearest road bridge-3.9 km, village road-0.9 km
 - (xiii) Whether it is part of cluster -No
 - (xiv) Whether EC obtained earlier-Yes and submitted EC compliance.
 - (xv) Date of approval of mining plan- the Joint Director of Geology, Zonal Survey, balangir on 28.07.2022.
 - (xvi) As per approved mining plan the Geological reserve of the quarry is 54191.5 cum. Mincable reserve is 44499.5 cum, annual production will be 3000/annum with total production in 5 years is 15000 cum.
 - (xvii) Whether the DSR has been prepared as per the MoEF& CC, Govt. of India Notification S.O. 3611(E) dated 25.07.2018, Sustainable sand mining guidelines-2016 and Enforcement & Monitoring Guideline for sand mining-2020- No
 - (xviii) Budget for EMP- Rs. 1.20/ Lakh per annum

My deficiencies/omission have been noticed in the above documents-Nil

Whether SEAC recommended the proposal – The proposal was placed in SEAC meeting held on 2nd.

7th, 8th & 11th Sept, 2023 and after detailed discussion, the SEAC observations the following-The SEAC observed that the major water flow channel is crossing the lease area dividing the land mass as seen in kml file. Moreover, major part of the lease area is having clay deposit. The proposed mine

development plan shows year wise mining area. Whereas the replenished deposit area has been ignored.

Hence, the SEAC decided to reject the proposal.

3. The proposal was placed 142nd SEIAA meeting held on 13th, 14th & 15th November 2023 and the Authority observed that there are three sand quarry proposals in the river-Sunder within stretch of 10 Km in the river channel. The Bichhanapalli sand quarry-I which is located in the centre (i.e. Baddohel Sand Quarry and Bichhanapali-2 Sand Quarry) and has been granted EC on 24.11.2022 vide proposal no. SIA/Or/MIN/284097/2022. The Other two proposal i.e. Baddohel Sand Quarry vide proposal no. SIA/OR/MIN/404049/2022 and Bichhanapali-2 Sand Quarry vide proposal no. SIA/OR/MIN/404088/2022 is rejected by SEAC.

In view of this, all three cases i.e. proposal no. SIA/Or/MIN/284097/2022, SIA/OR/MIN/404049/2022 & SIA/OR/MIN/404088/2022 are referred back to SEAC for re-examination and considered view/recommendation.

4. The proposal was placed SEAC meeting held on 01.12.2023 and the after detailed discussion, the SEAC reiterates its earlier recommendation as it is not clear on what basis the decision should be reversed. Hence, it is recommended to return the proposal to SEIAA to take further action.

Decision Of Authority: Reject

The Authority accepted the recommendation of SEAC meeting held on 2nd, 7th, 8th & 11th Sept, 2023 on the following reasons:

The major water flow channel is crossing the lease area dividing the land mass as seen in KML file. Moreover, major part of the lease area is having clay deposit. The proposed mine development plan shows year wise mining area. Whereas, the replenished deposit area has been ignored. Hence, the SEAC decided to reject the proposal.

After detailed deliberation in the matter, the Authority decided to reject the proposal as per SEAC recommendation on the above-mentioned reason.

APPROVED BY

Member Secretary, SEIAA

Member SEIAA

AGENDA NO.151.20		
Proposal No.	SIA/OR/MIN/404088/2022	
Date of application	21.02.2023	
File no.	404088/880-MINB2/03-2023	
Project Type	Fresh EC	
Category	B2	
Project/Activity including Schedule No.	1(a) Mining of minerals	
Name of the Project	Proposal for EC of Bichhanapali-2 Sand Quarry over an area 12.30Ac or 4.977Ha in village Bichhanapali under Khariar tahasil of Nuapada district Odisha	
Name of the company/Organization	Khariar Tahasil	
Location of Project	village Bichhanapali under Khariar tahasil of Nuapada district Odisha	
ToR Date	N/A	
Name of the Consultant	N/A	

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.
 - This is a proposal for mining of sand from fresh Bichhanapali-2 Sand Quarry over an area 12.30Ac or 4.977Ha in village Bichhanapali under Khariar tahasil of Nuapada district Odisha.
 - (ii) The mining area is a part of Survey of India Toposheet No. F44W16, and the lease area bounded by Latitude: 20°14'46.43"N to 20°15'03.10"N and Longitude: 82°46'02.15"E to 82°46'18.03"E.
 - (iii) The mining lease is an identified sairat source in the DSR. The Bichhanapali-2 Sand Quarry sairat source will be leased out under the OMMC Rules, 2016 by Tahasildar, Khariar to the successful bidder (lessee) on the basis of public auction for a lease period of 5 years
 - (iv) Documents submitted: -Form-1, PFR, checklist, Mining Plan and approval letter, DSR, Viilage sheet, Cluster certificate from Tahasildar, topo map etc.
 - (v) Whether submitted KML file of the lease area-Yes
 - (vi) Whether submitted scrutiny fee-No, Tahasildar is the applicant
 - (vii) Distance from nearest sanctuary/ESZ- Sunabeda WLS-23.0 Km
 - (viii) Whether the lease area coming in DLC report-No, N/A
 - (ix) Whether the lease area reflecting in DSR-Yes
 - (x) Method of mining-manual
 - (xi) River- Sundar, Depth of sand deposition-1.2 m
 - (xii) Distance from nearest road bridge-1.2 km, village road-0.8 km
 - (xiii) Whether it is part of cluster -No
 - (xiv) Whether EC obtained earlier-Yes and submitted EC compliance.
 - (xv) Date of approval of mining plan- the Joint Director of Geology, Zonal Survey, balangir on 28.07.2022.
 - (xvi) As per approved mining plan the Geological reserve of the quarry is 51990 cum, Mineable reserve is 41636.4 cum, annual production will be 3000/annum with total production in 5 years is 15000 cum.
 - (xvii) Whether the DSR has been prepared as per the MoEF& CC, Govt. of India Notification S.O. 3611(E) dated 25.07.2018, Sustainable sand mining guidelines-2016 and Enforcement & Monitoring Guideline for sand mining-2020- No.
 - (xviii) Budget for EMP- Rs. 1.20/ Lakh per annum

(Lists) - Any deficiencies/omission have been noticed in the above documents-Nil

 Whether SEAC recommended the proposal – The proposal was placed in SEAC meeting held on 2nd, 7th, 8th & 11th Sept, 2023 and after detailed discussion, the SEAC observations the following-

The SEAC observed that the major water flow channel is crossing the lease area dividing the land mass as seen in kml file. Moreover, major part of the lease area is having clay deposit. The proposed mine development plan shows year wise mining area. Whereas the replenished deposit area has been ignored.

Hence, the SEAC decided to reject the proposal.

3. The proposal was placed 142nd SEIAA meeting held on 13th, 14th & 15th November 2023 and the Authority observed that there are three sand quarry proposals in the river-Sunder within stretch of 10 Km in the river channel. The Bichhanapalli sand quarry-I which is located in the centre (i.e. Baddohel Sand Quarry and Bichhanapali-2 Sand Quarry) and has been granted EC on 24.11.2022 vide proposal no. SIA/Or/MIN/284097/2022. The Other two proposal i.e. Baddohel Sand Quarry vide proposal no. SIA/OR/MIN/404049/2022 and Bichhanapali-2 Sand Quarry vide proposal no. SIA/OR/MIN/404049/2022 and Bichhanapali-2 Sand Quarry vide proposal no. SIA/OR/MIN/404088/2022 is rejected by SEAC.

In view of this, all three cases i.e. proposal no. SIA/Or/MIN/284097/2022, SIA/OR/MIN/404049/2022 & SIA/OR/MIN/404088/2022 are referred back to SEAC for re-examination and considered view/recommendation.

4. The proposal was placed SEAC meeting held on 01.12.2023 and the after detailed discussion, the SEAC reiterates its earlier recommendation as it is not clear on what basis the decision should be reversed. Hence, it is recommended to return the proposal to SEIAA to take further action.

Decision Of Authority: Reject

The Authority accepted the recommendation of SEAC meeting held on 2nd, 7th, 8th & 11th Sept, 2023 on the following reasons:

The major water flow channel is crossing the lease area dividing the land mass as seen in KML file. Moreover, major part of the lease area is having clay deposit. The proposed mine development plan shows year wise mining area. Whereas, the replenished deposit area has been ignored. Hence, the SEAC decided to reject the proposal.

After detailed deliberation in the matter, the Authority decided to reject the proposal as per SEAC recommendation on the above-mentioned reason.

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

AGENDA NO.151.21		
Proposal No.	SIA/OR/MIN/432654/2023	
Date of application	10.07.2023	
File no.	432654/822-MINB1/07-2023	
Project Type	Fresh EC	
Category	B1	
Project/Activity including Schedule No.	1(a) Mining of minerals	
Name of the Project	Proposal for EC of Bangarisingha Mahanadi Sand Quarry over an area of 17,00 Acres or 6.88 Ha having Khata No. 903(A.A.A), Plot No. 7388/7570 in village Bangarisingha under Baramba Tahasil of Cuttack District, Odisha.	
Name of the company/Organization	Sri Hara Senapati	
Location of Project	village Bangarisingha under Baramba Tahasil of Cuttack District, Odisha	
ToR Date	24/05/2021	
Name of the Consultant	M/s Green Circle Inc., Gujarat	

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.

- This proposal is for Environmental Clearance for Bangarisingha Mahanadi Sand Quarry over an area of 17.00 Acres or 6.88 Ha having Khata No. 903(A.A.A), Plot No. 7388/7570 in village Bangarisingha under Baramba Tahasil of Cuttack District of Sri Hara Senapati.
- Category: As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls in category B1 under Item 1(a)-Mining of Minerals.
- Mining Lease has been granted to Sri Haraprasad Senapati, S/o-Jadumani Senapti, by Tahasildar, Baramba for 5 years vide letter no. 01 dated 01/01/2021.
- The mining plan was approved by Md. Q Jamal Khan, DDG with letter no.GXVII(g)-863/19/7425/DG and date.12.11.2020.
- Mining lease is an identified sairat source in the DSR page No.55, St.no.93, Annexure.II. The proposed mine is an Existing Mine.
- TOR details: Terms of Reference (TOR), was issued by SEIAA, Odisha, vide proposal Letter Ref. No.-SIA/OR/MIN/61279/2021 vide letter no. 1343/SEIAA on 24/05/2021.
- 7. Public Hearing details: Public Hearing was conducted on 16.09 2022 at Mandap near Maa Anantakumari Mandir of village Bangarisingha under Baramba Tahasil of .Cuttack District, Odisha at 11.30 AM. Plantation, widening of roads, cleaning of deposited sand on transportation route, movement of transportation vehicles in a controlled speed limit were the main issues in Public Hearing. The budget incurred for the action plan of public hearing are kept under CER Budget is Rs. 30,000.

Sl.no	Particulars	Capital Cost	Annual Recurring cost
1	Pollution Control	55,000	11,000
2	Pollution Monitoring	25,000	5,000
3	Afforestation along Approach road	40000	8,000

1:1	Occupational health and safety	30,000	6,000	
5	Reclamation /Rehabilitation of mined out area	¥		
Tota	ai	1,50,000	30,000	

8. Location and Connectivity -

Village	Bangarisingha
Tahasil	Baramba
District	Cuttack
Khata No. & Plot No.	903 & 7388/7570
Kisam	Nadi
Latitude	Latitude: N20°23'20.7" to N20°23'27.0"
Longitude	Longitude :E85°27'59.9" to E85°28'17.5"
Nearest village	BangarisinghaVillage, 2.11km in W from the lease area.
Nearest Town/City	Cuttack at a distance 44k.m.
Nearest Railway Station	NarajMarthapur RailwayStation 33.5km.
Nearest Airport	BijuPatnatkInternationalAirport,Bhubaneswaris at about 40 km in ESE.
Nearest Highway	SH-65 at a distance of 6.2.
Nearest NH	NH-224 at a distance 20k.m
Ecology Sensitive Zone	No national parks and sanctuary within 10 km radius
Reserve Forest	Kumaranga Reserve Forest- 1.5 Km in N
Sesmic Zone	Zone - III as per IS: 1893 (Part-I): 2002
Survey of India Topo-Sheet no.	7311/7
Nearest distance of Approach Road	2k.m
Nearest water body	Mahanadi River
Nearest road Bridge / Railway Bridge	Mahanadi River bridge-0.6k.m
River embankment	0.5k.m
Electric transmission Pole	2.1k.m
Village road	Bangarisingha village road-2k.m
Nearest Habitation	Bangarisingha village-2.1k.m
	Chandaka Dampada Sanctuary at a distance 29k.m.

Total Reserves and Proposed Production – As per MGQ certificate given by Competent Authority the proposed production is 7000cum/Year.

Mining Lease	Year	Surface Area in m ²	Thickness in m	Production (m ³)
	Λ	В	C	D=B*C
Bangarisin	1st Year	7000	1	7000
gha	2nd Year	7000	1	7000

Makanadi —Sand	3rd Year	7000	1	7000
	4th Year	7000	1	7000
Quarry	5th Year	7000	1	7000
Total			-	35000 cum

As per Approved Mining Plan		As per Replenishment Study Report	
Geological Reserve	Mineable Reserve	Geological Reserve	Mineable Reserve
42804	37551	47110	36320

 Replenishment Report details (in case of sand) — Replenishment Study Report has prepared by Drone method. Date of Premonsoon Survey.-18.05.2022. Date of Post Monsoon Survey-05.12.2022. 36320cum of sand has been replenished annually.

Pre-Monsoon Reserve	Post-Monsoon Reserve	
Geological Reserve:-30008m³ Total cross-sectional area X Length of Influence=Volume of sand.	Geological Reserve:-47110m ³ Total cross-sectional area X Length of Influence=Volume of sand	
Mineable Reserve:-20114m ³ MR (m ³) of sand excluding all safety zone area and water covered area.	Mineable Reserve:-36320 m ³ MR (m ³) of sand excluding all safety zone area and water covered area.	

- Mining Method –The proposed project will carry out Open cast manual mining, with capacity is 7000 m³/year.
- Water Requirement Total water required for the proposed project is 5 KLD.

S. No.	Particulars	Quantity (KLD)	Source
	Dust Suppression (on haul roads etc.)	1.0	Water will be sourced from nearest available source.
	Green Belt Development/ Plantation	2.0	
	Drinking/Domestic & Sanitation	2.0	
Tota		5.0	

- Baseline Study details:
 Baseline study of the study area was conducted during pre-monsoon from 1st March 2022 to 31st May 2022 for Bangarisingha Sand Quarry.
 - a) Air quality: PM10 levels were ranging from 52.3 to 82.4 μg/m3. PM2.5 levels were ranging from 22.0 to 37.1 μg/m3. SO2 levels were ranging from 6.7 to 16.5 μg/m3. NOx levels were found ranging from 9.9 to 16.5 μg/m3.
 - b) Noise study: The noise levels varied in the study area during day time from 42.6 dB (A) Leq at Airi to 50.6 Leq dB (A) at T-Point where Vehicle Movement is Higher which is increase the noise level. The night time noise level in the study area is in the range of 37.2 (A) Leq at Khuntal to 46.2 Leq Db (A) at T-Point because, because Due to surrounding activities of Project site.

- Ground water monitoring results: pH ranges from 7.63 to 7.82. TDS in samples ranges from 426 mg/l to 675 mg/l. Total Hardness in the water ranges from 285 mg/l to 452mg/l. Calcium content in the water ranges from 51.6 mg/l to 81.7 mg/l, Magnesium content in the water ranges from 14.0 mg/l to 19.5 mg/l. Total alkalinity in the water samples ranges from 97 mg/l to 200 mg/l. Chlorides range from 125.4 mg/l to 245.5 mg/l.
- d) Surface water monitoring results: All samples were colourless meeting desirable norms (<5 Hazen). All samples meet the desirable standards (pH ranges from 7.26 7.97). TDS in samples ranges from 297 mg/l to 511 mg/l. Total hardness in the water ranges from 199.0 mg/l to 342.3 mg/l. Calcium content in the water ranges from 35.9 mg/l to 61.8 mg/l, Magnesium content in the water ranges from 16.1 mg/l to 27.7 mg/l, Total alkalinity in the water samples ranges from 71.6 mg/l to 123.1 mg/l. Chloride ranges from 152 mg/l to 262 mg/l.</p>
- e) Soil monitoring results: All the samples showed pH in the range from 7.34 8.12. Conductivity of the samples were in the range from 196 μs/cm 340 μs/cm. Moisture were in the range from 4.7% to 9.2%. Organic Carbon ranges from 0.52% 0.85%. Organic Matter ranges from 0.90% 1.47%. Phosphorus in the samples ranges from 17 mg/kg- 49 mg/kg. Total Nitrogen ranges from 49 mg/kg- 110 mg/kg. Potassium in the samples ranges from 95 mg/kg 146 mg/kg. Calcium in the samples ranges from 136 mg/kg 246 mg/kg. Magnesium ranges from 58.4 mg/kg 86.4 mg/kg. Chloride ranges from 83 mg/kg- 210 mg/kg.

14. Greenbelt Development- 50 trees per year.

Year	Number of saplings purposed	Location	Type of saplings
1st Year	50		
2nd Year	50	Plantation is	Teak, Mango, Jammu, Jhaun, Neem etc.
3rd Year	50	zone of the lease	
4th Year	50	area(river bank	
5th Year	50	areas)	
Total	250		

15. Manpower-Total number of manpower required for the project is 13 persons.

Designation	Bangarisingha
Supervisory Personnel/ Statutory Personnel	1
Skilled laborers (Operator and Helper)	2
Unskilled Laborer	10
Total	13

- Project Cost & EMP cost Estimated cost of the project is Rs. 20 Lakhs, EMP cost bars a Capital Cost of Rs. 1, 50,000 and Recurring Cost of Rs. 30,000.
- Environment Consultant: The Environment consultant M/s Green Circle Inc., Gujarat along with the proponent made a presentation on the proposal before the Committee on 31.07,2023.

18. The SEAC in its meeting held on 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
1.	Details of road connectivity with layout.	The proposed Bangarisingha Mahanadi River Sand Quarry over an area of 17.00 Acres situated in the Mahanadi River, mouza-Bangarisingha, Khata No-903, Plot no-7388/7570 under Baramba Tahasil of Cuttack district, Odisha. This lease premises holds a small area in the northern Part of the Mahanadi River. The average Length and width of the lease area is around 510mx 140m respectively. In that part of the River bed, the width of the River bed is more than 3.00Km and major River Flow/water channel is in the southern side of the River Bed, whereas lease has been granted in the northern part of the River Bed (i.e. Sand Bed deposit area). A small water channel counters in the northern part of the lease area remains dry throughout the season. The transportation will be done from north-eastern corner of the lease area through an unmettalled road to Baramba via Bangarisingha village. The detail lay out plan is enclosed.(Annexure-I)	submitted
2.	River bridge, river embankment,	Certificate from concerned Tahasildar for exact distance of River bridge, river embankment, and electric transmission line from the project site is enclosed as (Annexure-II)	submitted
3.	Revised replenishment study report as difference in Pre Monsoon RL and Post Monsoon RL is unrealistically high. Sufficient details of drone survey not provided. Also the calculation of reserve is not done in proper manner.	conducted by an ORSAC empanelled agency through UAV/Drone method is enclosed.	submitted
4.	Complete details of the compliance of Specific ToR 1.	The DSR for Sand Sairat sources was prepared as per MoEF & CC guidelines dated 25.07.2018 basing on the available	submitted

mining plan and approved report. Though the Bangarisingha Sand Quarry is an existing Quarry which was operated for last five years by Sri Trilochan Samal for ending with FY 2019- 2020. During previous Plan Period, Mineable Sand reserve was estimated at 1,27,034 cu.m with a production capacity of 22,100 cu.m per Year, which was reflected in Previous.

approved Mining Plan, Previous approved EC and DSR. The lessee has already achieved the production target of 22,100

cu.m of sand per Year.

After the completion of lease period of Sri Trilochan Samal, the lease area was surveyed again and put for auction by Tahasildar, Baramba, Dist-Cuttack. After Survey, the mining plan was prepared and approved by Deputy Director Geology, Bhu-Bigyan Bhawan, Bhubaneswar vide office letter noGXVII(g)-863/19-7425 /DG of dated 12.11.2020. In the year 2020, Mineable reserve was calculated excluding all the safety criteria, is 37551 cu.m and proposed production target was fixed by the competent Authority is 7000 cu.m per Year. After that no DSR was revised.

During the present study conducted through UAV/Drone by an ORSAC empaneled Agency, it was found that the

Available mineable sand resource for the Bangarisingha Sand Quarry is 23033.3429 cu.m and based on this estimation at least 60% (i.e. 13820.0057cum) replenishable quantity of sand available for mining of this period which may allow for mining activity. But the approved quantity of sand 7000cum, as per the mining plan. The updated reserve will be reflected in the DSR by the concerned Authority after approval of Replenishment Study Report prepared for the financial year 2023-2024.

Considering the information furnished and the presentation made by the consultant, M/s Green Circle Inc., Gujarat, along with the project proponent.

19. Any deficiencies/omission have been noticed in the above documents-Nil

Whether SEAC recommended the proposal – The proposal was placed in SEAC meeting held on 02.13.2023 and the SEAC the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure – E and following specific conditions:

- a) 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 – F.
- b) Sand extraction shall be limited to quantity of 7000 m³ and depth as per replenishment study report. Regular replenishment study as per guidelines to be conducted and report to be submitted.
- e) 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.

Decision Of Authority: Approved

The Authority observed that the mining plan has been prepared for an annual extraction quantity of 7000 cum/annum while the Annual Rate of Replenishment Study (ARRS) report indicates the annual rate of sand replenished as 36320 cum. After detailed deliberations in the matter, the Authority decided to grant Environmental Clearance with least mineable quantity i.e. 7000 cum/annum as per mining plan for the present with usual stipulated conditions as applicable for sand quarry.

- Maximum depth of mining 1.0 meter and maximum quantity of extraction shall be limited to 7000 cum/annum as per replenishment study report. If the PP wand to increase the production quantity, then he needs to modify the mining plan as per replenishment quantity of sand.
- The validity of EC is subjected to validity of DSR or validity of lease period, whichever is earlier.
- The Grant of EC for further period will be considered after submission of approved DSR by SEIAA as per the MoEF& CC, Govt. of India Notification S.O. 3611(E) dated 25.07.2018, Sustainable sand mining guidelines-2016 and Enforcement & Monitoring Guideline for sand mining-2020 and also as per the Hon'ble Supreme Court order vide its order dated 10.11.2021 in Civil Appeal Nos. 3661-3662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others).
- The Project Proponent (lease holder) shall deposit Rs.3,50,000/-, with the respective District Environment Society for raising 700 plants (minimum @100 trees per Ha) of native species within 2 years in a suitable location adjoining to quarry.
- The PP will implement the EMP cost of Rs. 1.5 Lakhs capital cost and recurring cost is 0.3Lakhs/Annum along with CER cost of Rs. 1.0 Lakh/annum as per commitment made by lessed in Public Hearing issues.

APPROVED BY

Member Secretary, SEIAA

Member SEIAA

Chairman, SELA

AGEND	A NO.151.22
Proposal No.	SIA/OR/MIN/405306/2022
Date of application	27.03.2023
File no.	405306/320-MINB1/03-2023
Project Type	Fresh EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for EC of Krushnandpur Paika Nadi Sand Sairat over an area of 12.65 acres or 5.12 hectare under Tirtol Tahasil of Jagatinghpur District
Name of the company/Organization	Sri Damodar Mohapatra
Location of Project	Tirtol Tahasil of Jagatinghpur District
ToR Date	24/05/2021
Name of the Consultant	M/s Green Circle Inc., Gujarat

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.

- This proposal is for Environmental Clearance of KrushnandpurPaikaNadi Sand Sairat over an area of 12.65 acres or 5.12 hectares under TirtolTahasil of Jagatsinghpur District of Sri DamodarMohapatra.
- Category: As per the EIA Notification 2006 and its subsequent amendment, proposed project falls in category B1 under Schedule of item 1(a)-Mining of Minerals.
- The lease area of Paika Sand Bed over an area of 12.65 acres (5.12 ha.) is located in Village-Krushnandapur, Tahasil—Tirtol, in district Jagatsinghpur of Odisha. Sri DamodarMohapatra is selected as successful bidder of the Sand Bed for a lease period of 5 (five) years from 2020-21 to 2024-25.
- Letter of Intent has been issued by Tahasildar, Tirtol to DamodarMohapatravide letter no.472 dated 24.02.2021 for a period of five years.
- The Mining plan has been approved for a period of five years i.e. 2020-21 to 2024-25 by The Deputy Director of Geology, Bhubaneswar. Vide letter no – 7958 DG, on dated 04.12.2020 in favour of Tahsildar, Tirtol. After approval the said lease has granted to Sri DamodarMohapatra on 30.11.2020.
- The District Survey Report for River Sand in respect of Jagatsinghpur district has been prepared in accordance with Appendix – x, Para – 7 (iii) (a) of S.O. No – 3611(E) dated 25.07.2018 of MoEF& CC. New Delhi and approved by Collector, Jagatsinghpur on dated 28.01.2020.
- TOR Details: Terms of Reference (TOR) was granted by SEIAA, Odisha vide letter no 1503 dated 17.06.2021.
- 8. Public hearing details: The public hearing in respect of Environmental Impact Assessment for KrushnandapurPaikaNadi Sand Sairat of Sri DamodarMohapatra over an area of 5.12Ha. under TirtolTahasil in Jagatsinghpur district. Odisha was conducted on 27.04.2022 at 10.30 A.M at Paikakula playground of Krushnanadpur village in Jagatsinghpur District. Issues raised during Public hearing are employment generation, development of road, provision towards repair and maintenance of village tube wells in Krushnanandapur Village, provision of assistance to Krushnanandapur Primary School, pollution control measures including operation of water sprinkling system and plantation. Total expenses to be incurred for the action plan towards public hearing issues is Rs.7 lakhs.

- 15 Jocation and connectivity: The said lease is located in survey of India Topo Sheet No. 73 L/7 (1451/5), bounded by Latitude: 21°21'49.70" to 21°21'57.00" N. Longitude: 86°15'24.10" to 15°34.70" E bearing Khata no 1743 and plot no 72/4147. The area over 5.12 ha is a non-forest Govt. land of Nadikissam, having ground elevation of 29 mRL. Lease area is accessible from Krushnandapur village at 0.50 km, which is well connected to Main roads and Highways. The nearest major railway station is Jhankadsarala Road at distance 6km from the lease area. Nearest National Highway is NH—16 at a distance of 47 Km. Nearest road bridge and river embankment is 600 m and 450 m respectively.
- 10. There are no National parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant reserves (existing as well as proposed) present within 10 km of the applied mine lease area.
- 11. Topography and drainage: The sand bed is on the River Mahanadi. The KrushnandpurPaikaNadi Sand Sairat deposit represents a gently sloping to almost flat terrain with highest altitude of 29 mRL. The general slope is towards east. Vegetation is scanty with small bushes existing in the auction hold area. There is no human settlement within the area. The drainage of the district is mainly controlled by rivers like Mahanadi, Devi, Biluakhai&Paika. During rainy season the river water carries sand which is formed due to disintegration of rock bodies along with other suspensions. After recession of the water flow the sand gets deposited in the locations where there is less energy. The river Mahanadi flowing from west to east and forming the northern boundary of the district forms the main drainage system in the district. Besides the river Devi, a tributary to Kathajori and flowing north-northwest to south-southeast with a meandering course also forms a drainage system in the district.

12. Baseline study: The baseline information on micro-meteorological data, ambient air quality, water quality, noise levels and soil quality have been generated for the period of October to December 2021.

PERIOD	October to December 2021	Applicable Standards
AAQ	PM2.5 - 18.9 to 33.6 µg/cu.m	60 μg/cu.m
PARAMETERS AT 7 LOCATIONS	PM10 - 37.8 to 67.3 µg/cu.m	100 µg/cu.m
r LOCATIONS	SO2 - 5.7 to 10.8 μg/cu.m	80 μg/cu.m
	NOx - 11.8 to 26.3 μg/cu.m	80 μg/cu.m
Ground water	pH - 6.8 to 7.5	6.5 to 8.5
Quality at 6 Location	Total Hardness - 80 to 92 mg/l	600 mg/l
1.Acutan	Chloride - 6 to 12 mg/l	250 mg/l
	Fluorides - 0.18 to 0.20 mg/l	1.5 mg/l
	TDS - 160 to 190 mg/l	1000 mg/l
	Heavy metals (Cd <0.001, As <0.01, Hg<0.0001) mg/l	Heavy metals (Cd <0.003, As <0.01, Hg<0.001) mg/l
Surface water at 4	pH - 7.1 to 7.4	
locations	Dissolved Oxygen - 5.9 to 6.5 mg/l	
	Biochemical Oxygen Demand 1.5 to 2.8 mg/l	
	Chemical Oxygen demand - 8 to 20 mg/l	

Noise at 7 locations	Day (dBALeq) 42.3 to 52.3	55
	Night (dBALeq) - 29.8 to 43.1	45
Soil Quality at 4 locations	pH - 6.95 to 7.3, Potassium - 64.5 to 94.1 Kg/ Ha, Phosphorous - 50 to 60.9 mg/ kg, Organic Carbon % - 0.28 to 0.39, Electrical Conductivity - 55 to 75 ms/Cm	

- 13. Replenishment study: Replenishment study for pre & post monsoon period on December 2020 and May 2021 using volumetric method as per Enforcement and Monitoring Guidelines for Sand Mining. 2020). The Geological Reserve of the Area is 43552 cum and Mineable Reserve of the Area is 33420 cum. Annual Production as per Mining Plan is 15360 cum. Sections considered is 10m x 10m (3 nos CS and 1 no LS). Elevation in Pre monsoon is 16mRL and Elevation in Post monsoon is 17mRL. Annual rate of Replenishment 32760 cum.
- 14. Total production and reserves: The lessee is going to work within the said area for 5 year from 2020-21 to 2024-25 with a maximum production of 15,360 cum per annum with a total production of 76,800 cum during plan period. As estimated, the geological reserve is 43,552 cum and Mineable Reserve is 33,420 cum.
- 15. Mining method: The method of excavation of sand from Krushnandapur Sand quarry will be manual open cast mining. The mode of the deposits, geomorphology of the area and its hydrological condition are some of the factors that favour the open cast method of mining. In this deposit, the mining is done by dry-pit method i.e., Sand will be excavated within the active channel on dry intermittent or ephemeral stream beds. The excavator is used for removal of sand from the pits. The sands are extracted, loaded, and transferred from pits to the users through trucks and tractors.
- 16. Water requirement: Total water requirement will be approx, 5 KLD for different purposes like domestic, dust suppression, plantation purposes. The water will be sourced by the lessee by tanker.
- 17. Traffic study: The V/C ratio on the Paika road connecting the Syphone Bridge which is connect to Tarapur Road is 0.240. However, with the commencement of mining activity maximum 8 no. of trucks/tractor will carry sand from the lease area and 4 cycles for transportation of employees which will have additional PCU load of 11.4 per hour. So, with the additional PCU load due to mining operation the V/C ratio will remain as 0.249 with LoS B.
- 18. Greenbelt: It is proposed for planting 250 saplings of suitable species per annum by the lessee in vicinity of the riverbank as avenue plantation which will be undertaken in consultation with the concerned authority. There is the proposal for development of green belt towards both sides of the riverbank. The riverbank plantation will be carried out in the 1st year of mining operation.
- 19. Manpower requirement: 25 Nos. (Out of which 2 nos. are skilled, 4 nos. are semi-skilled and 15nos are unskilled) of persons are required as manpower for the proposed project.
- Project cost: Estimated cost of the project is 80 lakhs. Budget for EMP cost is 3 lakhs.
- 21. Environment Consultant: The Environment consultant M/s Kalyani Laboratories Pvt Ltd (KLPL), Bhubaneswar along with the proponent made a presentation on the proposal before the Committee on dtd. 24.04.2023.
- 22. 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.		Compliance furnished by the proponent	Views of SEAC
n)Ti	How it has been concluded that the depth of sand deposit is 1 meter?	low it has been concluded that the Depth of sand deposit has been taken	
b)	Exact length of the bridge.	Exact length of the bridge is 610 m from the lease area which is situated up stream side of the bridge.	-
c)	Revised Replenishment Study Report using Drone method covering details of RL, cross sections taken, grid position etc.	Revised Replenishment study Report using Drone method for post monsoon is submitted herewith for your kind consideration.	The PP has stated in Replenishment Study Report that the quarry is not operational till now due to non grant of Environmental Clearance, hence it is studied that 21,120 m3 extractable mineable reserve is available and has been calculated by considering 60% of mineable reserve as per the MOEF notification dated 25.07.2018, from the annual replenishment during the year 2022-23 and is sufficient for the production capacity of 15,360 m3/annum.

23. The SEAC observed the following:

- a) Replenishment study Report is not satisfactory. For Pre Monsoon and Post Monsoon study different methods (Volumetric and drone respectively) are used which are not comparable. Actual replenished volume is also not calculated.
- b) In Replenishment study Report for pre & post monsoon period on December 2020 and May 2021" was carried out But the both the time periods as mentioned come under post-monsoon category.
- 24. The SEAC in its meeting dated12-07-2023 decided to reject the proposal for the reason as pointed out at para 23 and PP shall submit revised replenishment study to consider the proposal.
- 25. The proposal was placed in the 133rd meeting of SEIAA held on 22.08.2023 & 24.08.2023 and the Authority perused the recommendation of SEAC & its decision taken in the 132nd meeting. After detailed

deliberation in the matter, the Authority decided that the PP is required to submit the revised replement study report through ORSAC empanelled agency to consider the proposal.

- 26 Notw the PP has submitted the necessary clarification for consideration.
- 27. The proposal was placed in the 138th Meeting of SEIAA, Odisha held on 10.10.2023 & 12.10.2023, the SEIAA decided to refer back the proposal to SEAC with a request to examine the revised replenishment study report submitted now by the PP and their considered view for issue of EC.
- 28. The SEAC has gone through the revised replenishment study report and have following details in the report;
 - Pre-monsoon survey has been done in June 2022 using volumetric method and riverbed sand surface elevations have been recorded on a 30 m X 30 m grid.
 - ii) Post-monsoon survey has been done on 14th May 2023 by photogrammetry method using drone. Digital elevation model / Surface terrain model was used for determining elevation on a 30m X 30m grid in computer and accordingly volume of sand available on the riverbed post-monsoon have been estimated.
 - iii) The reported replenished volume of sand on the riverbed is the difference in volume of sand estimated in the safe workable area as determined by pre and post monsoon surveys using two different survey methods.
 - iv) The approved mining plan has not excluded bending portion of the river channel or mining of riverbed sand.
- 29. Any deficiencies/omission have been noticed in the above documents-Nil
- Whether SEAC recommended the proposal The proposal was placed in SEAC meeting held on 01.12.2023 and the SEAC observed the following:
 - (i) The Replenishment report submitted is in the same way as pointed out earlier. Two different methods are used for pre monsoon and post monsoon study. Pre monsoon study is done in June 2022 and post monsoon in May 2023. Both fall in pre monsoon period. Hence the clarification is not satisfactory.
 - (ii) Dates of pre-monsoon and post-monsoon survey are not proper. The first survey was carried out in the month of June* 2022 for pre monsoon season. Post- monsoon Survey was carried out on 14.05.2023 after the monsoon before starting of mining operation.
 - (iii) In Para 3.4 Year wise Production, the thickness and surface area are wrongly typed.
 After detailed discussion, the SEAC reiterates its earlier recommendation, and SEIAA may take decision at their level in view of above observations

Decision Of Authority: Rejected

The Authority observed that, the SEAC in its meeting held on 12.07.2023 recommended for rejection of the proposal due to un-satisfactory ARRS report. The PP was allowed to meet the deficiencies pointed out by SEAC. Subsequently, the PP submitted a ravished ARRS report uploaded in Parivesh portai on 12.09.2023 which again, referred back to SEAC for their examination. The SEAC again, examined the ARRS report in its meeting held on 01.12.2023 and retreated its earlier recommendation to reject the proposal.

After detailed deliberation in the matter, the Authority decided to reject the proposal due to the following reason cited by SEAC as follows:

- Pre-monsoon survey has been done in June 2022 using volumetric method and riverbed sand surface elevations have been recorded on a 30 m X 30 m grid.
- Post-monsoon survey has been done on 14th May 2023 by photogrammetry method using drone.
 Digital elevation model / Surface terrain model was used for determining elevation on a 30m X 30m

grid in computer and accordingly volume of sand available on the riverbed post-monsoon have been estimated.

- iii) The reported replenished volume of sand on the riverbed is the difference in volume of sand estimated in the safe workable area as determined by pre and post monsoon surveys using two different survey methods.
- iv) The approved mining plan has not excluded bending portion of the river channel or mining of riverbed sand.

APPROVED BY

Member Secretary, SEIAA

dember SELAA

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AGEND	0A NO.151.23	
Proposal No.	SIA/OR/MIN/421786/2023	
Date of application	25.03.2023	
File no.	421786/804-MINB1/03-2023	
Project Type	Fresh EC	
Category	BI	
Project/Activity including Schedule No.	t(a) Mining of minerals	
Name of the Project	Proposal for EC of Mangarajpur Mahanadi Sand Quarry over an area of 14.00 Acres or 5.66 Ha having Khata No.641(A.A.A), Plot No. 3720/3749 in village Mangarajpur under Baramba Tahasil of Cuttack District, Odisha.	
Name of the company/Organization	Sri Hara Senapati	
Location of Project	village Mangarajpur under Baramba Tahasil of Cuttack District, Odisha.	
ToR Date	24/05/2021	
Name of the Consultant	M/s Green Circle Inc., Gujarat	

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.

- This proposal is for Environmental Clearance of Mangarajpur Mahanadi Sand Quarry over an area of 14.00 Acres or 5.66 Ha having Khata No.641(A.A.A), Plot No. 3720/3749 in village Mangarajpur under BarambaTahasil of Cuttack District of Sri Hara Senapati.
- Category: The proposed project as per EIA Notification dated 14th September 2006 and subsequent amendments, falls under Category "B", Project or Activity 1(a)-Mining of Minerals.
- TOR Details: Terms of Reference (TOR) was granted by SEIAA, Odisha vide letter no 1346/SEIAA dated: 24.05.2021.
- Farlier EC was granted by SEIAA, Odisha vide letter no 4404 dated 17.08.2015.
- Mining plan was approved by Deputy Director of Geology, Bhubaneswar. Vide letter no 7431 DG, on dated 12.11.2020.
- This is a new project and the lease has been granted to successful bidder Sri Hara Prasad Senapati by the Tahasildar, Baramba vide letter no- 05, dated 01.01.2021.
- The said lease is an identified sairat source in District Survey Report, Cuttack in Pg 54, Sl.no. 90 prepared by Collector, Cuttack.
- 8. Public hearing details: Public hearing was conducted on 14.09.2022 at Village -Mangarajpur under TahasilBaramba of Cuttack district. Issues raised during public hearing were dust pollution, noise pollution, fixed time limit for movement of sand transportation vehicles, sand should be lifted from exact location, sand transportation vehicles shouldn't move through social forest area and near school area and a particular road should be used for sand transportation. Budget earmarked for action plan of public hearing is Rs. 5 Lakhs.
- Location and connectivity: Mangarajpur Mahanadi Sand Quarry is located in village Mangarajpur under BarambaTahasil of Cuttack district, Odisha consisting over an area of 14.00 Acres/5.66 Hectares. The proposed lease area is featured in Survey of India toposheet no. 7311/7 and bounded between the Latitudes of N20°22'26.9" to N20°22'35.5" and Longitudes of E85°18'39.6" to E85°18'47.7" bearing Khata No.641.

Plot No.3720/3749. The proposed lease area is located at a distance of 60 Km from the district headquarters cuttack the nearest railway station is Begunia Railway Station which is about 24.5 km from the mine lease area. The nearest airport is BijuPattnaik International Airport, Bhubaneswar at about 55 km from the mining site. Nearest river embankment, electric transmission pole and road bridge is 2.4 kms,700 m and 12km respectively. As per Seismicity Map of India, the project location/study area falls in Zone II

- 10. Topography and drainage: The general topography of the area around the mine site is general plan agricultural land along the river. The area constitutes almost alluvial plain without any conspicuous topographical features and forms a part of the vast Indo-Gangetic plain. The proposed area is undulating. The flow rate of the river varies with the quantity of precipitation in the catchment area. The lease area surrounded mostly with agricultural lands. There is no major impact of mining on the topography of the area. The mining lease area in riverbed will be replenished with sediments after monsoon and the area which in agriculture field will be reclaimed after mining.
- 11. Replenishment study: The present date survey by using UAV/Drone indicates the mineable sand deposit is around 26504cum. As per Sustainable Sand management guidelines potential sand deposits may be identified and Replenishment study may be done in regular intervals. Besides 60% of the above computed mineable reserve as above has been taken as available mineable reserve over the area as per MoEF Notification dated 25.07.2018. Maximum of 26504Cu.m of sand per annum may be allowed for mining activities. 60% of the mineable reserve is 15902cum. The maximum extraction limit as per sustainable sand mining Rule of MoEF Guideline is 15902cum.
- Baseline details: The baseline data was collected for the pre-monsoon season i.e. Oct-21 to Dec 2021 in the 10 km study area results.
 - a) Air Quality Results The maximum value for PM2.5 was observed, as 25.4 μg/m3 at Village-Ogalpur (A3) while 24 hours applicable limit is 60μg/m3 mixed use areas. The area observes average PM2.5 concentration in the range of 11.3-24.4μg/m3 with the lowest concentration of 11.3 μg/m3 recorded at Village-Ogalpur Area (A1). The maximum value for PM10 was observed, as 63.5μg/m3 at village-Ogalpur(A5) while 24 hours applicable limit is 100μg/m3 for mixed use areas. The area observes average PM10 concentration in the range of 34.2 -63.5μg/m3 with the lowest concentration of 34.2 μg/m3 recorded at Village-Ogalpur (A3).
 - b) The maximum value for SO2 was observed, as 18.3µg/m3 at Village- Ogalpur(A3) while 24 hours applicable limit is 80µg/m3 for industrial and mixed-use areas. The area observes average SO2 concentration in the range of 5.7- 18.3µg/m3 with the lowest concentration of 5.7 µg/m3 recorded at Village- &Ogalpur Area (A1). All the villages have observed value well under the prescribed limit.
 - c) The maximum value for NOX was observed, as 19.5 µg/m3 at Village- Mangarajpur(A2) while 24 hours applicable limit is 80µg/m3 for industrial and mixed use areas. The area observes average NOX concentration in the range of 8.4- 19.5-µg/m3 with the lowest concentration of 8.4 µg/m3 recorded at Village- Ogalpur(A5). All the villages have observed value well under the prescribed limit.
 - d) Ground water Quality results Total 5 Groundwater samples and 5 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for domestic purposes as all the constituents are within the limits prescribed by drinking water standards by Indian Standards IS: 10500.

- Sortace water Quality results analysis it is evident that most of the parameters of the samples comply with IS-2296: 1992 Category "C" standards of CPCB, indicating their suitability for Drinking water source after conventional treatment and disinfection.
 - f) Soil Samples collected from identified locations indicate the soil is Loamy type and the pH value ranging from 6.37 to 6.68 which indicating that soil samples are neutral in nature.
- 13. Reserves and total production: As estimated geological reserve and mineable reserve of the proposed project is 28931 and 24679 cum. Annual production of the proposed project is 3000 cum/annum.

Year	Production (m3)	
1st Year	3,000	
2nd Year	3,000	
3rd Year	3,000	
4th Year	3,000	
5th Year	3,000	
Totai	15,000	

- 14. Method of mining: The project is a new mine and lies on the bed of Mahanadi. The project for production of Sand (minor minerals) from Mangrajpur Sand Quarry which has been proposed for a total production of 15,000 Cu.m during the plan period. The open cast manual method and transportation through dumpers and tractors. No mining activity will be undertaken during the monsoon season. So, the material will be replenished during the monsoon season every year. The benching pattern is not required for sand mining. The maximum depth of mining will be of 1m or up to water table which is less. No drilling & blasting will be performed for production requirement.
- Water requirement: Total water requirement approx, 5 KLD will be required for different purposes like Domestic, Dust suppression, plantation purposes & sourced from as per the availability.
- 16. Power/fuel requirement: Minimal power required for office shall be taken from the General Electric supply of the area. Dumpers, tractors will be used for transportation. So, the approximate quantity of the fuel used per day is 0.014 KLD diesel is required as fuel.
- 17. Green Belt: It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. Riverbanks will be strengthened by way of plantation on the banks. Plantation will also be carried out as social forestry programme in village, school and the areas allocated by the Panchayat/State authorities. Native plants and other local species will be planted. A suitable combination of trees that can grow fast and have good leaf cover shall be adopted to develop the greenbelt. It is proposed to plant 250 Numbers of native species will be planted during the 5-year plan period.

S. No	Saplings to be planted	Species	Place of Plantation
)	50	Neem, Mango, Peepal, Shisham,	Along the roads, in
i)	50		schools and public building and other social forestry programme
ii)	50		
v)	50		
)	50	Sirish,	
Total	250	Babool, Chakunda	

18. Manpower requirement: In the mine for total production of 3,000 cum/annum of River Sand and 6 nos. of person are to be employed daily. The indirect employment opportunities for hired vehicles, etc. also can be generated to full fill the day-to-day requirements of the mining personals.

 Project Cost. The project proponent will incur a total cost of Rs. 290.00 Lakhs sand may vary from place to place and with magnitude of the sand mining. EMP cost includes a capital cost of Rs. 14,50,000 and recurring cost of Rs. 5,80,000.

Particulars	Capital Cost	Recurring Cost
Environmental Monitoring	3,00,000	1,00,000
Plantation	2,00,000	20,000
Dust Suppression	5,00,000	4,50,000
Others (Pollution Control Equipment)	4,50,000	10,000
Total	14,50,000	5,80,000

- The Environment consultant M/s EHS360 Labs Pvt Ltd (EHSL), Chennai 68 along with the proponent made a presentation on the proposal before the Committee.
- 21. The SEAC in its meeting held on dated24-04-2023 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:

S L N	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Revised Replenishment Study along with all the details as there is net loss of replenished sand in the present replenishment study report.	I hereby said that first replenishment report of Mangarajpur Mahanadi Sand Quarry was prepared by surface area method so some error raised in reserve, to rectify this error now reserve measured by cross-sectional method and replenishment report prepared accordingly.	Replenished sand deposited in the lease area is 17% i.e. 4394cum.

- The Committee in its meeting held on 19.06.2023 observed the following from revised replenishment study report.
 - a) As per Table-9 (Page 11 of Mangarajpur Mahanadi sand quarry replenishment report), which presents the summary of mineable quantity of river sand in the mining lease area during pre (May) and post (November) monsoon drone survey in 2022 the replenished quantity of sand is noted to be 4394 cum (The difference of 22110 and 26504 being the measured quantity of mineable sand during pre and post monsoon survey). Hence, the stated quantity of 15902 cum as per MoEF&CC, Govt. of India guideline is not correct.
 - b) In 1st Report, Pre monsoon done in July 22, Post monsoon date not found in the report. In 2nd Report, Pre monsoon done in May and Post monsoon date not given. Both reports are manipulated. It looks like a new mine. As per report sand is available.
 - There are also variation in geological and mineable reserve.

First survey:

In the initial report Geological Reserve: 39659cum and mineable reserve: 34759cum. In the ADS report Geological Reserve: 28020cum and mineable reserve: 22110cum.

In second survey:

Geological Mineable Reserves are same in both the reports.

- Moreover, PP has adopted two different methods: first survey by Volumetric and post-monsoon by Drone.
- d) When Table-4 and Table-5 (i.e. Geological resource and mineable resource calculations) are compared, it is seen that section-D (A-A', B-B'.... etc.) is same for the cases but cross-sectional areas, A are different while same method, same date has been used for surveying. However, no image is available where sections are shown.
- e) Two different methods used for pre monsoon and post monsoon study. Hence not comparable.
- f) In old study there was net loss of sand as per replenishment study. On asking about the same Revised study is submitted and it is mentioned that instead of surface, sectional study approach is taken. It appears to be doubtful and manipulated.
- g) As per old study pre monsoon potential area is 49656 sq m and sand thickness is 0.7 m. In revised study, the volume of pre monsoon sand is reduced, which quite evidently is to show sand deposition in the area (as old report had shown net loss.) If we back calculate this amount of sand then the thickness gets reduced to 0.4453 m which looks quite arbitrary.
- In the revised study eight sections are shown. In FF section minable reserve shown is more than geological reserve (136 minable and 127 geological).
- i) Nowhere any RL is mentioned.
- 23. The SEAC in its meeting held on dated 19.06.2023, the committee recommended the following:
 - The revised replenishment study report submitted by the proponent is not acceptable for the reasons as pointed out at para 22 above.
 - The proposal to be considered after receipt of fresh replenishment study report incorporating the comments of the members at para 22 above.

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

S L N	Information Sought by SEAC	Compliance furnished by the proponent
1.	The revised replenishment study report submitted by the proponent is not acceptable for the reasons as pointed out at para 22 above.	The replenishment study report has been corrected as per Para 22.
2.	The proposal to be considered after receipt of fresh replenishment study report incorporating the comments of the members at para 22 above.	The revised Replenishment report is submitted.

25. The SEAC in its meeting dated 31-07-2023 observed and recommended the following:

i) In the replenishment study report submitted by PP there was not loss of sand and clarifications were sought. Compliance furnished by the lessee is not satisfactory. Fresh replenishment study was asked which is not submitted. Two different methods are used for pre and post monsoon study which are not comparable. Figures are changed arbitrarily in each of the communication without any supporting documents or data. In the first study it was not loss of sand but was made deposition in the subsequent communication with so many gaps (as pointed out) now some more changed figures are submitted. This whole thing makes it difficult to accept. Hence, replenishment study report is

rejected.

(ii) In New of net loss of sand in replenishment study report and unsatisfactory compliance it is recommended to return the proposal to SEIAA to take further action.

The proposal is placed 135th meeting of SEIAA, Odisha held on 11.09.2023 & 12.09.2023 and the Authority observed that the SEAC have not accepted the replenishment study report submitted by PP and the SEAC have returned the proposal of EC to SEIAA citing the following deficiency in the proposal:

- a) In the replenishment study report submitted by PP there was net loss of sand and clarifications were sought. Compliance furnished by the lessee is not satisfactory. Fresh replenishment study was asked which is not submitted. Two different methods are used for pre and post monsoon study which are not comparable. Figures are changed arbitrarily in each of the communication without any supporting documents or data. In the first study it was net loss of sand but was made deposition in the subsequent communication with so many gaps (as pointed out) now some more changed figures are submitted. This whole thing makes it difficult to accept. Hence, replenishment study report is rejected.
- b) In view of net loss of sand in replenishment study report and unsatisfactory compliance, the SEAC have recommended to return the proposal to SEIAA to take further action.
- 27. After detailed deliberations in the matter, the Authority agreed with the recommendation of SEAC and decided that the PP is required to explain why the proposal of EC shall not be rejected for the above deficiency. Accordingly, EDS letter was issued to PP on dt. 04,10,2023
- 28. Now, the PP has submitted reply of SEIAA, Odisha EDS letter vide Nil dt. 18.10.2023
- 29. The proposal is placed142nd Meeting of SEIAA, Odisha held on 13.11.2023, 14.11.2023 & 15.11.2023 and the SEIAA perused the ARRS report submitted by the PP and decided to referred back the same to SEAC for re-examination and their views and recommendation.
- 30. The SEAC has gone through the revised replenishment study report and have following details in the report:
 - Pre and post monsoon surveys have been carried out in June and October months respectively in the year 2023.
 - Photogrammetry drone survey method has been used to arrive at the difference in elevations of the riverbed sand during the survey periods using Digital elevation model / Surface terrain model.
 - iii) The accuracy of the measurement in X, Y and Z (Elevation / ortho) directions (Ground control point locations error) for the survey has not been reported.
 - iv) The replenished volume of sand has been reported to be 3000 cum based on average estimated elevation difference of 0.31 meters.
 - Whether SEAC recommended the proposal The proposal was placed in SEAC meeting held on 01.12.2023 and the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure – A and following specific conditions.
 - a) 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. Therefore, no mining shall be carried out upto 500 meters of the bridge.
 - b) Extraction of sand should 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.
 - 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.

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: Approved

The Authority observed that the mining plan has been prepared for an annual extraction quantity of 7000 cum/annum while the Annual Rate of Replenishment Study (ARRS) report indicates the annual rate of sand replenished as 15902 cum. After detailed deliberations in the matter, the Authority decided to grant Environmental Clearance with least mineable quantity i.e. 3000 cum/annum as per mining plan for the present with usual stipulated conditions as applicable for sand quarry.

Maximum depth of mining 1.0 meter and maximum quantity of extraction shall be limited to 3000 cum/annum as per replenishment study report. If the PP wand to increase the production quantity, then he needs to modify the mining plan as per replenishment quantity of sand.

The validity of EC is for validity of DSR or validity of lease period whichever is earlier.

The Grant of EC for further period will be considered after submission of approved DSR by SEIAA as per the MoEF& CC, Govt. of India Notification S.O. 3611(E) dated 25.07.2018, Sustainable sand mining guidelines-2016 and Enforcement & Monitoring Guideline for sand mining-2020 and also as per the Hon'ble Supreme Court order vide its order dated 10.11.2021 in Civil Appeal Nos. 3661-3662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others).

The Project Proponent (lease holder) shall deposit Rs.3,00,000/-, with the respective District Environment Society for raising 600 plants (minimum @100 trees per Ha) of native species within 2 years in a suitable location adjoining to quarry.

The PP will implement the EMP cost of Rs. 14,50,000/-(Capital Cost) and recurring cost of Rs. 5,80,000/along with CER cost of Rs. 5.0 Lakh as per commitment made by lessee in Public Hearing issues.

APPROVED BY

Member Secretary, SEIAA

Member SELAA

AGEND	DA NO.151.24					
Proposal No.	SIA/OR/MIN/404298/2022					
Date of application	10.01.2023					
File no.	404298/99-MINB1/01-2023					
Project Type	Fresh EC					
Category	B1					
Project/Activity including Schedule No.	I(a) Mining of minerals					
Name of the Project	Proposal for EC of Jakara decorative stone quarry project over an area of 22.675 ha. or 56.03 acre located at Village- Jakara, Tahasil- Rayagada, Dist- Gajapati, Odisha of Sri M.JagdiswarRao.					
Name of the company/Organization	Sri M.JagdiswarRao					
Location of Project	Jakara, Tahasil- Rayagada, Dist- Gajapati, Odisha					
ToR Date	05.03.2022					
Name of the Consultant	M/s. Centre for Envotech and Management Consultancy Pyt. Ltd, Bhubaneswar					

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.

- This proposal is for environmental clearance of Jakara decorative stone quarry project over an area of 22.675
 ha, or 56.03 acre located at Village- Jakara, Tahasil- Rayagada, Dist- Gajapati, Odisha of Sri
 M.JagdiswarRao.
- Category: As per the EIA notification 2006 and its subsequent amendment, proposed project falls under category B of schedule- 1(a) Mining of minerals.
- Prospecting License was granted vide proceedings no. MII(d)-132/07- 5690/DM, dated 08.07.2015, and Letter of Intent (LOI) was granted vide letter no.7610/SM, Bhubaneswar, dated 04.10.2019.
- Modified Checklist of Minor Minerals is approved by Mining Officer on 06.12,2021 and Survey Report on Minor Minerals is submitted by Mining Officer to Collector, Gajapati vide letter no. 991/Mines, dated 17.11.2021.
- District Survey Report on minor minerals submitted by Mining Officer to Collector, Gajapati vide letter no. 991/Mines, dated 17.11.2021
- Mining Plan was approved by Directorate of Mines vide letter no. MXXII- (a)-3/2020-7826/DM., Dated. 09.11.2020.
- As per the record of revenue the precise area applied for Decorative stone comes under AbadaAjogyaAnabadi category and is of Parbat Kissam. There is no forest land involved in the mine lease area.
- Terms of Reference: Terms of Reference (TOR) has been prescribed by SEIAA vide letter no. 4222/SEIAA on dated 15.03.2022.
- Public hearing details: Public hearing was conducted on 12.09.2022 at Gram Panchayat Office, Kerandi
 under RayagadaPanchayatSamiti in Gajapati district. The major issues raised during the public hearing are
 dust suppression measures, protection of environment, peripheral development of the village, road

training to local youth, insurance benefit to workers. As per the demands, the project proponent has committed to provide ambulance, insurance benefit to workers, skill development training to local youth, road maintenance & development, protect environment, etc. Rs 13 lakhs will be spent under CER for various socio-economic activities, in 4 years' time.

- 10. Location: Jakara Decorative Stone Deposit of M/s Tejeswini Granites, over an area of 56.03 Acres or 22.675 Hectares is located in village Jakara under RayagadaTahasil of Gajapati District in Odisha. The proposed lease area is bounded by latitude N18° 51° 49.5" N18° 52° 09.4" and longitude E84° 20° 00.0" E84° 22° 25.5" & it is a part of the area covered in the Survey of India Toposheet No E45G5. Lease area comes under AbadaAjogyaAnabadi category and of Parbat Kissam.
- 11. Topography: The lease area of Jakara Decorative Stone Deposit comes under a hill range. The maximum altitude is 190 mRL and the lowest altitude is 165 mRL. The overall slope of the hill is towards SE to NW side of the area. There is no forest land within the lease area. No ecologically sensitive area such as National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. is found in the core and buffer zone of the proposed study area.
- 12. Drainage: There is neither any seasonal nor any perennial nala flowing within the lease area. The drainage pattern of the area is dendritic. Surface run-off water of the area is drained through the natural slopes/ nearby Nala. There is no river / major nala within the 10 km radius study area. There are some reservoir, ponds and seasonal nala located within the study area. A seasonal nala is flowing near Gopalasahi at 1.47 Km in NE direction.
- 13. This is a fresh mining project and decorative stone will be produced @ 7000 CuM / Annum.
- 14. Land use: The study area covers around 31415ha., mainly comprises of forest (62.7 %), agriculture land (19.01%) and water bodies (0.02%). The balance 18.27 % of the total area covers residential area, mining, rocky and waste land etc.

Table: Land use

SL No	Pattern of Utilization	Area put on use at the start of the Plan period	Area required during the Plan Period	Net area considered for calculation
		(Area in Hectares)	
i)	Mining Including Haul Road	0.00053	1.886	1.886
ii)	Over Burden /Waste Dump		1.207	1.207
iii)	Mineral storage		0.04	0.04
iv)	Infrastructure (workshop, administrative, Building, etc.)		0.018	0.018
v)	Roads	0.01	0.05	0.06
vi)	Railways			
vii)	Safety Zone/Greenbelt		1.458	1.458
viii)	Sub-Total	0.0105	4.659	4.669
ix)	Area Un-disturbed	22.664	18.016	18.006
Gran	nd Total:	22.675	22.675	22,675

- 15. Reserves and life of mine: Total geological & mineable reserve are estimated as 26,69,186.20 m³ and
- 16. Mining method and annual production: Opencast semi-mechanized method will be adopted using machineries such as excavator, line offset, compressor, jack-hammer, wire ropes and drill rod etc. in single shift involving drilling and cutting without blasting. Ultimate pit slope at the time of closure of mine will be around 45°.

Year	Volume of Rock Zone	Volume of Recoverable Decorative Stone	Volume of Khanda	Volume of waste		
	(m³)	(m³)	(m³)	(m3)		
1 st Year	35000.00	7000.00	3500.00	24500.00		
2 nd Year	35000.00	7000.00	3500.00	24500.00		
Jut Year	35000.00	7000.00	3500.00	24500.00		
4 th Year	35000.00	7000.00	3500:00	24500.00		
5 th Year	35000.00	7000.00	3500.00	24500.00		
Total	175000.00	35000.00	17500.00	122500.00		

- 17. Waste generation: A total of 1,22,500 m³ of waste to be generated during plan period. The generated waste will be dumped with an average height of 5 m having five terraces. 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. The waste generated during the conceptual period will be back filled over an area of 4.669 hectares up-to 168m RL. The wastes are proposed to be stacked maintaining the overall slope at less than 280 and to be sequentially graded, compacted and levelled. Retaining wall of 153 metre and garland drain of 160 metre will be erected around the dumping yard to arrest the washing off loose sediments.
- 18. Water requirement: About 1.1 KLD of water will be utilized for drinking, dust suppression and plantation purposes. This water will be met from nearby villages.
- 19. No mines water will be discharged into any seasonal /perennial nala near the leasehold.153m long retaining walls will be built all around the waste dumps, which will have weep holes for passage of storm water to join garland drains.160m long Garland drains shall be constructed as much as possible around waste dump (depending on contours) and it will be connected to 12m X 12m X 2m size settling pond. Sanitary sewage generated in office area shall be treated in septic tank & soak pit. Silt generated from cutting faces shall be collected in 10m X 12m X 1m size settling pond & supplied to brick makers, cement industries, etc.
- 20. Power requirement: No electrical power shall be required for operations in mine. 225 KVA DG set will be used for office and lighting purpose.
- 21. Baseline study: Study period is summer season (December 2021 to February 2022)-
- i. Ambient air quality

4	PM10 (μg/m³)				PM2.5 (μg/m ³)				SO2 (μg/m ³)				
LOCATI	Station Code	Max.	Min.	Avg.	98 Percentile		Min	Avg	98 Percentile		Min.	Avg.	98 Percentile

Project	• A1	62	36	49.58	61.00	36	18	25.58	35.00	7.6	4.6	6.03	7.45
Sitterana		1775	1	D. Great Great				100000000000000000000000000000000000000	p-sereth 5.11		1000	1000	0.545
Sana Jolara	Λ2	68	43	57.35	68.00	34	20	25.46	33.00	8.2	5.1	6.12	8.20
Angara singi	Α3	65	34	52.88	64.50	35	19	25.85	34.00	7.5	4.4	6.24	7.40
Bandik ara	A4	60	35	48.42	60.00	36	16	24.69	34,00	7.6	4.1	5.88	7.50
Lingap ur	A5	58	34	47.80	57.52	33	14	24.80	32.52	7.2	4.8	5.85	7.20
Rentik ota	A6	56	32	46.72	55.04	34	11	23.16	32.56	7.2	4.3	5.76	7 01
Jakara	Α7	52	36	44.32	51.52	28	12	20.88	27.52	6.7	4.2	5.36	6.56
Killoyi Colony	A8	57	35	46.32	56,04	35	13	24,72	33.56	7.3	4.5	5.82	7.06
CPCB Standard		100	(μg/m	³)	1	6	0(µg	m ³)		8	0(µg/п	n³)	

	Station Code	NOX (µg/m³)				CO (mg/m³)				
LOCATION		Max.	Min	Avg	98 Percentile	Max.	Min.	Avg.	98 Percentile	
Project Site	Al	13.4	9.5	11.44	13.30	BDL	BDI.	BDL.	BDL	
Sana Jolara	A2	13.6	9.6	11.30	13.55	BDL	BDL	BDL	BDL	
Angarasingi	Α3	13.6	9.2	11.37	13.40	BDL.	BDL	BDL	BDL	
Bandikara	Α4	13.2	9.1	11.01	13.05	BDL	BDL	BDL	BDL	
Lingapur	Λ5	13.7	9.4	11.38	13.51	BDL	BDL	BDL	BDL	
Rentikota	Λ6	13.8	9.5	11.44	13.66	BDL	BDL	BDL.	BDI.	
Jakara	Α7	12.6	9.5	10.82	12.50	BDL	BDL	BDL	BDL	
Killovi Colony	AS	13.1	9.6	11.46	13.00	BDL	BDL	BDL	BDL	
CPCB Standard		80(μg/m³)				4(mg/m³)				

ii. Noise level

10		Results { dB(A) Leq}								
Station name	Station code	Day	(0600-2	200hr)	Nigh	t (2200	-0600hr			
	t dil	Max.	Min.	Avg*	Max.	Min.	Avg*			
Project Site	NI	48.7	31.7	42.9	33.6	BDL	30.9			
Sana Jolara	N2	52.6	32.6	45.7	35.5	BDL	31.5			
Angarasingi	N3	49.1	30.8	42.7	33.4	BDL	30.8			
Bandikara	N4	53.8	33.5	46.6	35.9	BDL	31.8			
Lingapur	N5	48.2	32.1	43.0	33.7	BDI.	31.0			
Rentikota	N6	51.9	31.9	45.2	34.8	BDL	31.5			
Jakara	N7	51.2	31.2	44.1	31.9	BDL	30.3			
Killoyi Colony	N8	49.1	30.6	43.2	33.2	BDL	30.7			

Note: *Logarithmic Average

BDL of Noise Level Meter is

30 dB(A).

iii. Soil quality

SL.		LOCATIONS							
No.	Parameters	SI	S2	83	S4	85			
1	Colour	Brow n	Brow	Brow	Brow	Brow			
2	Soil Texture	Loam	Loam	Loam	Loam	Loam			
3	pH value	6.8	7.1	7.3	7.5	6.6			
4	Bulk Density (g/cm ³)	1.28	1.32	1.16	1.06	1.09			
5	Available Phosphorus kg/ha	8.8	7.4	10.2	12.1	8.8			
6	Available Potassium kg/ha	216	172	244	196	168			
7	Available Organic Carbon (%)	0.24	0.48	0.52	0.58	0.36			
8	Available Nitrogen (%)	203	212	248	198	177			

iv. Surface water quality

Parameters	Unit	SWI	SW2	SW3	SW4	SW5	SW
Color,	Hazen	<5	<5	<5	<5	<5	<5
Odour	Unobjectionab le	U/O	U/O	U/O	U/O	U/O	U/O
Suspended Solids	mg/l	38	26	31	40	35	33
Turbidity	NTU	12	09	10	14	11	12
pH value	****	7.32	7.22	7.28	7.56	7.44	7.36
Temperature	0c	9	12	10	8	11	9
Oil & Grease	mg/l	<5	<5	<5	<5	<5	<5
Ammonical nitrogen(as N)	mg/I	1.12	1.48	1.04	1.22	1.18	1.26
Total Kj. Nitrogen(as NII ₄)	mg/I	1.1	2.1	0.7	1.6	1.3	1.7
Total Hardness (as CaCO ₃)	mg/l	54	50	44	48	56	52
Iron (as Fe)	mg/l	0.28	0.26	0.22	0.24	0.32	0.30
Chloride (as Cl)	mg/l	29.8	27.6	24.2	22.8	30.4	25.2
Fluoride (as F)	mg/l	0.14	0.20	0.12	0.18	0.12	0.16
Total Dissolved Solids	mg/l	90	84	78	72	80	82
Calcium (as Ca)	mg/l	15.2	13.4	14.2	12.6	16.2	11.4
Magnesium (as Mg)	mg/l	4.8	3.6	3.1	2.8	4.4	3.6
Copper(as Cu)	mg/l	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0
Nickel (ns Ni)	mg/l	<0.0	<0.0	<0.0	<0.0	<0.0	<0.0

Manganese (as Mn)	mg/I	<0.0 5	<0.0 5	<0.0	<0.0 5	<0.0	<0.0 5
Sulfate (as SO ₄)	mg/I	12.8	14.2	14.8	12.4	16.2	11.8
Nitrate (as NO ₃)	mg/l	1.6	1.1	2.1	1.2	1.6	1,4
Sulfide (as S)	mg/I	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

v. Ground water quality-

Sl. No.	Test parameters	Unit	Norms as per IS: 10500-2012					
			Acceptable Limit	Permissible Limit	GW 1	GW 2	GW 3	4
1	Colour	Haze	5	15	<5	<5	<5	<5
2	Odour	S	Agreeable	Agreeable	Agr.	Agr.	Agr.	Agr
3	Taste	S	Agreeable	Agreeable	Agr.	Agr.	Agr.	Agr
4	Turbidity	NIU	1	5	<1	<1	<1	<1
5	pH Value @ 25°C	S	6.5-8.5	No Relaxation	7.22	7.12	7.08	7.16
6	Total Hardness (as CaCO3)	mg/l	200	600	177	182	202	212
7	Iron (as Fe)	mg/I	0.3	No Relaxation	0.28	0.24	0.22	0.18
8	Chloride (as Cl)	mg/I	250	1000	32	40	44	38
9	Total Dissolved Solids	mg/l	500	2000	292	302	335	356
10	Calcium (as Ca)	mg/l	75	200	36	62	54	68
11	Magnesium (as Mg)	mg/l	30	100	16	22	14	18
12	Copper (as Cu)	mg/I	0.05	1.5	ND	ND	ND	ND
13	Manganese (as Mn)	mg/I	0.1	0.3	ND	ND	ND	ND
14	Sulphate (as SO4)	mg/l	200	400	24	42	30	46
15	Nitrate (as NO3)	mg/l	45	No Relaxation	ND	ND	ND	ND

- 22. Greenbelt: Green belt will be developed in the safety zone. In the plan period, 0.1386 ha. will be planted with 510 nos. of saplings. Besides these, roadside plantation will be done with adequate number of saplings.
- 23. Manpower: A total of 30 nos. of persons (managerial & supervisory personnel 03, Skilled- 14, Semi-skilled- 06 & Unskilled- 07) will be engaged in the mines
- 24. Project cost: The estimated cost of the project is Rs.3 Crore. The cost earmarked for environmental control measures is 90,0000/- per annum.
- 25. Environment Consultant: The Environment consultant M/s Centre for Envotech and Management Consultancy Pvt. Ltd. Bhubaneswar along with the proponent made a presentation on the proposal before the Committee.
- 26. The SEAC in its meeting held on dated 14-02-2023 decided to take decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

SL No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC	
d)	Copy of lease sanctioned order.	Letter of Intent issued by Steel & Mines Department, GeO dated 04.10.2019 is attached as Annexure- 1. After receipt of the Environmental	which is in favour of M/s Tejeswini	

0		Clearance, Lease Grant order shall be issued by the concerned department.	
C)	Detailed layout map showing garland drain, settling pond, mining area.	Layout map showing Garland Drain, Settling Pond in Mining Area is attached in Annexure-2.	complied
n	Copy of permission from DFO for tree cutting.	We do hereby submit our undertaking that the permission letter from concerned DFO for tree cutting shall be submitted to SEIAA/SEAC committee before start of mining operation. The undertaking in this regard is attached in Annexure - 3. Only after lease is granted by the Concerned authority, we will get the permission from office of the Concerned DFO.	To be added as specific condition.
g)	List of villages of Andhra Pradesh to be affected as it is nearer to inter-state boundary.	As per Air Quality Modelling, following villages in Andhra Pradesh state are likely to be affected due to the proposed decorative stone mining operation; 1. Basvasai Colony 2. Killoyi Colony 3. Karibanda 4. Kondamasingi 5. Paringasai Due to small quantity of emission from the mining, there may be slight increase in air pollutants. Hence, the impact in the above-mentioned villages due to Mining Operation are most likely to be insignificant. However, the proposed mitigation measures like water sprinkling, green belt development etc., shall further lower down the impact.	complied

3. Whether SEAC recommended the proposal – The proposal was placed in SEAC meeting held on 01.12.2023 and the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per Annexure – A and following specific conditions:

The SEAC in its meeting dated 11-07-2023 recommended for grant of Environmental Clearance upto lease period with stipulated conditions as per Annexure and following additional conditions:

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

- The project proponent shall maintain periodic health check-up records of their employees and ensure 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) Since after lease is granted by the concerned authority, the Project Proponent will get permission from office of the Concerned DFO for cutting of trees. Therefore, the permission letter from concerned DFO for tree cutting shall be submitted to SEIAA/SEAC before start of mining operation (as proposed).
- 4. The SEIAA in its 130th meeting of SEIAA held on 1st, 2nd and 3rd August, 2023 observed that in Krown Your Approval (KYA) of the KML file under Parivesh shows that the lease area as forest land whereas in the application the same area is mentioned as non-forest land based on a letter dated 16.01.2009 of DFO, Paralakhemundi. After detailed deliberation in the matter, the Authority decided to seek clarification on the following:
 - (i)The PP is required to submit a certificate from DFO, Paralakhemundi stating that current status of the land is coming under DLC/forest or not.
 - (ii) The PP is also required to submit the approved DSR by Competent Authority.
 The PP has submitted their necessary clarification / ADS for consideration of EC.
- 5. The SELAA in its 141st meeting dated 01-11-2023 perused the submission dt. 10.10.2022 made by the Project Proponent including letter dt.17.11.2021 of Mining Officer, Ganjam Circle, Berhampur, requesting the Collector & District Magistrate, Gajapati for preparation of DSR, which cannot be treated as approval of competent authority. The DSR has not been submitted to SEIAA & SEAC for approval as per the orders of Hon'ble Supreme Court in Civil Appeal Nos. 3661–3662 of 2020 dt. 10.11.2021 on petition of the State of Bihar and Others versus Pawan Kumar and others etc. In view of the above, the case is referred back to SEAC for reconsideration and furnishing specific view whether EC can be granted in the instant case without an approved DSR.

After detailed discussion, the SEAC recommended that Environmental Clearance may be granted to the lessee after they submit approved DSR incorporating the present lease.

Decision Of Authority: ADS

The Authority accepted the recommendation of SEAC and decided that the PP is required to submit the approved DSR incorporating the present lease for consideration of EC.

APPROVED BY

Member Secretary, SELVA

Member, HELAA

