				water suppl that area.
1 4 1	c)	Design/layout of proposed 6 meter height of tailing storage and its management.	management is attached in Annexure-3.	complie
	d)	Chemical analysis of the tailings for hexavalent chromium.	and hence no tailings are generated yet. However based on the empirical derivation for Chemical Balance and other similar tailing Analysis, the chemical composition of tailings will be Cr2O3-8.87%; FeO (T)-36.21%; Al2O3-9.82%; SiO2-29.88% and MgO-3.02%. From the Leachate test of composite sample of Chrome Ore Tailings extracted with water is Cr (VI): 1.6 ppm and total Cr: 3.1 ppm.	in the second
	e)	Water analysis report of Nala, water bodies near habitation and samples of ground water collected from the study area for contents of hexavalent chromium, manganese and other heavy metal elements such as vanadium, mercury etc.	The water analysis report of both Ground Water & Surface Water within the study area is attached in Annexure-	complied
,	ŋ	Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.	As in Annexure 5.	submitted
	g)	Explore the possibility for the installation of permanent storage tanks/ ponds for rainwater and its use as per the requirement.	Acknowledging the advice, it is now planned to harvest rooftop rainwater and store it in underground concrete storage tanks for reuse along with the makeup water for beneficiation process.	. The
	h)		It is well taken and due to the treatment of Ferrous Sulphate for conversion of Hexavalent Chromium to Trivalent chromium along with coagulation and settling, the introduction of Membrane filters along with coagulated particle segregation shall be adopted for the waste water treatment.	•)
(0)		Changes made in EIA report in tabular form before and after public	The detail changes in the EIA before & after Public Hearing is tabularized in the	submitted

proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions below mentioned specific conditions:

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

2. Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 11.09.2023 and the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions below mentioned specific conditions.

The waste water that will be generated from the tailings shall be treated in ETP wherein hexavalent Chromium shall be reduced to trivalent Chromium by dosing it with

appropriate standard chemical following due technical procedure.

(ii) The PP shall obtain NOC to use the Panchayat roads from the concerned BDO for transportation of both input materials and finished products including the responsibility of

maintaining the road if damaged by such transportation.

(iii) As the PP will implement the dry stacking of tailings, there will be trickling down of effluent. Also during rain, the leached effluent from stack will trickling down. PP shall ensure collection of these effluents for treatment with routine analysis to ensure satisfying the standard before it is discharged. All data shall be kept for periodical compliances.

(iv) The PP shall make all efforts to adopt ZLD.

Decision of Authority: ADS

The authority perused the recommendation of SEAC and decided that the PP should prepared a Standard Operating Procedure (SOP) for ensuring the recommendation (i) and (iii) of SEAC along with a specific action plan to adopt Zero Liquid Discharge (ZLD).

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

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AGEND	A NO.143.08		
Proposal No.	SIA/OR/MIN/427488/2023		
Date of application	09.05.2023		
File No.	427488/814-MINB1/05-2023		
Project Type	EC		
Category	Bt		
Project/Activity including Schedule No.	1(a) Mining of Minerals		
Name of the Project	Proposal for EC for Benipalli & Girisol Sand Quarries Cluster over an area of 30,750 acres or 12,4445 hectares in village Benipalli & Girisola, Tahasi Bellaguntha, District Ganjam, State Odisha submitted under cluster approach with consisting of 2 sand quarries.		
Name of the company/Organization	Tahasildar, Bellaguntha		
Location of Project	village Benipalli & Girisola, Tahasi Bellaguntha, District Ganjam, State Odisha		
FoR issue Date	09.08.2022.		
Name of Consultant	M/s. P & M Solution Pvt. Ltd.		

 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.

(i) This proposal is for Environmental Clearance for Benipalli & Girisola Sand Quarries Cluster over an area of 30.750 acres or 12.4445 hectares in village Benipalli & Girisola, Tahasil Bellaguntha, District Ganjam of Tahasildar Bellaguntha.

(ii) Category: As per the EIA notification 2006 and its subsequent amendment, proposed project

fall in category B1 under Schedule of item 1(a)-Mining of Minerals.

(iii) Project details: Girisola & Benipalli Sand Quarry is located at Village-Girisola & Benipalli, Tehsil- Bellaguntha, District- Ganjam, State- Odisha. The project is proposed by Tahasildar Bellaguntha on the behalf of Successful Bidder.

(iv) The proposed project is in cluster situation as one other lease lies within 500 m radius of

lease & total lease area becomes greater than 5 ha.

 (v) LOI has been issued for Girisola and Benipalli vide letter no 2859 dated 21.09.21 and vide letter no 1486 and 26.04.2022 respectively.

(vi) Mining plan is approved for Girisola and Benipalli vide letter no 1199 dated 02.12.2021 and vide letter no 361 dated 28.03.2022 by Deputy Director, Geology, South zone, Berhampur respectively.

(vii) TOR details: Terms of Reference (ToRs) was granted by SEIAA, Odisha vide letter no 5175 dated 19.08.2022(For Girisola) and vide letter no 5173 dated 19.08.2022(For Benipalli).

(viii) Public hearing details: Public hearing was successfully executed on date 31.01.2023 at 11:00 AM over the vacant Land adjacent to Gram Panchayat Office, Benipalli in Khata Mo. 858, Plot No. - 149, under Bellaguntha Tahasil of Ganjam District. Issues raised during public hearing are transportation of sand and maintenance of these roads, transporting vehicles shall be covered with tarpaulin and community development. Budget for issues raised in Public Hearing has been shown under CER Budget (Rs.120000) and EMP budget towards maintenance of road and dust suppression.

(ix) Location and connectivity: The mine lease area is located in Village- Girisola & Benipalli, Tehsil- Bellaguntha, District- Ganjam, Odisha is on Khata No. 970, & Plot No. 01, of

Girisola, & Khata No. 859 & Plot No- 210 & 211, of Benipalli of Barha river covered in the Survey of India Topo Sheet No – 74A/9 and is bounded between the Latitude - 19°50′23.10″N to 19°51′00.95″N and Longitude – 84°37′32.80″E to 84°37′35.73″E. Nearest Railway Station is Khalikote Railway Station, approx 38.22 km towards ESE direction.; Nearest Airport is Biju Patnaik International Airport is approx 130.0 km towards NE direction; Nearest Highway: SH-30 is approx 2.50 km in E direction; NH-157 is approx 3.30 km in W direction; SH-21 is approx 4.50 km in N direction. Nearest ecological sensitive areas are Bishnuchakra Reserve Forest, approx. 3.50 Km E; Dumdumi East Reserve Forest, approx. 8.40 Km SW; Malati Reserve Forest, approx. 9.50 Km SSW; Kaliamba Reserve Forest, approx. 6.50 Km WNW an Tilki Reserve Forest, approx. 9.85 Km NW.

(x) Topography: The Sand bed is on the Barha River. The river flows from West-East direction along the quarry lease area. The quarry lease area is present about 1.0 km towards the NE of the village Girisola. The proposed area is more or less flat with highest elevation of 44m above msl. The Sand bed is on the Barha River. The river flows from South-North direction along the quarry lease area. The quarry lease area is present about 0.4 km towards the SW of the village Benipalli. The proposed area is more or less flat with highest elevation of 59m above msl.

(xi) Replenishment study: The volume of sand available in Girisola sand quarry after post monsoon study is around 31245.28 m³, which can be treated as safe extractable within the framework of the study after arrival of river level. As it is a new mine no excavation has done in this year. So, total minable reserve available for mining is 35506 + 31245.28 = 66,751.28 m³ whereas, approved production capacity for the year is 5000 m³, the volume of sand available in Benipalli sand quarry after post monsoon study is around 37755.48 m³, which can be treated as safe extractable within the framework of the study after arrival of river level. As it is a new mine no excavation has done in this year. So, total minable reserve available for mining is 37755.48 + 57789 = 95,544.48 m³ whereas, approved production capacity for the year is 7500 m³.

(xii) Reserves and production: As estimated, geological and mineable reserves of the proposed project (Benipalli) is 77730 and 57789 cum respectively while for Girisola, geological and mineable reserves is 41954 and 35506 cum respectively.

Year	Surface area of sand (m ²)	Thickness of Sand (m)	Volume in	Recovery factor (100%)	Production of Sand i (m³/annum)
	10.0000	Commence of the Commence of th	irisola Sand ()uarry	ile with the control of the control
1 st	5000	1.0	5000	1.0	5000
2 nd	5000	1.0	5000	1.0	5000
3rd	5000	1.0	5000	1.0	5000
4 th	5000	1.0	5000	1.0	5000
5 th	5000	1.0	5000	1.0	5000
2.11	Total			, The state of the	25000
	-		Benipalli Sand	Quarry	
1 st	5000	1.5	7500	1.0	7500
2 nd	5000	1.5	7500	1.0	7500
3 rd	5000	1.5	7500	1.0	7500
4 th	5000	1.5	7500	1.0	7500
5 th	5000	1.5	7500	1.0	7500
5	Total	1.1.2	0.8.7.8		37500

(xiii) Baseline study: The data collected during the month of March 2022 to Dec. 2022 & data collected has been used to understand the existing environment scenario around the proposed Quarry against which the potential impacts of the project can be assessed.

Ambient Air Quality: Ambient Air Quality Monitoring reveals that the minimum & maximum concentrations of PM10 for all the 8 AQ monitoring stations were found to be 50.12 μg/m³ at AQ8 and 88.32 μg/m³ at AQ1, respectively. The minimum & maximum concentrations of PM2.5 were found to be 22.62 μg/m³ at AQ8 and 46.25 μg/m³ at AQ1, respectively. As far as the gaseous pollutants SO₂ and NOx are concerned, the prescribed CPCB limit of 80μg/m³ for residential and rural areas has never surpassed at any station. The minimum & maximum concentrations of SO₂ were found to be 6.05μg/m³ at AQ8 & 10.28 μg/m³ at AQ1, respectively. The maximum & minimum concentrations of NOx were found to be 10.19 μg/m³ at AQ8 & 20.23 μg/m³ at AQ1, respectively. The maximum & minimum concentrations of CO were found to be 0.31 mg/m³ at AQ8 & 1.20 mg/m³ at AQ1, respectively.

b) Noise quality: Noise monitoring was carried out at six locations. The results of the monitoring program indicated that both the daytime and nighttime levels of noise were well within the prescribed limits of NAAQS, at all the 8 locations monitored.

c) Water quality: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500. From the Surface water analysis, it is evident that most of the parameters of the samples comply with 'Category 'C' standards of CPCB indicating their suitability for Drinking water source after conventional treatment and disinfection.

d) Soil quality: Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.39 to 7.89, which shows that the soil is alkaline in nature.

(xiv) Mining method: The sand will be excavated by open cast manual method. Since the depth of mining is 1.0m for Girisola Sand Bed & 1.50m for Benipalli Sand Bed, excavator, handpicks, spade, hand shovel will be used by laborers for extracting & loading of sand. Benching parameters is not feasible in case of sand mining. The maximum depth of mining will be 1.0m for Girisola Sand Quarry & 1.50m for Benipalli Sand Quarry. The mine will be developed in North to South direction. At the end of plan period the quarry floor will be 54 m RL for Girisola Sand Bed & 59 m RL for Benipalli Sand Bed.

(xv) Water requirement: The water requirement for workers for drinking purpose will be around 0.36 KLD & the total water requirement will be around 15.44 or 16.00 KLD. This water will be

supplied from the nearby area.

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10 lped per labor 10*36/1000= 0.36 KLD	0.36
Dust Suppression	Total approach road to be water sprinkled = 2100 m 2100 m*6m*0.5 *2 times/1000= 12.60 KLD	12.60
Plantation	1240 plant (during plan period) @ 2 L/per plant= 1240*2lts= 2480/1000= 2.48 KLD	2.48
Total		15.44 16.00

(xvi) Greenbelt: A time bound progressive green belt plan is given in cluster.

Year No of plants along No. of plants Location Species both side of in buffer zone consulting local authorities

1	1 st	1050	190	Approach road -1050
1	2 nd	Maintenance		nos along both Guava,
	3 rd			sides 1.05 km of mango,
	4 th			approach road at Jamun, spacing of 2 m. jhaun, neem
	5 th			Village area – 190 etc
	Total	1050	190	nos. In village area like school premises, Aangawadi, Panchayat bhavan
ı	Total	1240		

(xvii) Manpower: The number of working people required for the proposed project is 36(14 nos of persons -Girisola; nos of persons 22-Benipalli).

(xviii) Project cost: Total Cost of the project will be Rs 60 Lakhs (Girisola Sand Quarry= Rs. 30 Lakhs + Benipalli Sand Quarry= Rs. 30 Lakhs). CER cost will be 2.0% of the total amount i.e., 1,20.000/-. Rs. 2,36,000 is budget for Occupational Health.

Table: Budget allotted for the Environmental Management Plan for Girisola Sand Quarry

SI. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1.	Pollution Control Dust Suppression /Water Sprinkling	-	1,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution		50,000 40,000 20,000 10,000
3.	Green belt development	1,23,200	50,000
4.	Maintenance of haul road	2,62,500	75,000
Total		3,85,700	3,45,000

Budget allotted for the Environmental Management Plan for Benipalli Sand Quarry

SI. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1.	Pollution Control Dust Suppression /Water Sprinkling		1,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution		50,000 40,000 20,000 10,000
3.	Green belt development	1,24,800	50,000
4.	Maintenance of haul road	2,62,500	62,400
Total		3,87,300	3,32,400

Budget allotted for the Environmental Management Plan for Cluster

SJ. No.	Measures	Capital Cost (In Rs.)	Recurring Cost
1.	Pollution Control Dust Suppression /Water Sprinkling		2,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	-	1,00,000 80,000 40,000 20,000
3.	Green belt development	2,48,000	1,00,000
4.	Maintenance of haul road	5,25,000	1,37,400
Total		7,73,000	6,77,400

Table: CER cost

S. No.	Activity	Capital Cost (in Rs.)/annum
l.	Financial aid for medical camp in Girisola & Benipalli village. (a) Rs. 15,000/ camp (4 camp in a year)	60,000
2,	Skill development program camps like computer learning, sewing etc. in Girisola & Benipalli village. (In Both Village) @Rs 30,000/trainer (2 trainer)	60,000
TOTA	AL	1,20,000

(xix) Environment Consultant: The Environment M/s P & M Solution, Noida along with the proponent made a presentation on the proposal before the Committee on 07.07.2023.

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

	SL No.	Information Sought by SEAC	Compliance furnished by the proponent		
	a)	Latest KML file as the KML file was old one.	The latest KML file was sent to seac.odisha.2019@gmail.com		
-	, Þ)	Live video of site and also showing approach road.	Live video of site and also showing approach road was sent to seac.odisha.2019@gmail.com		
	c)	Details of all mines in cluster (including existing and proposed).	Both the Benipalli & Girisola Sand Quarries are proposed for grant of EC and no other mine located in cluster, as well as within 500 meter from the periphery of cluster area.		
	d)	As per the specific TOR point, regarding the distance of bridge, submit the distance certificate duly certified by concerned Tahasildar.	The distance of bridge i.e Chadhiapalli Bridge is situtated at 2.70 KM from Benipalli Sand Bed and 3.00 KM from Girisola Sand Bed a Certificate is attached as Annexure - I.		

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

a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Benipalli & Girisola Sand Quarries Cluster without referring to SEAC with stipulated conditions as per Annexure – A after receipt of individual applications from the lessee in cluster along with following documents.

- i) Billed in form-I of individual lease
- ii) Prefeasibility report of individual lease

in EMP of individual lease.

Approved Mining Plan of individual lease.

v) Previous production details of individual lease duly certified by Tahasildar.

vi) Replenishment Study Report of individual lease.

- b) Following specific conditions may be stipulated in individual Environmental Clearance.
 - 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.
 - 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.

iii) Provision of Bio-toilet shall be made at the site.

- iv) 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.

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

c) Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 11.09.2023 and the SEAC recommended EIA & EMP report with opinion that the SEIAA may consider to grant Environmental Clearance to individual lease for Benipalli & Girisola Sand Quarries Cluster without referring to SEAC with stipulated conditions that after receipt of individual applications from the lessee in cluster along with following documents.

Decision of Authority: Approved

After detailed deliberation in the matter the Authority approved the EIA & EM submitted by the PP. The PP shall apply individual application for EC with required documents.

APPROVED BY

Member Secretary, SEIAA

MemberUSEIAA

Chairman, SEIAA

AGEND	A NO.143.09
Proposal No.	SIA/OR/MIN/422523/2023
Date of application	01.05.2023
File No.	422523/341-MINB1/05-2023
Project Type	EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of Minerals
Name of the Project	Proposal for EC for Jharipadar- I & II Stone Quarries Cluster over an area of 18.00 acres or 7.2846 hectares in village Jharipadar, Tahasil- Digapahandi, District- Ganjam State Odisha submitted under cluster approach with consisting of 2 stone quarries
Name of the company/Organization	Tahasildar, Digapahandi
Location of Project	village Jharipadar, Tahasil- Digapahandi, District- Ganjam State Odisha
ToR issue Date	19.08.2022
Name of Consultant	M/s. Cognizance Research India Private Ltd., Noida

<u>Proposal in brief</u>: 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 Jharipadar- I & II Stone Quarries Cluster over an area of 18.00 acres or 7.2846 hectares in village Jharipadar, Tahasil- Digapahandi, District- Ganjam of Tahasildar, Digapahandi.

2. Category: As per the EIA notification 2006 and its subsequent amendment, proposed project fall in

category B under schedule of Item 1(a)-Mining of minerals.

Jharipadar Stone Cluster Quarry lease located at Village-Jharipadar, Tahasil – Digapahandi, District-Ganjam, Odisha over a cluster area of 7.2846 ha. The proposed project is in cluster situation as two leases are within 500m radius The ML has been allotted to Sri. Saroj Kumar Sahu & Smt. B. Swapna vide letter no. - 2137 & 2138 dated 30.04.2022.

4. The proposed site doesn't come under DLC as approved vide letter no 3423 dated 31.03.2021.

 The mining plan for the Quarry I & II has been approved by the Joint Director, Geology South Zone, Berhampur vide Memo no 319/SZ dated 16.03.2022 & vide letter no- 279 dated 07.03.2022 respectively.

 The proposed production capacity is 12,852 cu.m/annum (Mine 1 -7,380 cu.m/annum and Mine 2-5,472 cum/annum).

7. Letter of Intent details:

S no.	Name of Quarry	leasee	hata/plotno.	Lease area (Ha.)	LOI/ Form F letter no	Mining plan approval letter
1	Jharipadar Stone Quarry I	Sri. Saroj Kumar Sahu	Khata no- 980, Plot no- 05, 06	4.8564	Letter no 2137 dated 30.04,2022	Letter no- 319/SZdated 16.03.2022
2	Jharipadar Stone QuarryII	Smt. B. Swapna	Khata no- 980, Plot no- 08	2.4282	Letter no 2138 dated 30.04.2022	

100			07.03.2022
	Total	7.2846	
		2	

8. TOR details: The Terms of Reference (ToRs) has been granted by SEIAA vide letter no 5151 and 5155 dated 19.08.2022.

 Public hearing details: Public hearing was conducted on 18.01.2023 at Chatramandir Mouza of Digapahandi Tahasil of Ganjam district. Issues raised during public hearing are mining activity should abide all rules and regulation, transportation vehicles shall be covered by tarpaulins, water sprinkling should be carried out on transportation roads, plantation, control blasting and local

employment. Budget kept under CER is Rs.1,60,000.00.

- 10. Location and connectivity: The proposed Jharipadar Stone Quarry (I & II) comes under the village Jharipadar, Tahasil- Digapahandi, District- Ganjam, in the State of Odisha on Khata no- 980, Plot no- 05, 06, 08. Geographically the ML area of Mine 1 (Sri. Saroj Kumar Sahu) extends from 19°19'41.95"N to 19°19'48.11"N and 84°35'28.65"E to 83057'35.03"E and the ML area of Mine 2 (Smt. B. Swapna) extends from 19°19'28.98"N to 19°19'38.47"N and 84°35'48.20"E to 84°35'51.59"E. The proposed area falls in SOI top sheet No. E45A11(74/11). The elevation of the site ranges from 92 mRL to 146 mRL. The Mine Lease area is approx. 45 kms of aerial distance from the district headquarters Chatrapur. The proposed ML area can be approached by SH-29 which is approx.4.0 km away from ML area. Nearest Airport Bhubaneswar Airport, approx. 163 km in NE direction. Nearest Railway Station Berhampur Railway Station, approx. 22 km in SE direction. Nearest reserve forest Ramagurha Reserve Forest, approx. 3.5 Km in SE direction. Nearest water body Ghodahara River is flowing at distance of 11.3 km in NW.
- Baseline data: Data for baseline study was collected during pre-monsoon season March 2022 to May 2022
 - a) Ambient air quality: The minimum and maximum level of PM10 recorded within the study area was in the range of 42.5 μg/m3 to 68.9 μg/m3 with consolidated 98th percentile range between 52.7 to 67.7 μg/m3. The 24-hourly average values of PM10 were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 100 µg/m3 for PM10 in industrial, residential, rural and other area. PM2.5 recorded with in the study area is in the range of 17.1 μg/m³ to 31.6 μg/m³ and 98 percentile range between 22.9 µg/m3 to 30.6 µg/m3. The 24-hourly average values of PM2.3 were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 60 µg/m3 for PM25 in industrial, residential, rural and other area. The minimum and maximum levels of SO2 recorded with in the study area was in the range of 5.4 μg/m³ to 11.6 μg/m³ and 98th percentile was recorded between 8.4 μg/m3 to 10.9 μg/m3. The 24-hourly average values of SO₂ were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 80 µg/m3 for SO2 in industrial, residential, rural and other area. The minimum and maximum levels of NOX recorded within the study area was in the range of 7.8 μg/m3 to 17.9 μg/m3 with 98th percentile range between 11.6 μg/m3 to 16.8 μg/m3. The 24-hourly average values of NOX were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 80 μg/m³ for NO_X in industrial, residential, rural and other area.

b) Noise monitoring reveals that the minimum & maximum noise levels at day time were recorded between as 48.6 dB(A) & 51.4 dB(A) respectively. The minimum & maximum noise levels at night time were found to be 38.5 dB(A) & 42.3 dB(A) respectively. It is observed that the noise levels are well within the prescribed Ambient Air Quality Standards with respect to Noise.

c) Ground water: The analysis results indicate that the pH ranges from 7.36 to 7.59. Total Dissolved Solids ranges from 479 to 515 mg/l. Total Hardness (as CaCO3) ranges from 276 to 308 mg/l.

Fluoride (as F) ranges from 0.5 to 0.8 mg/l. The chlorides and Sulphates were found to be in the range.

Surface water: The pH ranged from 7.34 to 7.52. Chloride varied from 67 to 83 mg/l. Dissolved Oxygen (DO) ranged from 6.9 to 7.4 mg/l. BOD (3 Days at 27 0C) ranged from 1.7 to 3.3 mg/l. COD varied from 10 to 22 mg/l.

e) Soil analysis: The analysis results show that soil is basic in nature as pH value ranges from 6.76 to 7.13 with organic carbon 0.76 to 0.91%. The concentration of Nitrogen, Phosphates & Potassium has been found to be in good amount in the soil samples. Results of soil sampling analysis showed best for fertility.

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

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

13. Mining method: Mining will be done by opencast semi-mechanized method with adoption of drilling & blasting. Mining will be done by deploying machines like jackhammer, drill compressor, rock breaker, excavator and tractors/trucks. Tipper trucks will be used for transporting stone and waste. Bench height & width of bench is 5 m & width will be more than 5m. The excavated rock mass will be loaded in to 20 t capacity of trippers or truck by excavator. The life of the mine is 70 years (mine 1) & 40 years (mine 2) respectively.

14. Waste generation: Waste generation for Mine 1 is 4100 cum (5 years) and for mine 2 is 3040 cum (5 years)

 Water requirement: The total requirement of water will be 5.5 KLD, which will be met from nearby village; NOC need to be obtained from Gram Panchayat.

16. Greenbelt: About 1530 number of trees will be planted in safety zone, along approach road & in village during the first year. Plantation will be done with suitable local species like Teak, Mango, Neem, Jammun, Jhaun etc after consultation with the local authorities

	Total Plantation	Mine I (Sri. Saroj Kumar Sahu)			Mine 2 (Smt. B, Swapna)		
Ye ar		Plantation in safety barrierzone (0.2 ha)	Plantation along approach road	At other places in thevillage	Plantation insafety barrierzone (0.09 ha)	Plantation along approach road	At other places in the village
15t	780	250	150	100	130	50	100
2 ⁿ d	750	250	150	100	100	50	100
3rd							
4th							

5th		Maintenanc	Maintenanc	Maintenan ce	Maintenan	Maintenan ce	Maintenan ce	Mainte nance
Tot		1,530	500	300	200	230	100	200
anaal	4		1000			530	-	1100

17. Employment potential: Besides the direct and indirect employment to 33 persons, the company will provide vocational skill training to the unemployment youth of the neighbouring villages through outside agencies. Local villagers residing in the nearby villages shall be employed as semi-skilled workers

18. Project cost: The estimated project cost is 80 lakh. The CER budget will be 2% of total project cost of Rs 1.6 Lakh, Rs. 14.6 lakh as capital cost & 5.6 lakhs/annum (for cluster) as recurring cost is allocated for environmental protection activities

Table: Budget for Environmental protection Action plan

S.No	Particulars	nvironmental protection Amount pe	r Annum (Lakh)	
		Capital	Recurring	
a)	Dust suppression	5.0	0.5	
b)	Plantation and its protection(@ Rs. 400/sapling-including fencing)	6.2	1.0	
c)	Personal Protective Equipment (@ Rs. 2000/PPE kit)	0.7	0.7	
d)	Environmental Monitoring(Air, water, soil, noise)		1.2 (0.5 lakh, 0.4 lakh, 0.20 lakh, 0.10 lakh)	
e)	Garland drain & settlingtank	2.0	1.0	
ŋ	Haul road construction/ maintenance (Approach road, approx. 0.34 km for both mines)	0.7 (@ Rs 2.0 Lakh/km)	1.2 (@ Rs. 300*200 days* 2 labor)	
g)	Patra Fencing Around thelease Cost 250/m2	5.9		
	Total	20.5	5.6	

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

20. The SEAC in its meeting held on dated 19-06-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

SI. No.	Information Sought by SEAC	Compliance furnished by the proponent
a)	management i.e. frequency and time of blasting, mitigation measures followed during blasting protocol	An Brief note on Blasting and Exact distance of nearest habitation from the project site attached as Annexure - I As far as magazine management is concern, there is no proposal for magazine because the blasting

		of explosives. Exact distance of nearest habitation from the project site.	will be carried out by 3rd party (DGMS Certified)
1	b)	Brief note on management of flying rocks.	Attached as Annexure - II.
	c)	There is a difference in EMP budget submitted in documents online (capital cost – Rs.14.6 lakhs and Rs. 5.6 lakhs as recurring cost) and presentation (capital cost – Rs. 20.5 lakhs and Rs. 5.6 lakhs as recurring cost). Which one is correct? This shall be clarified.	Sir it is submitted that, due to some technical mistake it was estimated that capital cost was 20.5 Lakhs in presentation But the EMP budget is actually stand at capital cost – Rs.14.6 lakhs and Rs. 5.6 lakhs as recurring cost. An copy of EMP budget is submitted as Annexure – III.
	d)		The ground water Table varies during the summer is varies between 16m to 20m from the surface level. During dry season the water table falls at 20m from surface whereas during rainy season the water table remains at 16m from surface. As the mining activities, presently proposed are maximum 8m at the hill tops & slopes, so water logging in the quarry is not anticipated, the quarry floor will never intersect the ground water level. Given in Approved mining plan (Jharipadar-I-page no.12) & (Jharipadar-II Page no 11) attached as Annexure IV.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Cognizance Research India Private Ltd., Noida on behalf of the proponent, the SEAC approved the EIA/EMP report in cluster approach and recommended the following:

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Jharipadar- I & II Stone Quarries cluster without referring to SEAC with specific conditions as per Annexure - C after receipt of individual applications from the lessee in cluster along with following documents.
 - i) Filled in form-I of individual lease
 - Prefeasibility report of individual lease
 - iii) EMP of individual lease.
 - Approved Mining Plan of individual lease.
 - v) Report on vibration study.
 - vi) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
 - An Undertaking by the lessee not to use wagon drilling blasting to be submitted. Accordingly, specific condition to be stipulated in EC of individual lease.
 - viii) No storage and usage of blasting materials/explosives inside the lease area without license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983 shall be ensured by the lessee. An undertaking to this effect shall be submitted by the lessee. Accordingly, specific condition to be stipulated in EC of individual lease.
 - ix) An undertaking to obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water. Accordingly, specific condition to be stipulated in EC of individual lease.

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

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

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

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

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

d) Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 11.09.2023 and the SEAC recommended EIA & EMP report with opinion that the SEIAA may consider to grant Environmental Clearance to individual lease for Jharipadar- I & II Stone Quarries Cluster without referring to SEAC with stipulated conditions that after receipt of individual applications from the lessee in cluster along with following documents.

Decision of Authority: Approved

After detailed deliberation in the matter the Authority approved the EIA & EMP. The PP shall apply individual application for EC with required documents.

APPROVED BY

-Member Secretary, SEIAA

Member SEIAA

Chairman, SEIAA

AGENDA	NO.143.10
Proposal No.	SIA/OR/MIN/422764/2023
Date of application	21.05.2023
File No.	422764/806-MINB1/03-2023
Project Type	EC
Category	Bl
Project/Activity including Schedule No.	l(a) Mining of Minerals
Name of the Project	Proposal for EC for Salesingh Stone Quarry over an area of 22.50 acres of 9.106 hectares in village Salesingh, Tahasil Maneswar District Sambalpur, State Odishi submitted under cluster approach with total cluster area 14.103 hi consisting of two Stone Quarries.
Name of the company/Organization	Sri Ajay Tiwari
Location of Project	village Salesingh, Tahasil Maneswar, District Sambalpur, State Odisha
ToR issue Date	19.05.2022
Name of Consultant	M/s. P & M Solution Pvt. Ltd.

<u>Proposal in brief</u>: 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 Salesingh Stone Quarry over an area of 22.50 acres
or 9.106 hectares in village Salesingh, Tahasil Maneswar, District Sambalpur of Sri Ajay Tiwari
(submitted under cluster approach with total cluster area 14.103 ha consisting of two Stone
Quarries).

 Category: As per the EIA notification 2006 and its subsequent amendment, proposed project falls in category B1 under Schedule of activity 1(a)-Mining of Minerals.

 The proposed project is in cluster situation as two leases are within 500 m radius & total lease area becomes greater than 5 ha i.e, 14.103 ha.

4. The proposed mine lease has been granted to Tahasildar Maneswar. Salesingh Stone Quarry area has been allotted to Sri Nihar Das & Smt. Kanchanbala Das by the Tahasildar Maneswar on behalf of Government of Odisha in accordance with the provision of the Odisha Minor Mineral Concession Rules, 2016 through long term quarry lease for the purpose of mining of stone.

 The mining plan for the ML area has been approved by the Joint Director, Geology Authorized officer, Zonal Survey, Sambalpur, Odisha vide Memo no 141/ZS dated 25.01.2021 & vide letter no-1142 dated 10.08.2021.

The Lease has been issued by LOI/ Form F letter no 932 dated 10.03.2022 & 633 dated 10.02.2021.

S n o	Name of Quarry	Name of the leasee	Khata/plot no.	Lease area (Ha.)	Form F letter no	Mining plan approval letter
1	Salesingh Stone Quarry	Sri Nihar Das	Khata no- 229, Plot no- 826(P)	9.106	Letter no 932 dated 10.03.2022	Letter no 1142 dated 10.08.2021

2	Smt. Kanchanbal a Das	Khata no- 229, Plot no- 826/1 & 826/2	4.997	Letter no 633 dated 10.02.2021	Memo no- 141/ZS dated 25.01.2021
Total			14.103 ba		

 TOR details: Terms of Reference (TOR) has been prescribed by SEIAA, Odisha, vide letter no. 4591/SEIAA & 4595/SEIAA dated19.05.2022.

8. Public hearing details: Public hearing was conducted on 03.11.2022 in Salesingh village under Maneswar Tahasil. Issues raised during public hearing are damage of houses and school building along with noise pollution due to blasting activities, air pollution and its adverse effects on health, agricultural fields and its yield accidental issues dur to plying of vehicles, dissatisfaction of villagers

regarding public hearing meeting venue.

9. Location and connectivity: The proposed Salesingh Stone Quarry come under the village Salesingh, Tehsil-Maneswar, District- Sambalpur, in the State of Odisha. Geographically the ML area of Mine 1 (Sri Nihar Das) extends from 210 19'03.76"N to 210 19'14.73" N and 830 57'40.64" E to 830 57'56.62"E and the ML area of Mine 2 (Smt. Kanchanbala Das) extends from 210 19'04.30' N to 210 19'17.01"N and 830 57'35.03"E to 830 57'48.95"E. Mine 1 bears Khata no-229, Plot no-826(P) and Mine 2 bears Khata no-229, Plot no-826/1 & 826/2. The proposed area falls in SOI top sheet No. F45M3, F44R1, F45M4, F44R16. The elevation of the site ranges from 155 mRL to 190mRL. The Mine Lease area is approx. 16kms of aerial distance from the district headquarters Sambalpur. The proposed ML area can be approached by SH-15 which is approx.1.3 km away from ML area. Nearest reserve forest Labdera Bulibunga at 1.20 Km southeast.

10. There are no National parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant

Reserves (existing as well as proposed) with in 10 kms radius of Mine lease area

11. Drainage: The drainage pattern of the area of dendritic type. Surface runoff water of the area is drained through natural slopes. Mahanadi River is flowing at distance of 5.0 km in NW side of the area which controls the drainage system in the region.

 Baseline study: The baseline environment quality was carried out over a radial distance of 10 km around the mining lease area during Pre-Monsoon Season of 2022 covering the months of March

2022 to May, 2022.

a) Air quality: The minimum and maximum level of PM10 recorded within the study area was in the range of 35.9 μg/m3 to 68.4μg/m3 with consolidated 98thpercentile range between 52.4 to 67.9 μg/m3. PM2.5 recorded with in the study area is in the range of 14.5 μg/m3 to 28.6 μg/m3 and 98 percentile range between 20.7μg/m3 to 28.5μg/m3. The minimum and maximum levels of SO2 recorded with in the study area were in the range of 5.1μg/m3 to 11.3μg/m3 and 98th percentile was recorded between 6.5μg/m3 to 9.0μg/m3. he minimum and maximum levels of NOX recorded within the study area was in the range of 7.9μg/m3 to 15.4μg/m3 with 98th percentile range between 10.2μg/m3 to 15.4μg/m3.

b) Noise levels: Noise monitoring reveals that the minimum &maximum noise levels at day time were recorded between as 49.1 dB (A) & 53.1 dB (A) respectively. The minimum & maximum noise levels at night time were found to be 36.2 dB (A) & 41.7 dB (A) respectively. It is observed that the noise levels are well within the prescribed Ambient Air Quality Standards with respect to Noise.

c) Ground water: The analysis results indicate that the pH ranges from 7.41 to 7.73. Total Dissolved Solids ranges from 509 to 588mg/l. Total Hardness (as CaCO3 Fluoride (as F) ranges from 0.4 to 0.6 mg/l.) ranges from 236 to 312 mg/l. The chlorides and Sulphates were found to be in the range.

d) Surface water: The pH ranges from 7.16 to 7.36.Chloride varies from 78 to 102 mg/l. Dissolved Oxygen (DO) ranges from 6.2to 6.9mg/l. BOD (3 Days at 27 °C) ranged from from 16 to 34mg/l.COD ranges from 3.2 to 6.6mg/l.

e) Soil quality: The analysis results show that soil is basic in nature as pH value ranges from 7.69 to \$06 with organic carbon 0.76 to 0.91%. The concentration of Nitrogen, Phosphates & Potassium has been found to be in good amount in the soil samples. Results of soil sampling analysis showed best for fertility.

13. Total production and reserves: As estimated, geological and mineable reserve of quarry 1 is 12,76,213.5 cum and 8,30,250 cum respectively. Total production for 5 years is 22518 cum. Geological and mineable reserve of quarry 2 is 724592 cum and 627302 cum. Geological and mineable reserve of the cluster is 2,000,805.5 Cum and 1,457,552 Cum respectively. Total production for 5 years is 26564 cum. The life of the mine is more than 100 years.

Table- Total Reserves details of the proposed cluster

S no.	Name of the Quarry	Geological reserve (cum)	Mineable reserve (cum) 8,30,250	
1	Salesingh Stone Quarry – (Mine 1)	12,76,213.5		
2	Salesingh Stone Quarry – (Mine 2)	7,24,592	6,27,302	

Table- Year wise production details of the proposed cluster

Year	Mine I	(Sri Nihar	Das)	Mine 2 (Smt. Kanchanbala Das		
	Volume of Evacuatio n (cum)	Volum e of Rock Mass, 90% (cum)	Volume of waste (cum)	Volume of Evacuat ion (cum)	Volum e of Rock Mass, 70% (cum)	Volume of waste (cum)
1 st	5010	4509	501	7420	5194	2226
2 nd	5010	4509	501	7420	5194	2226
314	4980	4482	498	7632	5342	2290
415	5010	4509	501	7632	5342	2290
5 th	5010	4509	501	7844	5491	2353
Total	25,020	22,518	2,502	37,948	26,564	11,384

- 14. Mining methodology: Mining will be carried out by opencast semi-mechanized method with adoption of drilling & blasting. Handling of rock mass will be done both manually & by excavators. Handpicks, spade, chisel, hammer will be used by manual labors for sorting & sizing. Loosening of rock mass will done by drilling & blasting. In order to prevent haphazard excavation of pits and suitable blending of ore, the excavation has been proposed at one place. In mine 1, proposed height &width of bench is 5 m & in mine 2 it is 3m. The excavated rock mass will be loaded in to 20 t capacity of trippers or truck by excavator.
- 15. Water requirement: the total water requirement will be around 7.81 KLD. This water will be supplied from the nearby area. This water will be supplied from the nearby village through hired tankers (Mine 1-6.50 KLD; Mine 2-1.30 KLD).
- 16. Waste generation and management: No OB will be generated during plan period. There will be generation of about 10 % of total volume of rock mass i.e, 501 cum/annum from mine 1 and about 30% of total volume of rock mass i.e, 2226 cum/annum from mine 2 will be generated as waste. There will be generation of total 13,886 cum of mineral waste from both of the mines during plan period. These wastes will be utilized for making of mine road & allied infrastructure. No dumping is proposed in mine 1 as the entire waste will be directly used for the maintenance of mine road. In

mine 2, about 70% of the waste will be transported to the crusher site along with valuable building stone & the remaining 30% of the total waste will be separated at the quarry head & will be stacked in the temporary waste dump of area 0.0106 ha & will be utilized by lease for making of mine road Wallied infrastructures. Since the dump will be active during the plan period so no reclamation and rehabilitation have been suggested the retaining wall around the dump will be constructed to prevent the wash off dump. Around the retaining a garland drain and settling tank will be provided to prevent the possible transportation of mine dust or fines.

Year	Mine (Sri Niha	Control of the Contro	Mine 2 (Smt. Kanchanbala D	
	Volume of waste (cum) 10%	Dump area/ dump site	Volume of waste (cum) 30%	Dump area/ dump site
1 st	501	No	2226	0.0106 ha./ in SE
2 nd	501	dumping	2226	direction of lease
314	498	is	2290	area (above mining
4 th	501	proposed	2290	pit), dump height-
5 th	501		2353	2m, slope- less than 45°.
Total	2,50	2		11,384

17. Greenbelt: Proposed plantation program is 1032 no. of tress for (Mine 1), 378 no. of tress for (Mine

2) Total plantation proposed for this project is 1410 nos of trees.

Year	Plantation in safety barrier zone		Plantation along approach road and	No. of plants in buffer zone
	Mine 1 (Sri Nihar Das)	Mine 2 (Smt. Kanchanbala Das)		consulting local authorities
1 st	89 (0.891 ha)	75 (0.75 ha)	800	446
2 nd	Maintenan	Maintenance Maintenan	Maintenance	Maintenance
3 rd	ce			
4 th				
5 th				
Total	89	75	800	446
Total Plantatio n	•	1410		

18. Manpower requirement: Total Requirement of Labour and other supervisory manpower will be around 19 (for both quarry) persons during the mining period (Mine 1-13 persons; Mine 2- 6 persons)

19. Project cost: The estimated project cost of the cluster is about Rs. 40 lakhs (Mine 1- 20 lakhs, Mine 2 -20 lakhs). Budget for Corporate Environmental Responsibility (CER) for Mine 1 (Sri Nihar Das) is 40,000; for Mine 2 (Smt. Kanchanbala Das) is 40,000(Total CER budget for the cluster is 80,000). : Budget for occupational health is 4,00,000 and budget for water, shelter and sanitation for mine worker is 3,00,000(capital cost) and 75,000(recurring cost). Budget allotted for the Environmental Management Plan of Mine 1 is 3,86,400(capital cost) and 2,70,000 (recurring cost) and of Mine 2 is 95,600(Capital Cost) and 2,70,000 (recurring cost). For cluster EMP budget is 4,82,000(Capital Cost) 5,40,000(recurring cost).

SI. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
1.	Pollution Control Dust Suppression /Water Sprinkling		1,00,000
2.	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	***	1,00,000 80,000 20,000 20,000
3.	Green belt development	2,82,000	1,00,000
4.	Maintenance of haul road	2,00,000	1,20,000
	Total	4,82,000	5,40,000

Table-CSR budget in Cluster

SL No.	Activity	Capital Cost (in Rs.)
1.	Financial aid for medical camp in Salesingh village.	30,000
2,	Skill development program camps like computer learning, sewing etc. in village Salesingh.	20,000
3.	Construction of separate toilet for boys & girls at public place in village Salesingh.	30,000
TOTAL		80,000

 Environment Consultant: The Environment consultant M/s P and M Solution, Noida along with the proponent made a presentation on the proposal before the Committee on 12.06.2023.

 The SEAC in its meeting held on dated 12-06-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	KML file shows 3 quarries in cluster approach but proposal submitted for 2 quarries under cluster approach. This may be clarified.	Although KML file shows 3 quarries in cluster approach 2 KML quarries belong to one quarry lease i.e Salesingh stone quarry over 4.997 ha of Plot no – 826/1 & 826/2 in favor of Smt. Kanchanbala Das and the other one belongs to Sri Nihar Das over 9.106 Ha. Copy attached as Annexure – I. The total cluster consists of two quarry lease having three quarries.	complied
2.	Proposed Transportation route for stone duly certified by the concerned Tahasildar.	Copy attached as Annexure - II.	complied

complied	D1 of around unter table during	///	A DEST
Complica	RL of ground water table during summaries 140 mRL and rainy season 148mRL the RL of the surface post mining as per Mining Plan would be 167mRL (Salesingh-9.106 ha) & 155 mRL (Salesingh-4.997 ha) Which are much above the ground water table.	RL of ground water table during summer and rainy season along with RL of the surface post mining as per the approved mine plan.	
complied	Copy attached as Annexure - III.	SOP to be followed during Blasting.	4.
complied	Copy attached as Annexure – IV.	Specific measures against management of dust, noise, vibration and fly rocks.	5.
complied	Planting trees, shrubs and grasses along the edges of your fields to add as a conservation buffer can help prevent any runoff.	Precautionary measures to prevent the runoff affecting the nearby agricultural fields.	6.
complied	Yes, the height and width of benches proposed in mining plan area accordingly to DGMS guidelines.	Do the proposed height and width of benches follow the DGMS guidelines?	7.

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

- a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Salesingh Stone Quarry cluster without referring to SEAC with specific conditions as per Annexure - C after receipt of individual applications from the lessee in cluster along with following documents.
- i) Filled in form-I of individual lease
- ii) Prefeasibility report of individual lease
- iii) EMP of individual lease.
- iv) Approved Mining Plan of individual lease.
- v) Report on vibration study.
- vi) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
- vii) An Undertaking by the lessee not to use wagon drilling blasting to be submitted. Accordingly, specific condition to be stipulated in EC of individual lease.
- viii) No storage and usage of blasting materials/explosives inside the lease area without license/permission/authorization from competent Authority as per Indian Explosives Rules, 1983 shall be ensured by the lessee. An undertaking to this effect shall be submitted by the lessee. Accordingly, specific condition to be stipulated in EC of individual lease.
- ix) An undertaking to obtain NOC from CGWA and permission from WR department, Govt. Of Odisha for use of ground water. Accordingly, specific condition to be stipulated in EC of individual lease.
- x) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the stone quarry for ensuring that working personnel are not affected by silicosis.
- xi) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure.

- xii) A condition on SOP for blasting and safety on management of flying rock to be implemented and detail risk and hazard management procedure shall be followed by the lessee as per the Annexure D.
- Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.

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

e) Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 11.09.2023 and the SEAC recommended EIA & EMP report with opinion that the SEIAA may consider to grant Environmental Clearance to individual lease for Salesingh Stone quarries Cluster without referring to SEAC with stipulated conditions that after receipt of individual applications from the lessee in cluster along with following documents.

Decision of Authority: Approved

After detailed deliberation in the matter the Authority approved the EIA & EMP. The PP shall apply individual application for EC with required documents.

APPROVED BY

Member Secretary, SEIAA

Member SEIAA

RE)H	AGENDA	NO.143.11
-	Proposal No.	SIA/OR/MIN/404520/2022
	Date of application	17.01.2023
-	File No.	404520/784-MINB1/01-2023
	Project Type	EC
	Category	B1
	Project/Activity including Schedule No.	1(a) Mining of Minerals
	Name of the Project	Proposal for EC for Baitarani Sand Bec Mine on Baitarani River over an area of 5.058 Ha/12.50 Acre in village Tampo under Ghasipura Tahasil of Keonjha District, Odisha.
	Name of the company/Organization	Sri Hrushikesh Jena
	Location of Project	village Tampo, under Ghasipura Tahasil of Keonjhar District, Odisha
	ToR issue Date	28.02.2021
	Name of Consultant	M/s. Kalyani Laboratories Pvt. Ltd. Bhubaneswar

<u>Proposal in brief</u>: 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 Baitarani sand bed mine on Baitarani River over an area of 5.058 ha./12.50 Acre in village Tampo, under Ghasipura Tahasil of Keonjhar District of Sri Hrushikesh Jena.
- Category: As per EIA notification 2016 and subsequent amendment this proposal is coming under Category B of Schedule 1(a)-Mining of Minerals.
- The quarry lease has been granted by the Tahasildar, Ghasipura vide letter no.676 on dated 17.03.2020 to the applicant (successful bidder) for excavation of minor mineral (River Sand) for five years.
- The Tahasildar of Ghasipura Tahasil vide letter no. 5740 issued on dated 28.12.2020 while submitting relevant documents of EC application to SEIAA, Odisha further communicated that Sri Hrushikesh Jena of Jena Minerals Pvt. Ltd., Saroi, Haridaspur of Jajpur Dist. is the successful bidder of the said sairat source.
- The mining plan has been approved by the Deputy Director of Geology, Cuttack, Odisha vide memo no. 676 on dated 17.03.2020.
- Terms of Reference (TOR) details: Terms of Reference (TOR) was issued by Ministry of Environment, Forest and Climate change vide file no: 59407/55-MINB1/12-2020 on dated 28.02.2021.
- 7. Public hearing Details: The Public Hearing in respect of Environment Impact Assessment for Baitarani Sand Bed Mine of M/s Jena Minerals Pvt. Ltd. on river Baitarani over an area of 5.058 ha. in village Tampo under the Ghasipur Tahasil of Keonjhar District, Odisha was conducted on 12.05.2022 at 11.00 A.M at Village Tampo (Near Tampo Baitarani Bridge) (Khata No.218 (Rakhita), Plot No.556, Kissam-Gochara, Area-Ac.32.15) in Keonjhar District. Issues raised are local employment, dust pollution, water sprinkling arrangements, tarpaulin cover on sand loaded vehicles, plantations, increase of traffic management & road transportation. Total expenses to be incurred for public hearing action plan is 6.60 lakhs.
- 8. Location and connectivity: The proposed river bed sand mining will be carried out on Baitarani River located at village: Tampo, under Tahasil: Ghasipura, DistKeonjhar, Odisha & the lease area is 5.058 ha, or 12.50 acre bearing Khata No.-221, Plot No.705, 706, Kisam: Nadi. The project is located in survey of India toposheet no. E45O4 & E45O8 between latitude of 21° 07'52.44"N to 21°

08*11.57"N and longitudes of 86° 10'56.05"E to 86° 11'21.81"E. The site is well connected to NH-245& SH-53 at a distance of 6.9 Km & 7 Km. Nearest airport is Bhubaneswar airport at a distance of 105 Km from the mining lease area. Nearest Railway station is Korai Railway Station at a distance of 16 Km from the project site. The nearest road is Batto road located at a distance of 0.6 Km.

Topography: The Baitarani sand bed deposit represents a gently sloping to almost flat terrain with the highest elevation is 29.5mRL & lowest elevation is 27 mRL in sand. The lease area belongs to recent quaternary riverbed deposits consisting of sand, silt, clay, gravel and alluvial deposits. The sand in the lease area is a weathering product of the nearby metamorphic rocks and has been transported by 1st and 2nd order nala which ultimately gets deposited in the main nala/river bed during the rainy season.

10. Drainage: The drainage of the district is mainly controlled by rivers like Baitarani, Kangira, Ardei, Khairibandhan, Kanjhari, Sita, Kusei, Salandi etc. During rainy season, the river water carries sand which is formed due to disintegration of rock bodies along with other suspensions.

 Reserves: Total geological reserves and mineable reserves is 50588 Cum and 29844 Cum respectively.

12. Mining method and production details: In the applied bed lease area, the sand will be extracted by manual mining method. Handpicks, Spade, hand shovel will be used by manual labourers for extracting & loading of sand. The sand will be loaded into tippers/tractors having capacity 4Cu.m/2.5 Cu.m for loading & dispatched as per requirement. The extraction of sand will be carried out up to the limit of maximum 1.5m depth or the water table whichever less is. The total excavated material is sellable as no waste will be generated from the mining process. There is no provision of dumping within the quarry. Only 20 trucks and tippers will be utilized for transportation of sand. At the proposed rate of annual production, total excavated sand would be maximum of 25545Cu.m during the proposed plan period. The project intend to excavate maximum sand of 5223 Cu.m per year and total 25545 Cu.m within 5 year plan period from the lease area. During plan period the mined-out land will be 2.578 ha. The safety zone to be maintained at 7.5 metre width all along the quarry which will be 0.401 ha, and water body, which will cover 2.079 ha

Financial Year	Mineral s	Surface Area in (Sq. m)	Thickness of sand (m)	Volume of sand in (Cu. m)
1st Year	Sand	3422	1.5	5133
2nd Year	ELSELVASSES	3430	1.5	5145
3rd Year		3344	1.5	5016
4th Year		3352	1.5	5028
5th Year		3482	1.5	5223
Total				25545

 Water requirement: For drinking & domestic purpose, water requirement will be 2 KLD while water requirement for green belt development and dust suppression will be 1 KLD. So total water requirement for this proposed project is 3KLD.

 Fuel requirement: Tipper & Dumper will be used for transportation. The approximate quantity of the fuel/Diesel used per day is 100Lit/day.

15. Baseline study:

PERIOD	ERIOD October to December 2020	
	PM _{2.5} -16.7 to 27.2 μg/cu.m	60 μg/cu.m
	PM ₁₀ – 17.1 to 41.7 μg/cu.m	100 μg/cu.m

AAQ	SO ₂ - 5.2 to 9.9 μg/cu.m	80 μg/cu.m
PARAMETERS AT 7 LOCATIONS	Nox - 10.3 to 22.1 μg/cu.m	80 μg/cu.m
Ground water	pH - 6.9 to 7.3	6.5 to 8.5
Quality at 6	Total Hardness - 52 - 192 mg/l	600 mg/l
Location	Chloride - 9.6 to 124.6 mg/l	250 mg/l
	Fluorides - 0 .15 to 0.81 mg/l	1.5 mg/l
	TDS - 110 - 470 mg/l	1000 mg/l
	Heavy metals (Cd < 0.001, As < 0.001, Hg < 0.0005) mg/l	Heavy metals (Cd <0.003, As <0.01, Hg<0.001) mg/l
Surface water at 4	pH - 7.1 to 7.8	
locations	Dissolved Oxygen - 5.5 to 6.0 mg/l	
	Biochemical Oxygen Demand - 2 to 5 mg/l	
	Chemical Oxygen demand - 12 to 25 mg/l	
Noise at 8 locations	Day (dBA Leq) 32.4 to 45.6	55
PERSONAL PRODUCTION OF THE PROPERTY OF THE PRO	Night (dBA Leq) - 25.6 to 35.6	45
Soil Quality at 3 locations	pH – 5.20 to 7.4, Potassium – 202.9 to 1828 Kg/ Ha, Phosphorous – 166 to 603 Kg/ Ha, Nitrogen – 188 – 276 Kg/Ha, Electrical Conductivity- 117 to 1050 ms/Cm	

16. Greenbelt: There is proposal for plantation along the riverbank to protect the riverbank erosion in consultation with the forest department. Approximately 250 saplings is proposed to be planted during the 1st year of mining operation.

17. Employment generation: Due to the proposed sand mining, there will be generation of employment

for 14 persons out of which, 04 skilled, 04 Semiskilled, 6 nos are unskilled.

18. Project Cost: Total cost of the proposed project is 10lakhs. The EMP cost proposed for the project will be 4.0 Lakh per annum.

19. Environment Consultant: The Environment consultant M/s Kalyani Laboratories Pvt. Ltd. Bhubaneswar, along with the proponent made a presentation on the proposal before the Committee on 14.02.2023.

20. 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:

-	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	NOC/permission from concerned authority for usage and maintenance of Panchayat Road.		175425330755 7550 - 757 M
b)	taken for movement of vehicles in school area for safety of students.	Sand will be transported in early morning time to avoid traffic. The maximum speed of the sand transportation vehicle's is 10km/hr in school area. A mine worker is present with the driver of vehicle at the time of sand Transportation.	-
c)	Distance from bridge and other sand mines.	As per certified cluster certificate issued by The Tahasildar of Ghasipura Tahasil of Keonjhar District there is no other mines located within the 500meter of the project area. (Annexure –II) As per certified distance certificate by Tahasildar the distance of the river bridge is 550 meter from the lease area. (Annexure –III)	
d)	Conduct replenishment study in pre monsoon and post monsoon and submit the report	Necessary replenishment study report is attached as Annexure – IV.	Replenishment study Report submitted, Pre- monsoon data collected on 04.09.2022 and post monsoon on 29.04.2023. Replenishment of sand — 19706.4cum.

^{21.} The SEAC in its meeting held on 11-07-2023 opined that pre-monsoon study during September is not acceptable and recommended that the proposal to be considered for grant of EC after the proponent submit fresh replenishment study as per guidelines.

 The Project Proponent has submitted a Pre-Monsoon Replenishment Study Report conducted on dated 12-05-2023 as mentioned in report.

The Committee observed and recommended the following:

 The lessee indicated in the compliance furnished that they have conducted Pre-Monsoon Study on dated 04-09-2023. Post monsoon study of 29-04-2023 cannot be considered for undertaking mining. Hence, replenishment study report is rejected.

 The Project Proponent has submitted a Pre-Monsoon Replenishment Study Report conducted on dated 12-05-2023 as mentioned in report.

iii) The replenishment study report is prepared by My World Consultancy Private Ltd., Cuttack and the company is empanelled by ORSAC to carry out drone survey vide office order dated 16.10.2023. Pre-monsoon survey by drone / UAV using photogrammetry method has been carried out on 12th May 2023. Approximately 60% of the ML area was reported to be submerged in water at the time of survey.

Parameters	Baitarani sand quarries	Remarks	
Mining lease (ML) area (Ha)	5.058	Surveyed area is significantly	
Surveyed area (Ha)	21.6735	higher than ML area.	
Pre monsoon standard elevation RL (m)	The reported readings are in the range 20.94 to 27.17		
Post monsoon average standard elevation RL (m)	Post monsoon period survey not carried out. Survey done only for pre- monsoon period.	All RL reports are by digital elevation model (DEM) that is generated by using software.	
Replenished level (m)	Not reported		
Number of points in ML area reported for RL measurement	59		
Minimum measurement error	A SALEMAN AND A		
Maximum measurement error	(- 15 m + 15 m)	William Ma	

In view of unsatisfactory revised replenishment report, this proposal is not accepted and it is recommended to return the proposal to SEIAA to take further action.

f) Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 11.09.2023 and the SEAC rejected the proposal as the replenishment study is not done as per MoEF & CC Guideline and unsatisfactory.

Decision of Authority: ADS

The Authority perused the matter and accepted the SEAC recommendation to reject the proposal as the replenishment study is not done as per MoEF & CC Guideline and the project proponent is required to submit fresh ARRS report through ORSAC empanelled agency for further consideration of the proposal.

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

AGENDA NO.143.12	
Proposal No.	SIA/OR/MIN/293602/2022
Date of application	13.11.2023
Project Type	Transfer of EC
Category	B2
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for Transfer of EC of Kendughat Sand Quarry over an area of 12.35 Acres or 5.00 Hectares in village Kendughat under Deogaon tahasil of Balangir district.
Name of the company/Organization	Sri Benudhar Singh
Location of Project	village Kendughat under Deogaon tahasil of Balangir district.

Proposal in brief:

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

(i) This is a proposal Transfer of EC of Kendughat Sand Quarry over an area of 12.35 Acres or 5.00 Hectares in village Kendughat under Deogaon tahasil of Balangir district...

(ii) Documents submitted: Application in Form-7, earlier EC copy, Tahasildar forwarding letter, Status of quarry and scrutiny of Rs. 2000/- vide e-Challan Ref. No. 337AC903DD dated 03/11/2023

(iii) The EC of Kendughat Sand Quarry over an area of 12.35 Acres or 5.00 Hectares in village Kendughat under Deogaon tahasil of Balangir district, was in favour of Tahasildar, Deogaon vide SEIAA letter no./Identification No. EC22B001OR131698 dt. 22.02.2022.

(iv) Present status of quarry- Non-working

(v) Whether submitted KML file-Yes

(vi) The project proponent applied proposal for transfer of EC from the name Tahasildar, Deogaon to Sri Benudhar Singh, (highest bidder/lessee) with attaching Tahasildar forwarding letter vide letter no. 1567 dated 08.09.2022.

(vii) Any deficiencies/omission have been noticed in the above documents. In the KML file it appears that quarry operated but in this case already quarry operated after obtaining EC and it is not clear that when the quarry lease period expired.

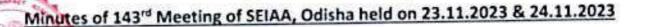
Whether SEAC recommended the proposal - N/A

Decision of Authority: Approved

After detailed discussion, the Authority decided to allow transfer of EC of the said proposal with following conditions:

- The new lessee shall comply EC conditions issued earlier vide letter no. EC22B001OR131698 dt. 22.02.2022 with the following additional conditions within 6(six) months:
 - a. Boundary Demarcation: The boundary of the lease area shall be demarcated on ground at the project cost, by erecting 1.20 meter (4 feet approx.) high reinforced concrete pillars above ground, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates by any empanelled agency of ORSAC.

b. Digital Map: -A digital map (in KML format as well as PDF version) showing GPS coordinates of all boundary pillars duly countersigned by the Tahasildar shall be submitted to SEIAA, Odisha through email at info sciaaodisha@gmail.com.



c. Intimation of EC: -The copies of the EC shall be sent to the Sarpanch (s) of the concerned Gram Panchayat (s), Urban Local Bodies and relevant other Offices of the Government with a request to display the same for 30 days from the date of receipt.

d. Tree Plantation: -Compensatory Tree Planting (CTP) shall be carried out with minimum @100 trees per Ha. of lease area as per the approved cost norm for avenue plantations of the State Forest Department. The Project Proponent (lease holder) shall deposit Rs.2,50,000/- with the respective District Environment Society for raising 500 plants of native species within 2 years in a suitable location adjoining to quarry.

e. State EMF Fund: - An amount equal to five percent (5%) of the royalty payable shall be collected from the lessee by the Tahasildar and deposited to the State Environment Management Fund, which will be utilized as per provisions of Rule 49(3) of the OMMC Rule, 2016 preferably, in and around the areas where mining activities are undertaken.

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

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AGENDA NO. 143.13

This is regarding matter for issue of show cause notice based on Hon'ble NGT order dt. 18.04.2023 on O.A. No.83/2022/EZ (I.A. No.189/2022/EZ) on the matter of Dilip Kumar Samantray & Ors Vrs State of Odisha & Ors. In the said order there is direction of Hon'ble NGT, EZ, Kolkata vide order dt. 18.04.2023 that "the SEIAA, Odisha has to compute Environmental Compensation against the Respondent Nos. 17 & 18 for excess mining of laterite stone/morrum/ordinary earth, bearing in mind the observation made hereinabove, after giving the said Respondents due notice with regard to the methodology of computation and thereafter proceed to recover the same from the Respondent Nos. 17 & 18 in accordance with law without being influenced by Environmental Compensation computed in Original Application No.83/2023 within a period of two months". Accordingly, the environmental compensation amount of Rs.18,51,98,061/- has been calculated based on the CPCB guidelines. The Respondent Nos. 17, Sri Susant Kumar Barad has extracted 53,484,399 cum of laterite stone beyond the lease area of Mayurjhalia Laterite Stone Quarry-3 as per affidavit dt.05.12.2022 submitted by Director of Mines & Geology, Govt. of Odisha before Hon'ble NGT, EZ, Kolkata. Similarly, the environmental compensation amounting of Rs.40,24,81,077/-has been calculated based on the CPCB guideline. The Respondent Nos. 18, Sri Shashank Agarwal Director of M/s. Agrawal Infrabuild Pvt. Ltd. has extracted 2.41,768.372 cum of morrum near Mayurjhalia Laterite Stone Quarry-3 without environmental clearance (EC) as per affidavit dt.05.12.2022 submitted by Director of Mines & Geology, Govt. of Odisha before Hon'ble NGT, EZ, Kolkata. Accordingly, the show cause notice has been issued by SEIAA, Odisha on dt. 21.11.2023 to the Respondent Nos. 17, Sri Susant Kumar Barud & to the Respondent Nos. 18, Sri Shashank Agarwal Director of M/s. Agrawal Infrabuild Pvt. Ltd. for appears before this Authority on 08.12.2023 at 11.00AM in SEIAA, Odisha office chamber. Hence, the matter may be placed 143th meeting to be held on 23.11.2023 & 24.11.2023 for approval.

Decision of Authority: Approved

The Authority perused the report on Environmental Compensation of Maurjhalia Laterite Stone Quarry/ morrum calculated basing on the order dt. 18.04.2023 of Hon'ble NGT on O.A. No.83/2022/EZ (I.A. No.189/2022/EZ) on the matter of Dilip Kumar Samantray & Ors Vrs State of Odisha & Ors amounting to Rs. Rs.18,51,98,061/- for laterite stone and Rs. Rs.40,24,81,077/- for morrum as the environmental compensation values for illegal extraction.

After detailed deliberation in the matter, the Authority accepted the report for issue of Show Cause Notice to the PP under section-5 of EP Act. 1986.

APPROVED BY

Member Secretary, SEIAA

Member, SEIAA

Chairman, SEIAA