AGENDA NO.137.01	
Proposal No.	SIA/OR/MIS/250157/2022
Date of application	26.01.2022
File No.	250157/71-MIS/01-2022
Project Type	New proposal for EC
Category	B
Project/Activity including Schedule No.	8(a) Building & Construction Project
Name of the Project	Proposal for grant of EC for construction of KIMS Medical College & Hospital, over an area 7.795 Ha. Sqm. Plot No: 24,25,12/A, 12/C, 14/A & 14/B, Mouza: Patia, Tahasil: Bhubaneswar, Dist: Khurda of Sri Rabindra Nath Dash.
Name of the company/Organization	Rabindra Nath Dash, Secretary, KIT
Location of Project	Mouza: Patia, Tahasil: Bhubaneswar, Dist: Khurda of Sri Rabindra Nath Dash.
ToR Date	22.02.2022
Name of the Consultant	M/s Green Circle Inc. Vadodara

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) The proposal is for Environmental Clearance of for KIMS Medical College & Hospital, over an area 7.795 Ha. Sqm. Plot No: 24,25,12/A, 12/C, 14/A & 14/B, Mouza: Patia, Tahasil: Bhubaneswar, Dist: Khurda of Sri Rabindra Nath Dash.

ii) The project falls under category "B" or activity 8 (a)-Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.

iii) This project is Construction and Expansion of campus-V(KIMS Hospital) C1+C2+G+4 -storey's named as (KIMS hospital building) situated within the premises of Plot No. 25,24,12/A,12/C,14/A & 14/B at Mouza – Patia under Bhubaneswar Development Authority.

iv) **Location and Connectivity** - The Project Site is located at - Mouza-Patia. The Geographical coordinates of the project site is: Latitude – 20° 21'09.90"N to 20° 21'04.47"N & Longitude – 85° 48'49.96"E to 85° 48'42.87"E. The Project Site is well connected with NH 5 at 2.5km. Nearest Railway Station is Bhubaneswar Railway station is 12.1km. Nearest Airport is Biju Pattanaik Airport – 16.3km. Bhubaneswar fire station at 9.32km. Nearest Reserve Forest is Bharatapur RF – 2.7 km. No Ecologically Sensitive areas within 10 KM radius. Project Site is well connected to existing KIMS Hospital Road running all the way from in N & E direction and Patia Main Road serves in the S direction. The hospital has two gates that serve the dual purpose of entry and exit. The same service road acts as connecting link between one part of the city with the other which is used by the patients and general public.

v) The site is coming under Bhubaneswar Development Authority. Total Plot Area is 77962.68 sqm / 19.264Ac. or 7.795 Ha. Total built up area = 1,12,994.63 Sqm. No. of clinical Beds=1300 nos.

vi) **The Proposed Area Statement of The Project**:
Total Plot Area: **77962.68 sqm / 19.264Ac. or 7.795 Ha.**
Total built up area = **1,12,994.63 Sqm**

Table 1: Area Statement for campus-V (KIMS HOSPITAL BUILDING) CLINICAL BUILDING

Approved Area on Plot-25 ;

Ground floor B.U.A	5992.5sqm
First Floor B.U.A	4778.7sqm
Second Floor B.U.A	4778.7sqm
Third Floor B.U.A	4778.7sqm
Total Floor B.U.A	20328.6sqm
Parking Area	6652.7sqm

Dental Science Block

Ground floor B.U.A	1302.032sqm
First Floor B.U.A	2038.199sqm
Second Floor B.U.A	2025.636sqm
Third Floor B.U.A	2025.636sqm
Total Floor B.U.A	7391.503sqm

Approved Area on Plot-24 ;

Hostel

Ground floor B.U.A	1403.77sqm
First Floor B.U.A	1362.89 sqm
Second Floor B.U.A	1362.89 sqm
Third Floor B.U.A	1362.89 sqm
Total Floor B.U.A	5492.44 sqm

Approved Area on Plot-12/A;

Hostel

Stilt floor B.U.A	1638.80 sqm
First Floor B.U.A	1638.80 sqm
Second Floor B.U.A	1573.77 sqm
Third Floor B.U.A	1561.70 sqm
Fourth Floor B.U.A	1540.30 sqm
Total Floor B.U.A	7953.37 sqm

Approved Area on Plot-12/C;

Nursing School

Ground floor B.U.A	563.43 sqm
First Floor B.U.A	593.13 sqm
Second Floor B.U.A	589.89 sqm
Third Floor B.U.A	589.89 sqm
Total Floor B.U.A	2336.34 sqm

Hostel

Ground floor B.U.A	653.3 sqm
First Floor B.U.A	669.91 sqm
Second Floor B.U.A	663.61 sqm
Third Floor B.U.A	663.45 sqm
Total Floor B.U.A	2650.27 sqm

EXISTING AREA STATEMENT :

Plot Area : 53681.55 sqm (13.265 AC)

Hospital Block (Capacity =1200)

Basement Floor	3773.26 sqm
Ground floor B.U.A	9746.48 sqm
First Floor B.U.A	8257.73 sqm
Second Floor B.U.A	8257.73 sqm
Third Floor B.U.A	8257.73 sqm
Fourth Floor B.U.A	8257.73 sqm
Fifth Floor B.U.A	4457.05 sqm
Sixth Floor B.U.A	2291.09 sqm
Total Floor B.U.A	53298.80 sqm

Dormitory/Dormitory Block (Capacity -60)

Ground floor B.U.A	718.58 sqm
First Floor B.U.A	505.49 sqm
Second Floor B.U.A	505.49 sqm
Total Floor B.U.A	1729.56 sqm

Total Existing B.U.A : 55028

PROPOSED AREA STATEMENT :

Proposed Ramp & Lobby in Hospital Block

Ground floor B.U.A	259.42 sqm
First Floor B.U.A	259.42 sqm
Second Floor B.U.A	259.42 sqm
Third Floor B.U.A	259.42 sqm
Fourth Floor B.U.A	259.42 sqm
Fifth Floor B.U.A	259.42 sqm
Total Floor B.U.A	1297.10 sqm

Proposed Cancer Block(Capacity-300)

Lower Basement Floor B.U.A	1578.36 sqm
Upper Basement Floor B.U.A	1469.95 sqm
Ground floor B.U.A	1210. 48 sqm
First Floor B.U.A	1231.13 sqm
Second Floor B.U.A	1372.04 sqm
Third Floor B.U.A	1430.96 sqm
Fourth Floor B.U.A	1430.96 sqm
Total Floor B.U.A	9723.88 sqm

Proposed Library Block

Basement –I B.U.A	43.00 sqm

Basement-II B.U.A	43.00 sqm
Ground floor B.U.A	1617.85 sqm
First Floor B.U.A	1650.81 sqm
Second Floor B.U.A	1650.81 sqm
Third Floor B.U.A	1650.81 sqm
Fourth Floor B.U.A	1650.81 sqm
Fifth Floor B.U.A	1650.81 sqm
Total Floor B.U.A	9957.9 sqm

Basement-I Parking Area : 3733.67

Basement-II Parking Area : 3733.67

Podium Floor Parking Area : 3344.36

Proposed Parking Block

Basement-I Parking Area	5499.27 sqm
Basement-II Parking Area	5366.02 sqm
Podium Floor Parking Area	5268.25 sqm
Total Proposed B.U.A	20978.88sqm

vii) **Water requirement**: During Operation phase the fresh water requirement is approx. 760 KLD (source is IDCO), out of which for Residents (Student/Patient/ Staff/Doctors/Attendants) – 7,15,000 LPD, Day Working Staff &Patients – 45,000 LPD, Watering of Lawn, Garden& Play Ground – 50,000 LPD, Kitchen, Laundry & Ground Recharge- 50,000 LPD

viii) **Waste water details**: Waste Water Generation 409 KLD, will be treated in STP of capacity 400KLD. Treated Waste Water Recovered & to be reused - 280 KLD & to be reused (Greenbelt – 50KLD & washings and others - 230 KLD) and rest 120 KLD discharge to nearest Municipal Drain.

Particulars	No. of Unit	Liters per Day	Total (LPD)
Residents (Student/Patient/Staff/Doctors/Attendants)	5500	130	7, 15,000
Day Working Staff & Patients	1500	30	45,000
Watering of Lawn, Garden & Play Ground	—	50,000	50,000
Kitchen, Laundry & Ground Recharge	—	50,000	50,000
Total			8, 60,000

ix) **Power requirement**: The total power requirement approx. 1215 KW and source is from TPCODL. Emergency power back of capacity 6965 KVA through - 3Nos. DG set 1500 KVA, 1No. DG set 600 KVA, 3Nos. DG set 500 KVA, 1No. DG set 365 KVA.

x) **Rain Water Harvesting**: Total Runoff from Storm Water from Site is 1007 m³ so based on 1no. Harvesting pit volume 43 cum we required 61 nos. Rain water Harvesting Pits.

xi) **Parking Requirement**: Total area provided for parking is 45373.5 sqm.

xii) **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4).

xiii) **Green Belt Development**: Total green area measures 18250.39Sq.mts.

xiv) **Solid Waste Management**: Total quantity of Municipal Solid Waste:
Bio-degradable waste = 217 kg/day.
Non- bio degradable waste = 76kg/day. Hand Over to Authorized Agencies.
Hospital/Biomedical waste = 110 kg/day disposed to Sani Clean Pvt. Ltd. Segregation, Storage & Disposal as per Bio-medical Waste Management Rules 2016.

xv) The estimated project cost is Rs. 65 Crores and cost for EMP is Rs. 1332 lakhs.

xvi) The project proponent along with the consultant **M/s Green Circle INC., Vadodara-390021(Gujurat)** made a detailed presentation on the proposal on 18.05.2022. The SEAC decided to take decision on the proposal after receipt of the certain information / documents from the proponent followed by site visit of sub-committee of SEAC.

xvii) 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)	Statutory clearance status such as Environmental Clearance, Consent to Establish and Consent to Operate from the Board for the existing building.	The CTO is attached as **Annexure-1**
b)	BDA letter refers to regularization of the Building from SEIAA for Environmental Clearance. So, construction status of the existing building such as total built-up area constructed prior to 14th September, 2006 and after 14th September, 2006 is to be submitted for academic Block (s) and Hospital Building (s) separately with associated infrastructures.	The letter from BDA to regularization is attached herewith as **Annexure-2**.
c)	Copy of all approval letters of BDA of existing buildings from the inception.	Copy Attached as **Annexure-2**.
d)	Existing water consumption is stated to be 493 KLD for hospital and 107 KLD for domestic purpose. Water consumption both for existing set up and proposed expansion be submitted along with basis of calculation and water balance diagram both for monsoon and non-monsoon period.	Water balance diagrams are attached herewith as **Annexure-3** series.
e)	Agreement copy of PP with Sani clean. Agreement copy submitted found to have been expired since 31st October, 2020.	Agreement copy is attached herewith as **Annexure-4**.
f)	Reduce the discharge treated water to drain by increasing the greenbelt indicating presently being discharged & proposed to be discharged with permission from the concerned authority of the drain for the purpose.	Instruction followed and implemented as proposed. The permission letter of the concern authority is attached as **Annexure-5**.
g)	Detailed land schedule with kissam of land in tabulated form along with supportive land documents of all academic/institutional/clinical	Detailed land schedule with kissam of land are attached as **Annexue-6**.

	buildings/parking space and physical features of the existing and proposed expansion showing the same in layout map including land use pattern. " Kisam" of the land in " Sabik" and " Haal" land record.	
h)	) Comparative table showing existing and proposed project in terms of environment features / parameters and physical features / parameters including safety with 3D pictures including the distance between the buildings as against the norm.	Attached as **Annexure-7.**
i)	Separate STP and ETP units or brief write up for integrated setup. To confirm the existing no of STPs with their corresponding capacity(s) and their location in the layout map within put details and output discharge and proposed additional nos. an d capacity with location. Similarly to confirm the existing no of ETPs with corresponding capacity and their location in the layout map with input details & output discharge & where to discharged and disposal of ETP sludge including for the expansion also.	Attached as **Annexure-8.**
j)	Chemical analysis report on discharge of STP and ETP vis-à-vis norms and discharge of integrated setup of STP and ETP (if existing is integrated).	Chemical analysis report of STP & ETP of existing building are attached as **Annexure-9.**
k)	) Traffic study report from an institute of repute and decongestion plan at intersecting points of exit & entry with public road.	Traffic study report is attached as **Annexure-10.**
l)	Provision for Incinerator to be made and if not, to justify, in absence of incinerator, how the organic wastes, infectious waste etc. would be deactivated to avoid further pollution and hazardousness. Also submit how the infectious waste of 436.66kg/ day as stated at present being disposed and proposed to be disposed after expansion indicating the estimated quantity.	The organic wastes, infectious waste are disposed to the OSPCB authorized & approved agency (Sani clean).
m)	Monitoring plan and measures to be taken for safely disposal of Bio-medical wastes.	The disposal of Bio-medical wastes are implementing as per the SOP given by the approved agency and with his supervision.
n)	Layout of DG set location with respect to wind direction.	Layout plan for DG is attached as **Annexure-8.**

o)	Details of solar panel accommodated and utilized with power generation details vis-à-vis total power used per day for existing and proposed after expansion.	Details of solar panel accommodated and utilized with power generation details is attached as **Annexure-11.**
p)	)Building wise built-up area of existing and proposed expansion both for academic and hospital separately.	Separate map for Building wise built-up area of existing and proposed expansion both for academic and hospital are attached as **Annexure-11** series.
q)	Permission/NOC from BMC for discharge of treated water to existing drain for existing and additional load	Permission for discharge of treated water to existing drain for existing and additional load is attached as **Annexure-5**
r)	Layout and breakup percentage for green belt and landscape for existing and proposed with dimensions & stretch and percentage of the land area excluding land scape.	Attached as **Annexure-11.**
s)	Fire-fighting and parking arrangements for existing and for proposed expansion.	Attached as **Annexure-12.**
t)	Rain water harvesting and recharging details to be submitted.	Report Attached as **Annexure-13.**
u)	)Parking provision in terms of space and ECS (both for two wheelers and four wheelers) in reference to present beds, OPD and proposed expansion in consideration of patients' visitors, doctors, and medical staff be submitted.	Attached as **Annexure-14.**
v)	)Permission/license of proposed HSD storage tank including details of the present arrangement.	There is no provision for HSD storage tank.
w)	Dimension (Stretch and width) of greenbelt with number of trees Existing and Proposed to be planted.	Details are Attached as **Annexure- 8.**
x)	)Layout map showing the drain network (internal), Recharge pits, STP etc. to be submitted.	Attached as **Annexure-11.**
y)	i) Firefighting arrangements with periphery roads for firefighting and its width to be submitted in layout map including entry and exit gates.	Attached as **Annexure-11.**
z)	NOC from CGWA and permission from WR department Government of Odisha for current use of ground water and proposed drawl of ground water after expansion to be submitted.	Attached as **Annexure-15.**
aa)	The STP and ETP should not be housed in the same building. The pipelines shouldn't be inter-connected. Attempt	Agreed and maintain the same as proposed.

	should be made to operate the ETP on zero discharge principle. Detailed proposal to this effect to be submitted.	

xviii) The proposed site was visited by the sub-committee of SEAC on 09.11.2022. Following are the observations of the Sub-Committee:

xix) PP and Consultant were present along with other team members. It was observed that there has been some construction done in one of the blocks to which the PP explained that- Non-requirement of EC being the area was within the limit. Now with expansion it is more than 20000 sq mt and thus, they have applied for total buildings as per proposal submitted.

xx) Inside roads were wide enough and Further, the PP was asked to submit some documents which has now been submitted by them as below:

xxi) BDA approved Plans for the buildings.

xxii) A table mentioning the building blocks with description, year of approvals, area of buildings and year of constructions with explanations for better understanding.

xxiii) Management of solid bio-medical wastes of hospital inside the premises as explained to sub-committee.

xxiv) Based on above documents and explanation, the Sub-committee recommend for EC subject to compliance of all requirements (which could be the conditions of EC) like: Solar Power, Traffic study, NOC from BMC for treated effluent discharge, Fire regulation compliances, RWH and drains as per approved lay out and if any other parameters as asked by Committee during presentation.

xxv) The documents furnished by the proponent to the Sub-Committee reveals the existing and proposed construction built up area as follows;

Sr. No	Name of the Building	Year of BDA Approval With letter No	Total Built up Area	Year of Construction Completion	Remark
HOSPITAL					
1	Hospital	No.: 6150/BP Dt: 29.06.2005	20336.14 Sqm	01.05.2006	As per rule Environment Clearance is not required, because all the construction was completed before July 2006
2	Hospital	No.28717/ BDA Dt:29.07.2022	34519.15 Sqm	Yet to be Constructed	As per rule the total area is more than 20000 sqm. Environment Clearance is required.
3	Dormitory Block	No.28717/ BDA Dt:29.07.2022	1729.56 Sqm	Yet to be Constructed	As per rule the total area is less than 20000 sqm. Environment Clearance is not required.
4	Cancer Block	N0.28717/ BDA Dt:29.07.2022	9723.88 Sqm	Yet to be Constructed	As per rule the total area is less than 20000 sqm. Environment Clearance is not required.
5	Parking Block	No.28717/ BDA Dt:29.07.2022	10865.29 Sqm	Yet to be Constructed	As per rule the total area is less than 20000 sqm. Environment Clearance is not required.

MEDICAL COLLEGE:					
1	College	No.: 10455/BP/ BDA Dt: 23.11.05	13453.53 Sqm	01.05.2006	As per rule Environment Clearance is not required because all the construction was completed before July, 2006
2	Library	No.28717/ BDA Dt:29.07.2022	17425.24 Sqm	Yet to be Constructed	As per rule the total area is less than 20000 sqm. Environment Clearance is not required.
		TOTAL	**108052.79 Sqm**		

xxvi) The proponent has constructed 20336.14 Sqm for Hospital component prior to 14.09.2006 for which Environmental Clearance is not required. Further, the proponent has constructed 13453.53 Sqm for College component prior to 14.09.2006 for which EC is also not required. Although the library of college with proposed built-up area 17425.24 Sqm is coming under educational institution component, they have included the same in proposed built up area for the purpose of obtaining Environmental Clearance. Hence, built up area for Hospital and College component for which EC is required detailed below:

Sr. No	Name of the Building	Year of BDA Approval With letter No	Total Built up Area
HOSPITAL			
1.	Hospital	No.28717/BDA Dt:29.07.2022	34519.15 Sqm
2.	Dormitory Block	No.28717/BDA Dt:29.07.2022	1729.56 Sqm
3.	Cancer Block	N0.28717/BDA Dt:29.07.2022	9723.88 Sqm
4.	Parking Block	No.28717/BDA Dt:29.07.2022	10865.29 Sqm
COLLEGE			
(i)	Library	No.28717/BDA Dt:29.07.2022	17425.24 Sqm
		TOTAL	**74263.12 Sqm**

xxvii) The proponent has intimated after the site visit by the sub-committee of SEAC that total built up area mentioned in their earlier application was 1,12,994.6 sqm both for KIIMS Medical college and Hospital, but after getting final approval from Bhubaneswar Development Authority (BDA), the total built-up area is 108052.79 Sqm, out of which they require Environmental Clearance for built up area of 74263.12 Sqm. They have submitted the copy of building plan approved on dtd. 29.07.2022.

xxviii) The Committee observed the followings;

xxix) The total built up area for Hospital and College component is 108052.79 Sqm, out of which they have constructed 33789.67 Sqm prior to EIA notification 14th Sept, 2006. Hence, this will not be treated as violation case. They have now proposed to obtain Environmental Clearance for proposed built up area of 74263.12 Sqm for which they require to submit modified proposal with modified documents such as Form-I, Form- IA, Prefeasibility report etc. as they have modified the proposal than the original one.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Green Circle INC., Vadodara-390 021 (Gujurat),** the SEAC recommended for grant of Environmental Clearance valid for a period of 10 years with following specific conditions in addition to the conditions as per **Annexure- D** for modified built-up area of 74263.12 Sqm. **However, the SEIAA may consider to grant EC after the proponent submits revised documents such as Form-I, Form-IA, Pre-feasibility report and other documents.**

a) All the land kisam shall be converted to "Gharabari" before going for construction activity for the project by appropriate revenue authority including that of " SABAK/ HAAL" records as well.
b) No of trees that are cut with due permission as stated during the process of redevelopment of the project site, necessary compensatory plantation shall be done by PP or the authority concerned or by the Forest department, Government of Odisha under deposit scheme as per the Government rules
c) Plantation and solar facilities to be implemented as proposed at appropriate time.
d) Parking in terms of ECS (4-wheeler, 2-wheeler and bicycles) shall be provided compatible with patience and attending visitors, OPD patients and visitors with them, Doctor's and staffs, nursing sisters and at least 10% floating population in confirmative building by- law/NBC norm/ applicable laws and rules for this kind of project.
e) The proponent shall operate STP and ETP separately as standalone system and both shall not be inter-connected. ETP outlet effluent shall not be discharged to outside the project premises i.e., "Zero Liquid Discharge" from ETP to outside the premises shall be maintained.
f) Under no circumstances, treated waste water discharge from ETP shall be used for dual plumbing for flushing purpose.
g) The Decongestion plan as given by the proponent in the traffic density study report shall be implemented for compliance with a definite time frame.
h) Existing waterbody if any shall be renovated and maintained properly. Periodic monitoring of water quality shall be taken up to ensure its upkeeping.
i) The proponent shall obtain permission from concerned authority for discharge of surplus treated water of STP only to nearby drain & nallah.
j) Permanent Environment Management Cell with environment professionals shall be in place, both for existing and proposed expansion within a definite time frame.
k) **This EC may be granted subject to strict compliance by the Authority concerned on the conditions and commitments made by PP.**
l) **This EC may be granted without prejudice to any order or direction from any court of competent jurisdiction or competent authority under applicable laws including that of any litigation or legal dispute on land (if any).**
m) The PP and/ or the appropriate authority for the purpose shall comply with all the conditions of EC and if anything is found/ noticed otherwise at any point of time, the EC so granted shall be deemed to have withdrawn/revoked with immediate effect besides levy of penalty or actions as deem fit under applicable laws.
n) The Campus of the project area shall be provided with Pucca Boundary Wall with an intention to Protect the Green Belt, treatment Plants, Energy Conservation Equipment
o) and Biodiversity of the project
p) **All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.**
q) Any deficiencies/omission have been noticed in the above documents-The PP has not complied most of the conditions raised by SEAC vide letter no. 04.06.2022

Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 27.03.2023 and the SEAC recommended the proposal for EC valid for 10 years.

2. The proposal was placed in the 118th meeting of SEIAA held on 06.05.2023 and the Authority observed the following:

(i) The PP has submitted that part construction has been completed before year 2006 as per approval in BDA letter dated 29.06.2005. The PP is required to submit documents in support of the above submission, i.e. occupancy certificate from BDA on already constructed 33,789.67 Sqm prior to EIA notification 14th Sept, 2006.

(ii) There is no previous EC for this project. Therefore, the PP is required to submit comprehensive proposal for 108052.79 Sqm proposed now and the constructed built-up area 33789.67 sqm. Prior to 2006 along with the applicable proforma for violation, if any.

(iii) The KML file has to be submitted limiting to the area for which the EC is sought.

(iv) The PP to submit report from DFO Chandaka (WL) if any forest area / land is involved as per DLC report and whether the area comes within Eco-Sensitive Zone (ESZ).

Now the PP has submitted the ADS raised by SEIAA for consideration.

Decision of Authority: ADS

The Authority perused the submission made by the project proponent vide their letter no. KIIT/C.1/460/23 dt. 09.09.2023 and subsequent clarifications furnished by the representative of the PP during the meeting held on 29.09.2023 and the followings are the observations:

1. The project proponent has applied for grant EC for KIMS Medical College & Hospital, over an area7.795 Ha. Sqm. Plot No: 24,25,12/A,12/C,14/A & 14/B, Mouza: Patia, Tahasil: Bhubaneswar, Dist: Khurda, Odisha. Whereas in the meeting on 29.09.2023, the representative of the PP clarified that the EC is required for a total built-up area of 1,08,052.79 sqm. And not over 7.795 Ha as applied.
2. The in-principle approval of BDA based on which EC applied is as under:

BDA approval letter no.	Total Built-up area	Name of the Building
(i). 6150/BP/BDA dt.29.06.2005	20336.14 sqm	Hospital (Existing)
(ii).10455/BP/BDA dt.23.11.2005	13453.53 sqm	Institution (Existing)
(iii). 28717/BDA dt. 29.07.2022	74263.12 sqm	(Hospital, Dormitory, Cancer Block, Library, Parking)-Proposed

3. The PP states that a total built up area of 33,798.67 sqm. comprising of the Hospital having total built up area of 20336.14 sqm. approved by BDA on 29.06.2005 and the Institution having total built up area of 13448.64 sqm. approved by BDA on 23.11.2005 have been constructed and completed before 14.09.2006 i.e., the date of EIA Notification 2006. However, there is no official document to certify the same, except a certificate by an Architecture. In absence of any official record certifying that the existing building has been constructed and completed prior to EIA Notification 2006, the same shall be considered as a violation in terms of MoEF & CC, Govt. of India OM dated 07.07.2021.
4. The DFO, Chandaka is required to clarify the discrepancy on plot nos. and area mentioned in their letter no. 3693 dated 23.05.2023 vis-à-vis BDA letter vide letter no. 6150/BP/BDA dt.29.06.2005, 10455/BP/BDA dt.23.11.2005 and 28717/BDA dt. 29.07.2022 with respect to Eco-Sensitive Zone of Chandaka Wildlife Sanctuary and DLC area.
5. The PP is required to furnish the revised KML file of the area as per the BDA approvals mentioned at point-2 above.

6. The Authority also observed that the PP has applied on 26.01.2022 and in the meanwhile, the Parivesh Portal has undergone changes. As a result, the name of the project as well as the area statement cannot be changed in old portal. Hence, the PP is required to revise the application after clarifying the above observation and apply in the new Parivesh.2.0 Portal for further consideration.

APPROVED BY

Member Secretary, SEIAA **Member, SEIAA** **Chairman, SEIAA**

AGENDA NO.137.02	
Proposal No.	SIA/OR/MIN/408894/2022
Date of application	28.12.2022
File No.	408894/768-MINB1/12-2022
Project Type	Proposal for EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for grant of EC for Expansion in production capacity of Chromite mineral from 3 Lakh TPA to 6 Lakh TPA from Mahagiri mine (Chromite) Over a ML area of 73.777Ha located in Village - Kaliapani, Tahasil - Sukinda, District - Jajpur of M/s Indian Metals & Ferro Alloys Limited
Name of the company/Organization	Applicant: M/s Indian Metals Ferro Alloys
Location of Project	Village - Kaliapani, Tahasil - Sukinda, District - Jajpur
ToR Date	18.11.2021

1. **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 M/s Indian Metals Ferro Alloys for Mahagiri mines (Chromite) for expansion in production capacity of Chromite ore from 3 Lakh TPA to 6 Lakh TPA from over a mining lease area of 73.777 ha. located at Village - Kaliapani, Tahasil - Sukinda, District - Jajpur, Odisha filed by Sri Sandeep B. Narade.

(ii) The State Government granted the mining lease over an area of 73.777 ha. in Village- Kaliapani, Tahasil-Sukinda, District - Jajpur, Odisha. The lease was executed on 20.09.2005 in favour of M/s Indian Charge Chrome Limited for exploitation of chromite ore for a period of 30 years i.e., from 20.09.2005 to 19.09.2035 (Lease validity is deemed to have been extended upto 19.09.2055 as per MMDR amendment act, 2015).

(iii) Transfer of the mining lease from M/s Indian Charge Chrome Ltd. to M/s Indian Metals & Ferro Alloys Ltd. was executed on 19.11.2015. It is a running mine with lease validity up to 19.09.2055 as per MMDR Act.

(iv) Forest Clearance has been obtained for the entire lease area of 73.777 ha. in three phases. First phase FC has been granted on 18.05.2005 vide letter no. F.No. 8-116/2002-FC for an area of 63.91ha. Second phase FC has been granted on 18.11.2014 vide letter no. F.NO.8-116/2000-FC(VOL.) for an area of 2.47ha. (Safety zone). While third phase FC has been granted on 30.10.2018 for an area of 7.397ha. (Sabik Kisam Forest) vide letter no. F.No.8-116/2002-FC (Vol.I).

(v) NOC from CGWA has been obtained for extraction of 1000 KLD of groundwater vide letter no. CGWA/NOC/MIN/REN/1/2021/6551, dated 04/06/2021 and valid up to 03/06/2023 where 10 KLD water abstraction is allowed from borewell for drinking & domestic purpose while 990 KLD is through dewatering of mine seepage water.

(vi) The site specific wildlife conservation plan has been approved vide letter no 720/7WL-FD&WLC-209/2020 on dated 25.01.2021 with financial forecast of Rs. 346.032 lakh for various activities.

(vii) The modified Mining Plan for the period 2020-21 to 2024-25 with enhancement in production capacity of 3.0 to 6.0 LTPA of chromite ore from fully mechanized underground mining has been approved by IBM vide its letter no. MRMP/A/17-ORI/BHU/2020-21/784 dated 11.08.2021, which is in force. The proposed production from underground is envisaged to be a maximum of 6.0 LTPA which will be achieved in 2029-30 progressively.

(viii) Earlier Environmental Clearance for production of 3.0 LTPA was granted by MoEF&CC vide letter no. J-11015/345/2007-IA.II (M) dated 29.10.2012 and by subsequent amendments dated 02.01.2014 (for extension in EC validity for grant of Forest Clearance regarding diversion of 2.47ha. of safety zone by 31.01.2015) & 17.03.2015 (deletion of specific condition (iii) of EC letter dated 29.10.2012 & 02.01.2014).

(ix) Present proposal is for expansion of mining of chromite mineral from production capacity 3 LTPA to 6 LTPA from Mahagiri mines of M/s Indian Metals & Ferro Alloys Limited. The entire mine lease area of 73.777 ha. is forest land.

(x) CTO has been obtained from State Pollution Control Board vide letter no. 551/IND-I-CON-5331 dated 07.01.2022 which is valid upto 31.03.2026 for the production of 0.3 MTPA.

(xi) Past production had been certified by Deputy Director Mines, Jajpur road circle, Jaipur vide memo no 757/mines on dated 27.05.2021.

(xii) Six Monthly Compliance report has been submitted for the period of April 2022 to Sep 2022 on dated 24.11.2022 to RO, MoEF. The Project proponent has submitted previous certified compliance report issued by RO, MoEF, Bhubaneswar, vide letter no. 101-331/21/EPE dated 21.10.2021.

(xiii) ToR Details: The project has been granted Terms of Reference by SEIAA, Odisha vide letter no. 3496/SEIAA dated 18.11.2021.

(xiv) Public Hearing details: The public hearing for the project was conducted on 06th July, 2022 at Mahagiri Enclave (Khata No. 53/15, Plot No. 664), Village - Kaliapani, Tahasil - Sukinda, District-Jajpur, Odisha. Local Employment, medical facilities and plantation was the main issues raised during the public hearing. The project proponent has proposed to spend Rs. 200 Lakhs in next five years under social activities.

(xv) Location and connectivity: The lease area of 73.777 ha. is located in village Kaliapani, Tahasil - Sukinda, District - Jajpur, Orissa State. The study area falls in the Survey of India Topo-sheet no. F45N16 and the geo coordinates are Latitude - 21°01'16.66"N to 21°01'56.83"N and longitude 85°46'24.94"E to 85°47'13.58"E. Nearest road is Tomka-Mangalpur road passes in the north-north western side of the mining lease area at a distance of 1.29 km. The project is at a distance of 11.07 km South from NH-200. The nearest railway station is Tomka at 21.60 km from the lease area. Nearest Airport is Birasal Airport at 10.98km. There are no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site, Tiger/Elephant Reserves within 10 km of the mine lease area. The area comprises hilly and undulating terrain. The Daitari hill range is located in the north and the Mahagiri range occupies the southern portions. The central valley portions of the area is drained by Damsal Nala flowing in westerly direction. It forms the main watershed of the study area. The entire drainage originating from Daitari hills in north and Mahagiri in the south join Damsel Nala.

(xvi) Mining method and production: Mining of Chromite will be done by fully mechanized underground mining in a lease area of 73.777 ha. The process of underground mechanised mining will involve drilling, blasting, loading and transportation. There is no processing or beneficiation process involved, except, ROM is only crushed and screened to different sizes. This method of development and stopping leaves no rib pillars between two stope blocks. A crown pillar of 10 m thickness is being left in between two stopping levels. Drilling is being done by single/double boom jumbo drill & blasting is being done using slurry explosives for development in waste and ore drives. Ultimate pit limit of underground mining will be (-) 395 mRL as per present exploration. The maximum proposed production of Chromite Ore will be 6 LTPA.

(xvii) During the period from 01.04.2021 to 31.03.2025, it is proposed to exploit 15.0 lakh tons of ROM from underground mines. So, the mineral reserve and resource category after 2024-25 shall be 157.45 lakh tons. Life of Mine will be 31 years.

(xviii) Waste generation: Generation of waste in the conceptual period is estimated to be around 8.89 Lakh CuM. The waste generated from underground working shall be utilised for backfilling of mined out areas of opencast working, as well as for ground levelling within the leasehold area for

different land use purposes. The overburden/waste material shall be utilised for backfilling of underground stope voids. In case of the generation of mineral reject, it will be separately stacked within the area designated for Mineral Storage.

(xix) Water requirement: The water requirement of the project will be fulfilled by seepage water which will be used after treatment in ETP located in Sukinda Mines (Chromite) of the same lessee and 10 KLD fresh water from the borewell will be used for drinking & domestic purposes. For this purpose, NOC from CGWA has been obtained for extraction of 1000 KLD of groundwater vide letter no. 21-4(107)/SER/CGWA/2008-1212 dated 12.06.2018 where 10 KLD water abstraction is allowed from the borewell for drinking & domestic purposes and 990 KLD is through dewatering of mine seepage water. Detailed water usage is mentioned in below table.

Particulars	Unit	Existing Quantity	Total after expansion	Source (Groundwater/Surface Water/other)
Drinking & Domestic	KLD	50	60	U/G mine dewatering after treating in WTP
Plantation	KLD	134	143	ETP
Sprinkling	KLD	90	90	ETP
Underground Drilling	KLD	100	150	U/g mine dewatering
Backfilling Plant	KLD	160	160	U/g mine dewatering
Total	**KLD**	**534**	**603**	

(xx) ETP/STP: It is proposed to expand the capacity of existing ETP from 360 cum/hr to 1260 cum/hr and to install the additional ETP of 900 cum/hr capacity in view of increase in the dewatering rate after expansion of the project. Domestic wastewater generated from administrative activities and canteen is treated in the Sewage Treatment plant of capacity 50 KLD. The treated water is used for mines, dust suppression and plantation. Discharge to outside lease area into the natural drainage after meeting SPCB standards is 940KLD.

(xxi) Rain water Harvesting system has been adopted and each year 61985 cum/year of water is harvested.

(xxii) Power requirement: Total power requirement after the proposed expansion project will be 4.0 MVA and it will be met from Central Electricity Supply Utility of Odisha (CESU) grid line. A 2000 KVA Sub-station has been established with 33 KV/433V transformers. Three 750 KVA, D.G. sets have been installed for illumination, ventilation and operation of pumps in case of power failure. The daily consumption of diesel for running machineries & DG set is 5 KLD and after expansion will be 10 KLD. The diesel will be sourced from the M/s Indian Oil Corporation Limited (IOCL).

(xxiii) Greenbelt: Green belt/plantation has been developed around the mining activity area, safety zone, along haul road. In addition, 1.8 ha. out of 5.090 ha. of OB dump area and 2.19 ha. out of 6.9 ha. of backfilled area has also been covered by plantation, around 9.33 ha. is under greenbelt. At the end of the conceptual period around 60.66 ha. area will be reclaimed by plantation.

(xxiv) The baseline data was collected from October 2021- December 2021 .The details are given below:

- Micro- meteorological data:
  - Temperature: Temperature of the area varies from 6.62^{0}C to 31.08^{0}C
  - Relative Humidity: The relative humidity varies from 40.4 to 99.93.
  - Wind Speed: Wind speed normally is in the range of 0.02 Km/hr to 6.86 Km/hr.

➢ Ambient Air Quality Results - Samples were collected from 8 sampling locations. The following results were obtained.

S.No	Parameters	Mean Value Range (Core Zone)	Mean value Range (Buffer Zone)	Standard
1.	PM 2.5 (µg/m3)	24.15 - 25.97	25.19-37.66	24 hrs: 60 µg/m3
2.	PM 10 (µg/m3)	58.69-63.11	61.22-91.51	24 hrs: 100 µg/m3
3.	SO2 (µg/m3)	6.40-6.92	6.71-10.71	24 hrs: 80 µg/m3
4.	NO2 (µg/m3)	16.77-18.03	17.49-26.33	24 hrs: 80 µg/m3
5.	CO (mg/m3)	0.24-0.25	0.25-0.37	8 hrs: 02 mg/m3

➢ Noise Quality results: Samples were collected from 9 locations. The following results were obtained.

S. No.	Parameters Leq noise level	Type of Area	Range dB(A) - Core Zone	Range dB(A)- Buffer Zone	Standard in dB(A)
1.	Day Time	Industrial Area	64.9 - 65.5	–	75
2.	Night Time		57.9-58.8	–	70
3.	Day Time	Residential Area	--	56.2-58.2	55
4.	Night Time		--	46.5-48.9	45
5.	Day Time	Commercial Area	–	68.5	65
6.	Night Time		–	62.7	55

➢ Water Quality Results: The samples were collected from 18 locations (8 samples of ground water 10 samples of surface water).

➢ Ground water quality- Core zone & Buffer Zone:

- The Total Dissolved Solids (TDS) of the sampling locations W1, W2, W3, W4, W5, W6, W7, W8 ranges from 49.7 mg/l to 317 mg/l which are within the drinking water standard (IS:10500) i.e. 500 mg/l.
- The Total Hardness of the sampling locations ranges from 28 mg/l to 260 mg/l. Total Hardness of sampling locations Sukurangi Village and Giringamali village are found higher than the drinking water standards (IS:10500).

- The Alkalinity of the sampling locations ranges from 31 mg/l to 356 mg/l. Alkalinity of all sampling locations except for Sukurangi Village (356 mg/l), OMC colony (244 mg/l), Giringamali village (356 mg/l), and Kendubani Village (321 mg/l) are within the drinking water standards (IS:10500) i.e. 200 mg/l.
- The Fluoride content in the sampling locations ranges from <0.1 mg/l to 0.4 mg/l. which are within the drinking water standard (IS:10500) i.e. 1.0 mg/l.
- The Calcium Concentration of sampling locations ranges from 4.8 mg/l to 67.2 mg/l. Calcium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 75 mg/l.
- The Magnesium Concentration of sampling locations ranges from 3.9 mg/l to 25.3 mg/l. Magnesium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 30 mg/l.
- The Chloride Concentration of all the sampling locations ranges from 14 mg/l to 48 mg/l. Chloride levels of all the sampling locations are within the drinking water standards (IS:10500) i.e 250 mg/l. Surface water quality- The majority of the water quality parameters in the selected sites were within their respective drinking water quality standards. Moreover, DO values fall under class 'D' and 'E' as per CPCB guidelines. Surface water quality criteria indicating that the surface water quality within the region can be used for Irrigation, Industrial Cooling, and Controlled Waste disposal.
- Soil Quality Results: The samples were collected from 18 locations:
- Core Zone: The soil samples collected from the core zone sites show that the soil texture in the core zone is Clay, Sandy clay, Sandy loam, Silt loam, Loam having average fertility in the Core Zone.
- Buffer Zone: The soil samples collected from the buffer zone sites show that the soil texture in the buffer zone is Clay, loam, silt clay and Clay Loam. Primary nutrient profile shows that soil is average fertile due to the availability of low amounts of nitrogen, available potassium.
- Ecology and Biodiversity Results: There are a total 11 Schedule I Species of fauna found in the buffer zone as mentioned, for which site specific wildlife conservation plan has been approved by PCCF & Chief Wildlife Warden, Odisha vide letter no.720/7WLFD&WLC/209/2020 dated 25.01.2021.

(xxv) Manpower: The proposed project will be additional 331 manpower for the proposed expansion in the mine, apart from existing 746 employees.

(xxvi) Project cost: The project cost is Rs. 154.30 Crores (Only for expansion project) and Proposed EMP Capital cost is Rs. 69.66 Lakh and annual recurring cost is 28.69 lakhs.

(xxvii) The Environment consultant M/s Perfact Enviro Solutions Pvt. Ltd, New Delhi, along with the proponent made a presentation on the proposal before the Committee on dtd. 13.01.2023

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

2.Whether SEAC recommended the proposal –Yes. The proposal was placed in the SEAC meeting held on 13.07.2023 and the SEAC have recommended for grant of Environmental Clearance with stipulated conditions along with the following specific conditions.

i) The project proponent shall monitor analysis of hexavalent chromium in nearby soil and water body periodically and follow mitigation measures if necessary.
ii) The PP to explore implementation of new technology for removal of hexavalent Cr.
iii) All the compliances submitted/ committed by PP (s) shall be strictly adhered to by them.

3.The proposal was placed in the 131st meeting of SEIAA held on 10.08.2023 & 11.08.2023 and after detailed deliberation in the matter, the Authority decided to seek additional information/document on the following:

(i)The PP is required to submit current compliance report of earlier EC condition from IRO, Bhubaneswar as the Certified Compliance Report of EC conditions dated 25.10.2021 enclosed with the application is more than one year.

Decision Of Authority: Approved

The Authority perused the observation submitted by the PP and allow grant of EC subject to the following conditions:

1. The PP shall submit an undertaking to complete the two issues point out by the IRO, MoEF & CC, Bhubaneswar in their certified compliance report vide letter no. 101-331/21/EPE dt. 21.10.2021 within a period of six (06) months i.e.
    a. The project should work towards fully metalled roads inside the mine at the earliest.
    b. The garland drains need to be desilted soon after the present monsoon season.
2. In case the above two issues are not complied within a period of six (06) months, the EC granted shall be withdrawn.

APPROVED BY

Member Secretary, SEIAA | **Member, SEIAA** | **Chairman, SEIAA**

AGENDA NO.137.03	
Proposal No.	SIA/OR/MIN/421981/2023
Date of application	25.04.2023
File no.	426324/103-MINB1/04-2023
Project Type	Proposal for ToR for expansion of production capacity
Category	B1
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for ToR of Expansion in Chromite ore production from 0.24 Million TPA (opencast) to 1.5 million TPA (Opencast and underground) with maximum excavation of 2.5 million TPA (Opencast and underground) along with installation of a new crusher and COB plant to enhance the beneficiated chrome ore from 0.1 MTPA (opencast) to 0.8 MTPA (Opencast and underground) and a Backfill plant in Ostapal Chromite Mine (72.843 ha) at Village Gurujanga Tehsil Sukinda District Jajpur, Odisha by M/s. Ferro Alloys Corporation Ltd.
Name of the company/Organization	Sri Sandeep Kittana Acharya M/s. Ferro Alloys Corporation Ltd.
Location of Project	Village Gurujanga Tehsil Sukinda District Jajpur, Odisha by M/s. Ferro Alloys Corporation Ltd.
ToR Date	N/A
Name of the Consultant	M/s. JM EnviroNet Pvt. Ltd

1. **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) The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.

(ii) This proposal is for Terms of Reference for Environmental Clearance of M/s. Ferro Alloys Corporation Ltd for Expansion in Chromite ore production from 0.24 Million PA (opencast) to 1.5 million TPA (Opencast and underground) with maximum excavation of 2.5 million TPA (Opencast and underground) along with installation of a new crusher and COB plant to enhance the beneficiated chrome ore from 0.1 MTPA (opencast) to 0.8 MTPA (Opencast and underground) and a Backfill plant in Ostapal Chromite Mine (72.843 ha) at Village Gurujanga Tehsil Sukinda District Jajpur of Sri Sandeep Kittana Acharya .

(iii) **Category**: As per EIA Notification dated 10th November 2006, as amended from time to time; the project falls under S. No.'1' (Mining of Minerals), Project or Activity '1(a) - (4)', and S. No.'2' (Mineral Beneficiation) Project or Activity '2(b) - (4)'Category "B".

(iv) **Mining lease status**: The mining lease over an area of 72.843 Ha, which comes under the part of Daitari Protected Forest and Village Gurujanga, was granted to M/s Ferro Alloys Corporation Limited ("FACOR") on 13/08/1985 for 20 years i.e., from 13/08/1985 to

12/08/2005. Mining lease deed was executed on 22.08.1985 and registered on 13.08.1985 in favor of M/s FERRO ALLOYS CORPORATION LIMITED ("FACOR"). The lease was expired on 12/08/2005, but it has continued to conduct the mining operations in the said lease under the deemed extension provisions of section 8 of the MMDRA, 1957 with Rule-24-A (6) of the MCR, 1960 till 21/08/2016. As per the MMDR amendment Ordinance, 2015 under sec. 8A, the lease period has been deemed to be extended for a period of fifty years i.e., from 13/08/1985 to 12/08/2035.The supplementary Lease Deed has been executed on 22/08/2016. Thereafter, Hon'ble NCLT Cuttack Bench under the provisions of Insolvency and Bankruptcy Code (IBC)-2016 vide its order dt. 30.01.2020, has approved the resolution plan of M/s Sterlite Power Transmission Limited (Vedanta Ltd.). Pursuant to the said order with of NCLT Cuttack, the Board of Directors of M/s. FERRO ALLOYS CORPORATION LTD. have been changed with effective from dt.21.09.2020. Consequently, the Board of Directors have appointed the nominated owner of the company vide its resolution dt. 27.09.2020, in accordance with the statutory provisions.

(v) **Environment Clearance** has been obtained from SEIAA, Odisha vide EC identification No. EC22B001OR120821 dated 04.04.2022. CTO for 0.24 million TPA chromite Production Capacity vide letter no. 11221 dt. 28.06.2022 (Valid up to 31.03.2026).

(vi) CGWA NOC regarding the abstraction of ground water is obtained vide reference CGWA/NOC/MIN/REN/1/2021/6481; Validity: 02.08.2020 – 01.08.2022.

(vii) **Location**: M/s Ferro Alloys Corporation Limited proposing expansion in Ostapal Chromite Mine (ML Area -72.843 ha) for Chromite ore production (ROM) from 0.24 million TPA (opencast) to 1.5 million TPA(Opencast and underground) with maximum excavation of 2.5 million TPA (Opencast and underground) along with installation of a new crusher and COB plant to enhance the beneficiated chrome ore from 0.1 million TPA (opencast) to 0.8 million TPA (Opencast and underground) and a Backfill plant for backfilling of Underground mined out stopes at Village- Gurujanga, Tehsil-Kaliapani, District- Jajpur, Odisha bounded by Latitude: 21° 03' 26.60" N to 21° 04' 00.98" N and Longitude: 85° 47' 04.39"E to 85°47' 34.29" E in SOI Toposheet No. Core Zone -73G/16 and Buffer Zone –73G/16, 73G/12, 73H/9 & 73H/13. Nearest NH/ SH are Tomka - Mangalpur State Highway (~0.34 km in South Direction), NH- 200 (~14 km in South East Direction) direction from mine site. The nearest railway station is Jajpur Railway Station (~55.0 km in SE direction) from the mine site. Nearest airport is Biju Patnaik International Airport, Bhubaneswar (~142 km in South direction).

(viii) **Land- use details:**

S. No.	Type of land use	At present -As on date (Ha)	At the end of Plan Period (Ha)	Conceptual Period-End of life of mine (Ha)
i)	Area under mining	30.67	34.54	34.54
ii)	Mineral Storage	1.56	1.29	1.29
iii)	OB/ Waste Dump	28.58	20.08	20.08
iv)	Tailing Pond	0.29	1.50	1.5
v)	Infrastructure (Workshop, Admin Building)	-	1.67	1.67
vi)	Road	0.95	2.06	2.06
vii)	Effluent treatment plant	0.44	0.44	0.44
viii)	Mineral separation plant	1.42	2.11	2.11

ix)	Greenbelt within 7.5m (Safety Zone)	4.07	4.07	4.07
x)	Others	4.863	5.083	5.083
	Total	72.843	72.843	72.843

(ix) **Topography**: The entire lease area is a flat terrain having a gentle slope of from South to North. The highest ground elevation in this area is lying in the Northern part of the lease area at an altitude of 158 m AMSL and the lowest relief in this area is 135 m AMSL lying in the Southern part. General ground level of the mining lease area is 146.5 m AMSL

(x) **Proposed Method of Mining:** Sublevel method of underground mining is proposed. Mode of Entry will be declined. The selected mining method is predominantly Longitudinal Longhole Open Stoping (LHOS) with backfill. Vertical stoping method utilising long-hole drilling and blasting, stopes are unsupported; pillars are usually left between stopes and occasionally within stopes. Ore will be extracted from the stope via the lower extraction drift using remote-controlled loaders The LHD (Low profile Dumper) equipment will move the rock to a re-muck bay and re-handle the material into trucks. The trucks will move ore to surface via the decline. Mineral will be transported to existing (20 TPH) and proposed crusher (250 TPH) and existing (20 TPH) and proposed COB plant (250 TPH) by trucks/dumpers of 45 t capacity.

(xi) **Water requirement:** Existing water requirement for the project is 3400 KLD which will be 8500 KLD after expansion. Water is being/will be sourced underground seepage water & Mine sump water. Requirement of drinking water is met from the bore wells already installed in mining lease area.

(xii) **Power requirement:** Existing power requirement for this project is 0.55 MW which will be 10.0 MW after expansion. Power is being sourced from power grid.

S. No.	Particular	Requirement			Source
		Existing	Additional	Total	
i)	Water Requirement (KLD)	3400	5100	8500	Mine sump water & Ground Water (2nd renewal is under process)) (Till 7th year of this project water requirement will be within the existing permitted quantity 3400 KLD & on 12th year it will be required 8500KLD)
ii)	Manpower Requirement (Nos)	657	54	714	Preference is being/ will be given to the locals as per their eligibility & availability

iii)	Power Requirement (MW)	0.55	10	10.55	State Grid Power Supply

(xiii) **Green Belt**: Total area under greenbelt/plantation is estimated as 24.15 ha (Greenbelt on 4.07 ha +Plantation on 20.08 ha) which has been completed. Species planted in Green Belt and waste dump are Chakunda, Chhatian, Neem, Karanja, Krushnachuda, Sisama, Barakoli, Saguan, Panas, Amba, Pijudi/Pijuli, Bahada. Density of Trees will be @2500 trees/ha with the survival rate of 90%.

(xiv) **Waste generation**: During plan period, 3 million tonns of waste will be generated from opencast mining out of which will be dump is existing 2 no's of waste dump as well as backfilled over an area of 5.05 ha up to a depth of 30 m. During plan period of underground mining, 0.39 million tons of waste will be generated from underground mining which will be stacked in North dump. No waste generated at the conceptual stage through opencast mine and total of 2 million tons waste generated at the conceptual stage and it will be dumped in the waste dumps area.

(xv) **Employment generation**: The total man power for the project is 125 person. Unskilled /semi-skilled manpower is being/ will be sourced from the local area.

(xvi) **Project cost:** Cost for Environment Protection Measures includes Capital Cost of Rs. 13.36 Crore and Recurring Cost of Rs. 0.87 Crore/annum. Total cost of the Project is Rs 600 Crore.

(xvii) **Environment Consultant**: The Environment consultant **M/s JM Enviro Net Pvt. Ltd, Gurugram** along with the proponent made a presentation on the proposal before the Committee.

(xviii) 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:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Technological features and safety aspects of underground mines and details of underground mining study report.	Detailed Geotechnical study for all safety aspect and various aspects of underground mines is conducted by ABGM South Africa ABGM. Geotech Report and feasibility report is enclosed as **Annexure I** and **II**.	Complied and Annexure I and II is attached.
ii)	Existing facilities for water balance, material balance and management of wastewater with Layout for existing production.	Existing Water balance along with waste water is enclosed as **Annexure III** as well as material balance is enclosed as **Annexure IV**.	**Annexure III** and **Annexure IV is attached and complied.**
iii)	Address hexavalent Chromium Pollution and management.	Hexavalent Chromium pollution, management and its mitigation plan is enclosed as **Annexure No-V.**	Complied and **Annexure No-V is attached.**
iv)	Details of other units that will be in the process of expansion particularly in reference to environmental parameters.	Our proposal is for the expansion in granted production capacity in Chromite ore production from 0.24 million TPA (opencast) to 1.5 million TPA (Opencast and underground) with maximum excavation of 2.5 million TPA (Opencast and underground) along with installation of a new	Complied.

crusher and COB plant to enhance the beneficiated chrome ore from 0.1 MTPA to 0.8 MTPA and a backfill plant for backfilling of Underground mined stopes in Ostapal Chromite Mine (ML Area: 72.843 ha). Salient features for this proposal is find below:

- There is no additional land requirement for the proposal.
- A new COB Plant crusher capacity 250 TPH will be established
- There will be no change in water requirement for coming 7 year. After the 7 year it will cross the current limit.
- Requirement of HEMMs is sufficient for the for the O/C and the underground mining various environmental friendly and advanced Machinery & Equipment will be required. List of the same is as below:

Equipment	Make	Capacity	No of Equipment
Drill Jumbo	EPIROC	45 mm	5
Rock Drill	EPIROC	38 mm	2
Loader	SANDVIK	17 T	4
Production Drill	SANDVIK	89	4
LPDT	SANDVIK/CAT	30T – 65T	12
Explosive Carrier & Charging Unit	NORMET	1.4T	2
Spray mech	NORMET	-	3
Miller	NORMET	5 Cum	3
Cable bolter	SANDVIK	-	2
LMV's	ISUZU	-	8
Grader	CAT	-	1

		Truck - Store	SAND VIK/CAT	30 T	2		
		Diesel Browser	NORMET	2.5 KL	2		
		Water Tanker	NORMET	6 KL	1		
		Explosive Van	NORMET	2 T	2		
v)	Impact of expansion on peripheral soil environment and water environment in terms of quantity of hexavalent chromium to be present in soil, ground water and surface water.	In a study for the reduction of hexavalent chromium pollution at the Ostapal Chromite Mine conducted by NIT Rourkela, Odhisa in the years 2021–2022, it was discovered that there was 3.094 mg/l of hexavalent chromium in mine tailing water and 0.616 mg/l in mine overburden soil. Colocasia esculenta stem biomass and Artocarpus heterophyllus seeds has been suggested by Odhisa from NIT Rourkela as being helpful in reducing hexavalent chromium, Annexure VI attached for the same. Note on Hexavalent Chromium Pollution & Management is enclosed as **Annexure VI**. Detailed study will be carried out for the expansion of the project. Report will be submitted at the time of appraisal.					Complied.
vi)	Study report with respect to the suitability of material to be used for backfilling.	Technical Study for the same is under process by the Golder Associates- Engg. Consultant to carry out the required study / activities for finalizing the backfill methodology and Associated Flow sheet etc. Offer letter and work order for the same is enclosed as **Annexure VII**.					Technical Study is in process and work order is attached.
vii)	Feasibility of reduction of dependency on ground water by having adequate storage facility in underground/surface sumps.	Ground water only is used for domestic purpose inside Mine & outside mine for community supply. Mine sump water (i.e seepage water & Rainwater accumulation) is being used for Industrial purposes like Ore Beneficiation, Dust suppression, wheel washing, vehicle maintenance & afforestation etc. Further, nos. of measures have been taken to reduce the dependency on ground water withdrawal by adopting Modern technology like installation of automatic water level meter and floating valve in all the water tanks, Rain water harvesting, Monitoring the water loss, adopting the recycle & reuse of the water along with management on behavioral changes, increasing of awareness among employees and setup of Water Conservation Programme etc.					Complied and **Annexure VIII is attached.**

		Note on Feasibility of reduction of dependency on ground water by having adequate storage facility in underground/surface sumps is enclosed as **Annexure VIII.**	

(xix) Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s JM EnviroNet Pvt. Ltd, Gurugram**, the SEAC prescribed the following specific ToRs in addition to standard ToRs for conducting detailed EIA study.

(xx) Any deficiencies/omission have been noticed in the above documents-Not submitted certified EC compliance.

2. **Whether SEAC recommended the proposal** – The proposal was placed in SEAC meeting held on 17.08.2023 and after detailed discussion, the SEAC recommended the proposal for issues of both standard and below mentioned specific ToR.

a) Any updated or latest technology is used for treatment and management of hexavalent chromium in effluent or mines run off water, may be elaborated with mechanism and output characteristics. Any previous data if available to be provided also.
b) Complete material balance of the whole process occurring in Plant. Material Balance for existing and proposed, overburden waste, ETP and waste land.
c) Details of current production.
d) Latest EC compliance report and CTO Compliance report.
e) Surface runoff management and details of treatment facility for surface runoff with analysis for Cr^{+6}.
f) STP installation with design.
g) Detailed layout showing Damsala Nala from project site.
h) Details of Disaster Management for this mine.
i) Study report of Biodiversity of that area. Maintenance of Biodiversity register.
j) Detailed proposal to adopt Zero Liquid Discharge (ZLD) concept.
k) Source of waste water. Details of Effluent Treatment Plant for treatment of waste water containing hexavalent chromium and the monitoring mechanism.
l) Mitigative measures to be taken for serious occupational health hazards due to hexavalent chromium - SOP of measures to be undertaken for employees.
m) Analysis result of surface and ground water and soil within study area w.r.t. hexavalent chromium.
n) How much quantity of water is recharged viz-a-viz norm of CGWA.
o) Design and capacity of Tailing Pond (existing and proposed) including SOP of disposal of tailings be submitted and similarly of ETP as well.
p) Permission from the appropriate authority of "Damsala" Nala discharge treated waste water in to it be submitted including chemical analysis of the Said discharge water.
q) How is the waste from underground treated and shown in the returns. Is that below the threshold grade of IBM and if so then the same has to be explained. Treatment also must be explained as per returns
r) Change of land use from open cast to underground after the same was changed should be attached duly certified by MOEF&CC, Govt. of India.
s) Details of crushing and screening plant if any operating in the mine with their permission status.
t) Details of the technology and process involved for beneficiation should be given.
u) Management and disposal of tailings and closure plan of the tailing pond, if any after the project is over, should be detailed in a quantified manner.
v) The water requirement for the COB Plant, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should also be indicated.

w) Cumulative impact study of Beneficiation Plant with suggested mitigation measures as per the study should be described.
x) Details of back filling plant should be described.

Decision of Authority: Approved

After detailed deliberation in the matter, the Authority decided to issue ToR (both standard & specific) for undertaking detailed EIA studies for the project along with Public Hearing with additional conditions that the PP shall submit fresh CTE from SPCB, NOC from CGWA etc. during EC application.

APPROVED BY

Member Secretary, SEIAA **Member, SEIAA** **Chairman, SEIAA**

AGENDA NO.137.04	
Proposal No.	SIA/OR/MIN/417345/2023
Date of application	21.02.2023
File No.	417345/798-MINB1/02-2023
Project Type	Proposal for fresh EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for grant of EC for Kusumi & Mohuda Stone Quarries Cluster over an area of 27.258 Acres or 11.139 hectares in village Kusumi & Mohuda, Tahasil Kukudakhandi in District Kukudakhandi, State Odisha submitted under cluster approach with total cluster area 11.139 Hectares with consisting of 5 stone quarries.
Name of the company/Organization	Tahasildar, Kukudakhandi
Location of Project	village Kusumi & Mohuda, Tahasil Kukudakhandi in District Kukudakhandi, State Odisha
ToR Date	19.08.2022
Name of the Consultant	M/s. P and M Solutions

Proposal in brief:

1. 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 Kusumi & Mohuda stone quarries cluster over an area of 27.258 Acres or 11.139 hectares in village Kusumi & Mohuda, Tahasil Kukudakhandi in District Ganjam of Tahasildar, Kukudakhandi (submitted under cluster approach with total cluster area 11.139 Hectares with consisting of 5 stone quarries).

(ii) **Category**: The proposed project is in cluster situation as other leases are within 500 m radius of lease & total lease area becomes greater than 5 ha. So, as per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B1 under Schedule of item 1(a) -Mining of Minerals.

(iii) **Mining plans approval details of Kusumi & Mohuda stone quarries:**

S.No	Name and Address of the Mine	Khata No/Plot No	Lease Area	Mining Plan Approval	EC Status
i)	Kusumi Stone Quarry Mouza-Kusumi Lessee- Sri Surya Narayan Swar	Khata No-325 Plot No-147/P	2.294 Ha	1019/SZ, 30.07.2022	Applied for Fresh EC (ToR Granted in Cluster)
ii)	Kusumi Stone Quarry Mouza-Kusumi Lessee- Smt. Swapna Behera	Khata No-325 Plot No-147	1.199 Ha	529/SZ, 22.04.2022	Applied for Fresh EC (ToR Granted in Cluster)
iii)	Kusumi Stone Quarry Mouza-Kusumi Lessee- Smt. Swapna Behera	Khata No-325 Plot No-166	2.472 Ha	527/SZ, 22.04.2022	Applied for Fresh EC (ToR Granted in Cluster)

iv)	Mohuda Stone Quarry Mouza-Mohuda Lessee- Smt. B.Sita Reddy	Khata No-669 Plot No-1978 (P)	4.284 Ha	905/SZ , 01.07.2020	Applied for new EC (ToR Granted in Cluster)
v)	Mohuda Stone Quarry Mouza-Mohuda Lessee- Sri V.Budu	Khata No-669 Plot No-1978 (P)	0.890 Ha	531/SZ, 22.04.2022	Applied for Fresh EC (ToR Granted in Cluster)

(iv) There are two other identified sairat sources quarries present within 500 m of proposed cluster i.e.

S.No	Name and Address of the Mine	Khata No/Plot No	Lease Area	EC Status
i)	Mohuda Stone Quarry Mouza-Mohuda Lessee- Sri Tushar Kanta Dash	Khata No-669 Plot No-1406	2.165 Ha.	EC Granted on Date: 30.07.2022 from SEIAA & Running till 27.05.2025
ii)	Mohuda Stone Quarry Mouza-Mohuda Lessee- Sri B. Balaji Reddy	Khata No-669 Plot No-1978 (P)	2.165 Ha.	EC Granted on Date: 10.8.2021 from SEIAA & Running till 21.08.2026

(v) **DLC details**: -The proposed Sairat source under Kukudakhandi Tehsil is not coming under DLC land vide Letter no-5001 dated 03 June 2022.

(vi) **TOR details**: Terms of Reference (TOR) has been prescribed by SEIAA, Odisha vide Reference No: 5157/ SEIAA; File no. SIA/OR/MIN/81911/2022 dated 19.08.2022.

(vii) **Public hearing details**: Public hearing was successfully conducted on date 23.11.2022 at village-Kusumi, Tehsil-Kukudakhandi, District- Ganjam, Odisha. Issues raised during public hearing are local employment, local development, construction material availability for developmental works, assistance to local people, plantation, and control blasting. Funds allocated for Public Hearing issues are: Rs.89000.00 for plantation, 0.20lakhs for medical camp and 0.50lakhs for distribution of books and educational awareness campaign.

(viii) **Location and connectivity**: The Kusumi & Mohuda Stone Quarry lease is located at Village- Kusumi & Mohuda, Tehsil- Kukudakhandi, District-Ganjam, Odisha. The area falls in Survey of India topo sheet No. 74A/11, 74A/12, 74A/15& 74A/16.Kusumi stone quarry bears Khata no.325 plot nos.147/P (2.294 ha.),147(2.472 ha.) and 166(1.199 ha.) while Mohuda stone quarry bears Khata no 669, Plot no 1978(P) with 0.890 and 4.284 hectares. The quarry area bounded between the Latitude -19°16'37.96" N to 19°17'5.62" N and Longitude - 84°44'08.06" E to 84°44'36.64" E with an elevation of about 60m RL to 38 mRL. Nearest railway line is Berhampur Railway station at 6.0 Km NE, NH-16 is at 4.50 km in SE, SH- 22 is at 1.20 km in NW. Nearest road bridge is at Haladiapadara over bridge at a distance of 4.50km SE and nearest river embankment is at 20km in SW. Nearest reserve forest is Ramagurha reserve forest at a distance of 3.30 km in SW.

(ix) There is no National Park or Biosphere Reserve within 10 km distance from the lease area. The life of the mine will be 27 years for cluster.

(x) **Topography and drainage**: The area falls in Eastern Ghats of Odisha in Ganjam district. This group of formation comprises of granitic gneisses, granites, khondalites, chanockites and granitoids. A variety of Granite Gneiss forming peneplains ground occurs at geomorphic levels above 100- 150MSL. They are

believed to be late proterozoic age. The quarry lease has highest elevation of about 60m RL and lowest elevation of 38 mRL. There is no stream crossing in the mine lease area. Dakhinapur Reservoirs is at approx 5.60 km towards NE direction.

(xi) **Reserves and total production**: As estimated, reserves of Kusumi and Mohuda stone mining lease is presently spanning over an area of 11.139ha. (Cluster area). The proposed project is to mine Kusumi & Mohuda Stone Quarry (Cluster Area 11.139ha.) for proposed production of 37,364 cum/year (under cluster approach).

Name of The Mine	Production (cum)
Kusumi Stone Quarry (2.294 ha.)	8015
Kusumi Stone Quarry (2.472 ha.)	10098
Kusumi Stone Quarry (1.199 ha.)	6148
Mahuda Stone Quarry (0.890 ha.)	3015
Mahuda Stone Quarry (4.284 ha.)	10088
Total	37,364

Name of The Mine	Geological Reserves (cum)	Mineable Reserves (cum)
Kusumi Stone Quarry (2.294 ha.)	308307	219675
Kusumi Stone Quarry (2.472 ha.)	338138	188865
Kusumi Stone Quarry (1.199 ha.)	76976	51516
Mahuda Stone Quarry (0.890 ha.)	86197	47466
Mahuda Stone Quarry (4.284 ha.)	637641	507237

(xii) **Mining method**: Mining will be done by semi-mechanized method. Mining will be done by deploying machines like jackhammer, drill compressor, rock breaker, excavator and tractors/trucks. Tipper and trucks will be used for transporting stone and waste. Drilling & blasting will be carried out as & when required. In a month, around 57- 63 no. of drill holes will be made. On monthly basis around 24kg of non-explosive blasting material will be consumed. Blasting will be carried out by an employed blaster. Short hole blasting will be practiced. Bench height will be 5.0 m and Width 5.0m. Ultimate pit slope will be 45°.

(xiii) **Waste generation**: About 10% of mine waste will be generated which is mineral fines along with undersized material & other intermediate weathered products. These wastes will be disposed to the proposed dump yard in NW part of lease area. These wastes will be used for the construction of mine road. 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. Garland drain will be provided in 522m boundary of section 2.0m x 1.5m. The protective bound will also be prepared around the periphery of the ML area in 5m width.

Year	Waste Generation (cu.m.)				
	Kusumi Stone Quarry (2.294 ha.)	Kusumi Stone Quarry (2.472 ha.)	Kusumi Stone Quarry (1.199 ha.)	Mohuda Stone Quarry (0.890 ha.)	Mohuda Stone Quarry (4.284 ha.)
1st	3435	1122	1537	335	2522
2nd	3435	1122	1537	335	2522
3rd	3435	1122	1537	335	2522
4th	3435	1122	1537	335	2522
5th	3435	1122	1537	335	2522

xiv) **Baseline study**: Study at the site was monitored during pre-monsoon season March 2022 to May, 2022. Following observations were made:

a) Ambient Air quality: The minimum and maximum level of $PM_{2.5}$ recorded within the study area was in the range of 25.23µg/m³ to43.51µg/m³ with the 98th percentile ranging between 38.44µg/m³ to 43.35µg/m³ .The 24 hourly average values of $PM_{2.5}$ were compared with the National Ambient Air Quality Standards (NAAQS) and found that all sampling stations recorded in the study area are within the applicable limits i.e., 60 µg/m³ for $PM_{2.5}$ in rural areas. The minimum and maximum level of PM_{10} recorded within the study area was in the range of 51.28m³ to 78.13µg/m³ with the 98th percentile ranging between 72.38µg/m³ to 77.58µg/m³. The minimum and maximum concentration of SO_2 recorded within the study area was 6.23 µg/m³ to 9.78 µg/m³ with the 98th percentile ranging between 7.74µg/m³ to 9.77µg/m³. The minimum and maximum level of NO_2 recorded within the study area was in the range of was 8.03µg/m³ to 15.21µg/m³ with the 98th percentile ranging between 10.49µg/m³ to 15.21µg/m³.

b) Water quality: During the study period, the pH was varying for ground waters from 7.15 to 7.48 & in Surface water from 7.57 to 7.62. The total dissolved solids are varying from 275 mg/l to 303 mg/l. Hardness of ground water varies from 114 mg/l to 135 mg/l. Concentration of Fluorides is less than <0.01mg/l.

c) Noise levels study: The values of noise observed in some of the areas are primarily owing to vehicular traffic. Assessment of hourly night time Leq (Ln) varies from 37.6to 44.3dB (A) and the hourly daytime Leq (Ld) varies from 48.7to 59.2dB (A) within the study area.

d) Soil: In the study area, variations in the pH of the soil were found to be slightly alkaline (7.32 to 8.05).

(xv) **Water requirement**: A total of 17 KLD water will be required for Cluster applied area. The water will be supplied from available sources from nearby village.

Purpose	Water requirement (KLD)					Total
	Kusumi Stone Quarry (2.294 Ha.)	Kusumi Stone Quarry (2.472 Ha.)	Kusumi Stone Quarry (1.199 Ha.)	Mohuda Stone Quarry (0.890 Ha.)	Mohuda Stone Quarry (4.284 Ha.)	
Domestic & drinking	0.85	1.03	0.67	0.67	0.85	4.07
Dust suppression	9.2					9.2
Green belt development	2.75					2.75
Total						16.02 ~

(vi) **Wastewater management**: The wastewater generation from the above consumption is mainly from domestic consumption i.e., the wastewater generated from the domestic front is mainly from toilets. This water will be treated in septic tank followed by soak pit.

(vii) **Power supply**: Electrical power will be required only for site office and will be obtained from Solar energy. Transportation will be done through dumpers or trucks operating on diesel. No storage for diesel is proposed.

(viii) **Greenbelt**: The entire plantation will be done on the periphery of the reclaimed area. Precautionary measures will be taken for care of the forestation made by regular watering in the afforested area, to protect from grazing animals.

Year	Total Plantation	Green belt Nos.				
		Kusumi Stone Quarry (2.294 Ha.)	Kusumi Stone Quarry (2.472 Ha.)	Kusumi Stone Quarry (1.199 Ha.)	Mohuda Stone Quarry (0.890 Ha.)	Mohuda Stone Quarry (4.284 Ha.)
1st year	1377	189	438	250	250	250
2nd year	1377	189	438	250	250	250
3rd year	1377	189	438	250	250	250
4th year	1377	189	438	250	250	250
5th year	1377	189	438	250	250	250
Total	6890	945	2190	1250	1250	1250

(xix) **Employment generation**: The total manpower requirement for the proposed project is 91 persons.

(xx) **Project cost**: The estimated cost of the project is 2.6 Crores (Cluster).

S.No	Name and Address of the Mine	Applicant	Total Cost (Rs)	CER 2% of Total Cost in Rs)
i)	Kusumi Stone Quarry Khata No 325, Plot No 147/P, Mouza-Kusumi	Sri Surya Narayan Swar	60 Lakhs	Rs 1,20,000
ii)	Kusumi Stone Quarry Khata No 325, Plot No 166, Mouza-Kusumi	Smt. Swapna Behera	50 Lakhs	Rs 1,00,000
iii)	Kusumi Stone Quarry Khata No 325, Plot No 147, Mouza-Kusumi	Smt. Swapna Behera	50 Lakhs	Rs 1,00,000
iv)	Mohuda Stone Quarry Khata No 669, Plot No 1978/P,	Smt. B. Sita Reddy	50 Lakhs	Rs 1,00,000

	Mouza-Mohuda			
v)	Mohuda Stone Quarry Khata No 669, Plot No 1978(P), Mouza-Mohuda	Sri V. Budu	50 Lakhs	Rs 1,00,000

The EMP (For Cluster) cost includes capital cost of Rs 20.02 Lakhs and recurring cost of 12.50 Lakhs.

Sl. No.	Measures	Capital Cost (In Rs.)	Recurring Cost (In Rs.)
i)	Water Sprinkling/Air Pollution Control (Dust Suppression along haulage road and mine)	--	5,00,000
ii)	Greenbelt development safety zone 7.5 mtr and along the road (for each plants including hedges and fences)	13,77,000	2,50,000
iii)	Environment Monitoring (Air, Water, Noise & Soil Monitoring)	--	2,50,000
iv)	Construction and Maintenace of Haul Road	6,25,000	2,50,000
Total		20,02,000	12,50,000

xxi) **Environment Consultant**: The Environment consultant **M/s P & M Solution, Noida** along with the proponent made a presentation on the proposal before the Committee on dtd. 10.03.2023.

xxii) 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
a)	There are 7 quarries in cluster, out of which EC has been granted by DEIAA to 2 quarries. Clarification how DEIAA has granted EC to 2 quarries when total cluster area was more than 5 ha. Further, proper justification/Clarification through a write-up from district authority that why it should not be considered as violation.	The Compliance report from the district authority is attached herewith, as Annexure – I. On verification of the records, it is found that 7 (seven) no. of sairat proposals were submitted separately by the Tahasildar, Kukudakhandi for grant of Environmental Clearance in respect of Mohuda and Kusumi Quarries. All the proposals were supported by the documents such as, Mining Plan approval, Check list, form 1m etc. Out of 7 (seven) no. of proposals, 4 (Four) no. of proposals i.e. (1 Kusumi-I) Stone Quarry (2) Mohuda Stone Quarry (3) Kusumi –II Stone quarry (4) Mohuda Stone Quarry – 1 were approved in DEIAA meeting held on 29.06.2016. 1 (one) no. of Proposal i.e. Mohuda Road Metal Quarry was approved in	-

		DEIAA meeting held on Dated 06.12.2016. All the above proposals were applied by different proponents individually (not in cluster) along with a certificate issued by the Tahasildar, Kukudakhandi in the Check List. Remaining, 2(two) no. of Proposals i.e. (1) Kusumi Stone Quarry (2) Kusumi Stone quarry-1 were applied in a Cluster Proposal by Tahasildar, Kukudakhandi with two different plot nos. Such as Plot No. 147/1 and Plot No. 147. The area of Plot No. 147/1 is 2.294 Hectors and Plot No. 147 is 2.472 Hectors with a total area applied is 4.776 Hectors (within 5 Hectors). Basing on this, the Cluster Proposal was approved for granting of EC by DEIAA on 01.05.2017.	
b)	Copies of Environmental Clearance of 2 quarries granted by DEIAA.	DEIAA granted only one Stone quarry vide letter no. 1732 Dated 21.12.2016, the other has been granted by SEIAA Dated 10.08.2021 attached as Annexure – II.	The other quarry which had been granted by SEIAA Dated 10.08.2021 is not attached as Annexure – II of the Compliance report.
c)	Mitigation plan for flying rocks during blasting in cluster.	Attached as Annexure – III.	complied
d)	Layout plan of garland drain and settling pond and silt management.	Attached as Annexure – IV.	complied
e)	Details of nearby structures in tabulated form.	Attached as Annexure – V.	complied
f)	Mohuda Solid Waste Management Plant of Berhampur Municipal Corporation is located around 170 meter away from the quarries. Permission from Berhampur Municipal Corporation for operation of stone quarries near to Mohuda Solid Waste Management	Copy of NOC from Berhampur Municipal Corporation is attached as Annexure – VI.	Copy of NOC from Berhampur Municipal Corporation is attached as Annexure – VI has been submitted with specific conditions.

xiii) The SEAC in its meeting held on dated **12.07.2023**, decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by a site visit by the Sub-Committee of SEAC.

a) As stated by PP, copy of Environment Clearance letter of the other quarry which had been granted by SEIAA, dated 10.08.2021.

xiv) The proposed site was visited by the sub-committee of SEAC on 10.07.2023. Following are the observations of the sub-committee:

a) The lease area is located in the deep remote area with no habitation except some institutions/ infrastructure as listed below which fall within 1 Km radius.
   a) BeMC Solid Waste Management Plant
   b) Bhairabi High School
   c) Gram Bikash, Mohuda
   d) Supriya Memorial SX Public School
b) There are seven mines in this cluster. Out of which two are in operational at present as approved by DEIAA. The rest five are not operated at present as notice during field visit. One of the lessee named Swapna Behera has a crusher unit adjacent to Kusumi Stone quarry bearing Khata No 325, Plot No 147 and Plot No 166.
c) There is no mining activity carried out in the lease areas applied for EC.
d) There is road connectivity separately for each mine which falls within the lease area itself.
e) Common Solid Waste Management Plant of BeMC has been established during the year 2021. Since then, no mining activities have been carried out in the lease area. So, it is pre-mature to say about the impact. However, the Commissioner, BeMC has issued NOC regarding operation of stone quarries near Mohuda Solid Waste Management Plant with certain conditions while operating the mines vide his Letter Dated 12.06.2023.

xxv) The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	As stated by PP, copy of Environment Clearance letter of the other quarry which had been granted by SEIAA, dated 10.08.2021.	Copy of the EC granted by SEIAA vide Letter No. 2164/SEIAA Dated 10.08.2021 in respect of Mahuda Stone Quarry is attached as **Annexure – I**.

xvi) 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:

(i) 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 17.08.2021 and the SEAC recommended cluster EIA & EMP proposal with opinion that the PP ask to submit individual EC application again.

a) The SEIAA, Odisha may consider to grant Environmental Clearance to individual lease for Kusumi & Mohuda stone quarries cluster without referring to SEAC with specific conditions as per **Annexure – A** after receipt of individual applications from the lessee in cluster along with following documents.
b) Filled in form-I of individual lease
c) Prefeasibility report of individual lease
d) EMP of individual lease.
e) Approved Mining Plan of individual lease.
f) Report on vibration study.
g) DLC status of the lease area from concerned DFO as certified by the concerned Tahasildar.
h) 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.
i) 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.
j) 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.
k) Specific condition to be stipulated in EC of individual lease that "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".

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

m) Following specific conditions to be stipulated in EC of individual lease for operation of stone quarries near SWM project at Mohuda as suggested by Commissioner, Berhampur Municipal Corporation in its NoC issued vide letter no. 8247, dated 12.06.2023.

n) Necessary Precautionary measure shall be taken to avoid any dangerous inside the Solid Waste Management Plant, during the blasting time (prevent dangerous situation from flying rocks during blasting time) and liquid blasting shall be done.

o) Steps shall also be taken to avoid/ restrict the flying of crusher dust and deposit of the same within the Solid Waste Management Plant.

p) Green corridor should be ensured between SWM plant and Quarry site.

q) Life and safety of workers deployed in SWM plant and property shall be ensured at all times. If any hazardous situation occurs due to operation of Stone quarries, the lease will bear full responsibility regarding the same and NOC shall be withdrawn.

r) Detail risk and hazard management procedure as per the **Annexure – B** shall be followed by the lessee.

Decision of Authority: ADS

1. The Authority observed that EC has already been granted for two other quarries as individual sairat sources i.e. Mohuda Stone Quarry over an area of 5.350 acres or 2.165 ha bearing Khata no. 669 Plot no. 1406 in village- Mohuda, Tahasil- Kukudakhandi, district Ganjam, State Odisha in favour of Sri Tusar Kant Dash issued by SEIAA, Odisha vide EC identification No. EC22B001OR141098 dt. 30.07.2022 and other sources Mohuda Stone Quarry over an area of 5.350 acres or 2.165 ha bearing Khata no. 669 Plot no. 1978(P) in village -Mohuda, Tahasi-l Kukudakhandi, district Ganjam, State Odisha in favour of Sri B. Balaji Reddy.
2. The EC issued vide letter no. EC22B001OR141098 dt. 30.07.2022 contained specific conditions in point no. 7.7, page no. 05 that EC is liable to be cancelled/revoked if the submission of application in cluster is found to be incorrect/false in future.

In view of the above the Tahasildar, Kukudakhandi to explain why the two EC issued in name of Mohuda Stone quarry vide letter no.EC22B001OR141098 dt. 30.07.2022 & 2164/DEIAA dt. 10.08.2021 shall not be cancel/revoked.

APPROVED BY

Member Secretary, SEIAA | **Member, SEIAA** | **Chairman, SEIAA**

29.09.2023

AGENDA NO.137.05	
Proposal No.	SIA/OR/MIN/414684/2023
Date of application	15.05.2023
File no.	414684/591-MINB1/05-2023
Project Type	Proposal for EC
Category	B2
Project/Activity including Schedule No.	1(a) Mining of Minerals
Name of the Project	Proposal for EC of Sarguna Decorative stone Deposit (3.680 ha) in village Sarguna , Binika Tehshil of Subarnapur District,Odisha
Name of the company/Organization	M/S Penguin Trading and Agencies Ltd
Location of Project	village Sarguna, Binika Tehshil of Subarnapur District,Odisha
ToR Date	N/A
Name of the Consultant	M/s Visiontek Consultancy Services Pvt. 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.

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

Year	Volume of Rock Zone	Volume of Blocks (20%)	Volume of saleable (10%)	Volume of waste (70%)

	(m^3)	(m^3)	(m^3)	(m^3)
1st Year	12500	2500	1250	8750
2nd Year	13000	2600	1300	9100
3rd Year	13500	2700	1350	9450
4th Year	14000	2800	1400	9800
5th Year	15000	3000	1500	10500
Total	68000	13600	6800	47600

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

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

14. **Solid waste management**: 47600 cum of waste will be generated during total plan period. About 40% of the generated waste will be utilized for maintenance and construction of the haul road, approach and existing roads in the surrounding areas periodically. Therefore, a total of 19040 cum of waste will be utilized for construction and maintenance of roads and remaining 28560 cum of waste will be dumped in the proposed temporary waste dump in the earmarked site of the lease. During the plan period, retaining walls and garland drains will be constructed for the proposed dump. In the first-year programme, retaining wall of dimension - 384 m x 0.75 m x 1m and garland drain of dimension - 370m X 0.5m x 0.5m will be constructed. Settling tank will be constructed to arrest the wash off water.
15. **Manpower:** Total number of employees in the proposed mine will be around 20.
16. **Project cost:** Estimated project Cost for this mine is Rs 2 crores. Estimated cost for environmental management is Rs.5.6 Lakhs / annum.

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

17. **Environment Consultant**: The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee on 13.06.2023.
18. The SEAC in its meeting held on dated **13-06-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Copy of approved DSR after inclusion of proposed identified sairat source to be submitted. EC to be considered once DSR is approved.	DSR report is under preparation by State Mining & Revenue Department, which will be approved & submitted shortly. Attached as **Annexure 1**.	Letter fro District Magistra & Collector Sub-Collector, Sonepur f preparation DSR has be submitted.
ii)	Layout of dump, stack, garland drain, settling pond along with their capacity details.	Layout of dump, stack, garland drain & setting pond have been reflected in the surface plan of approved mining plan. Capacity of Dump -17680m^3 wastes over an area of 0.416 Ha. Garland drain -370m x 0.5m x 0.5m Setting Pond – 15m x 14m x3m	-
iii)	Explore the possibility for usage of waste (fine sand) generated, for manufacture of sand.	The waste (fine sand) will be generated during the mining activity. A stone crusher will be installed inside the mine for crushing the waste materials to produce construction grade sand/ material. Total waste generation - 47,600m^3 in 5 years. As per calculation approximately 96T/day waste will be generated. Considering 4 hr. operation in stone crusher, capacity of the crusher is estimated as 50 TPH.	-

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

Considering the information furnished and the presentation made by the consultant, **M/s Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance upto lease period with **stipulated conditions subject to its inclusion in approved DSR** as per **Annexure – A and following additional conditions;**

Any Deficiency- Not included in the DSR

Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on **18.08.2023** and the SEAC The SEAC recommended for grant of Environmental Clearance upto lease period with stipulated conditions.

a) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.
b) The project proponent shall maintain periodic health check-up records of their employees and ensure use of face mask by workers in crushing and handling sections of the decorative stone quarry for ensuring that working personnel are not affected by silicosis.

e) The project proponent shall undertake re-grassing of the area or any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for fodder, flora, fauna etc. after ceasing mining operation that is at the time of mine closure. Accordingly, specific condition to be stipulated in EC of individual lease.
Decision Of Authority: ADS The Authority observed that this application for Sarguna Decorative Stone Mines sairat source is not approved in the DSR of Subarnapur District. The PP is required to submit approved DSR by Competent Authority for the applied lease.

APPROVED BY

Member Secretary, SEIAA **Member, SEIAA** **Chairman, SEIAA**

01.10.2023