PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 27TH DECEMBER 2023

The SEAC met on 27th December 2023 at 10:30 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri Shashi Paul. The following members were present in the meeting.

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

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

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF PROPOSED RESIDENTIAL BUILDING PROJECT OF 'B+S+12' STORIED OVER A BUILT-UP AREA 33296.99 SQM AT MOUZA - GHATIKIA, TAHASIL - BHUBANESWAR, DIST- KHORDHA, ODISHA OF SRI. SUVRANSU SEKHAR MOHANTY & OTHERS - EC

1. This proposal is for Environmental Clearance of Proposed Residential Apartments Building Project, "Anandam" of 'B+S+12' storied over a built-up area 33296.99 sqm at Mouza- Ghatikia, Tahasil- Bhubaneswar, Dist- Khordha, Odisha of Sri. Suvransu Sekhar Mohanty & Others.
2. **Category**: The project falls under category "B" or activity 8 (a) - Building and construction projects, as per the EIA Notification 2006 and amendments thereafter.
3. **Location and Connectivity**: The proposed project is located on Plot Area – 6294.475 Sq.mt or 1.555 Acres over Plot no - 4223, 4224, 4225, 4233, 4234/10293, 4234/10245, Khata No-1988/651, 1988/709 at Mouza - Ghatikia, Tahasil - Bhubaneswar, District - Khordha. The Project Site is a part of the Survey of India Toposheet No. F45T12 and geo-coordinates are - Latitude: 20° 16' 16.40"N to 20° 21' 20.17" N and Longitude: 85° 46' 37.88" E to 85° 46' 41.31" E. The kissam of land is Patita. Nearest Highway is NH-16 -1.8 km, E, Ghatikia Main Road is at a distance of 0.10 km, N. Nearest Railway Station is Bhubaneswar junction railway station at 7.0 km, E. Nearest Airport is Biju Patnaik International Airport at 4.7 km SE. Nearest Habitation

is Ghatikia adjacent. Water Bodies within 10 KM radius are Jhumuka Nala – 7.83 km NNW and Daya Canal -5.16 km SSE.

4. The project site does not fall within Eco Sensitive Zone of Chandaka Dampara Wildlife Sanctuary. Chandaka Dampara Wildlife Sanctuary is at a distance of 8.0 Km. NOC obtained from concerned DFO with letter No.4970/4F(F.C. Act &Lease) -19/2023, Dt. 10.08.2023. The project site does not fall in CRZ area.
5. The site is coming under Bhubaneswar Development Authority, Bhubaneswar. The approval file No. BP-BMC-2023-04-29-016265.
6. Total plot area is 6294.475 Sq.mt or 1.555 Acre/0.629 Ha and net site area is 5468.475Sq.mt with built-up area 33296.99Sq.mt.
7. The proposed project "Anandam" is a Residential Apartment Building of configuration 'B+S+12' Storied.

S.No	Particulars	Area in Sq.mts
1	Total Plot Area	6294.475
2	Road affected Area	826.0
3	Net Plot Area	5468.475
4	Total Proposed FAR Area	26531.07
5	Total Proposed Non-FAR Area	6765.92
6	Total Built-up Area	33296.99
7	Total Green Area Provided (24.41%)	1335.26
8	Parking Area Provided	8000.58
9	Height of the Building	39.70
10	No. of Blocks/ Floors	1/ B+S+12
11	No. of Dwelling Unites	165
12.	Floor built-up Area: 1-11 th floors	2173.56
13	12th Floor built-up Area	2261.32

8. **Statutory Clearances obtained are**:

   AIRPORT NOC - BHUB/EAST/B/081623/776827,Dt. 10.10.2023.
   FIRE NOC – APPLICATION NO. - RECOMM120413001202300147 3 Dt. 11.09.2023
   CGWA NOC - NOC No. CGWA/NOC/ INF/ ORIG/2023/19021 Dt.16.08.2023.
   PROVISIONAL BDA APPROVAL - BDA Letter No- BP-BMC-2023-04-29-016265.

9. **Water Requirement**: Water during operation phase will be sourced from ground water. The fresh water requirement is 91.0 KLD. NOC from Central Ground Water Authority (CGWA) obtained vide NOC No. CGWA/NOC/ INF/ ORIG/2023/19021 for 92.0 KLD. Total Domestic water requirement will be 155 KLD for the project. In this, fresh water requirement and flushing water is 91 KLD and 64 KLD respectively. Wastewater generation will be 120 KLD. STP(MBBR) capacity provided is 150 KLD. 47.5 KLD excess treated water will be discharge to nearest drain in Non Monsoon period and 51.5KLD in Monsoon Period.

S.NO	Water Requirement	QUANTITY (KLD)
1	Domestic Water	91
2	Flushing Water	47
3	Gardening	5.0
4	Fire,S.Pool & Others	11.5
	Total	155

10. **Power requirement**: - Maximum power demand for the project during operation phase is estimated to be 2700 kW. Specification of Transformer provided is 2 Nos. 1500 KVA, 33KV/ 0.415 KV and 1 Nos. 750 KVA, 33KV/ 0.415 KV. Source of power will be Orissa State Electricity board. DG set of capacitiy 750 KVA, with stack height of 45 mts. will be provided as power back-up during power failure. Solar power generation is 135 kw. Consumption and its contribution are 5 % towards total power requirement in the project.

11. **Rainwater Harvesting** : - Total runoff calculated is 131.78 m^3 and 2 no. of pits is proposed for the project.

12. **Parking requirement**: - Total parking area required 7959.32 Sq.mt (30% of Proposed F.A.R i.e. 26531.07 sq.mt). Total parking area provided is 8000.58 Sq.mt (30.15%)/269ECS and located in Basement Area- 4089.01 Sq.mt/ECS-127 @ 32m^2, Stilt Area- 2676.91 Sq.mt/ECS- 89 @30 m^2 , Open Area -1234.66 Sq.mt/ECS-53 @ 23 m^2. Visitors Parking = 800.06 Sqm (10.0%) has also been provided along with EV parking facility.

13. **Fire fighting installation**: - Fire NOC recommendations have been obtained vide Application NO. RECOMM 120413 0012023001473 on Dt. 11.09.2023. The fire protection system for the building will be designed as per the provisions of National Building Code - 2016 and the directions of local fire service authority.

14. **Green Belt Development**: - Green area will be provided in 1335.26 sq.mt. (24.41 % of net plot area) The no. of trees proposed in the project is 85 trees.

15. **Solid Waste Management**: - Total solid waste generation will be 548 Kg/Day. Garbage will be 531.2 Kg/Day in which Biodegradable Waste 318.72 Kg/Day @ 60% will be treated in in-house Organic Waste Convertor and Non-Biodegradable waste 212.48 Kg/Day @ 40% will be Sent to Authorized Vendors as per SWM Rules 2016. Landscape waste will be 0.07 Kg/Day. STP Sludge generation will be 16.80 Kg/day.

WASTE SOURCE	DISPOSAL
Garbage – 418 Kg/day	▪ Segregation at Source & Disposed properly as per SWM Rules 2016 ▪ Bio-Degradable – 250.8 Kgs/day – Organic Waste Convertor ▪ Non-Bio-Degradable – 167.2 Kgs/day – (Authorized Re-cyclers/vendors)
STP Sludge – 14.14Kg/day	▪ Which is used as manure
Landscape waste - 0.043	▪ Which is used as manure

16. **Traffic Study**: Traffic study report was prepared by School of Civil Engineering, KIIT Deemed to be University, Bhubaneswar. LOS for the project is "A" with or without project.

17. **Project cost** : The estimated project cost is INR 97.82 Crores. Cost for Environmental protection measures during construction phase - Rs.12 Lakhs as capital cost and Rs.5.5 Lakhs as recurring and during operation phase - Rs.57 Lakhs as capital cost and Rs.8.0 Lakhs as recurring cost.

S.No	Activity	Capacity /Area/Nos.	Capital Cost (Lakhs)	Recurring Cost (Lakhs)
1	STP	150 KLD	40.0	4.0
2	Landscaping & Planting trees	85.0	4.0	0.5
3	Solid waste Management	548 Kg/Day	6.0	1.0
4	RWH Pit Installation	2.0	2.0	0.5
5	Environmental Monitoring	Air, Water, Soil & Noise	5.0	2.0
Total			57.0	8.0

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

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

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

i) The PP shall preserve the trees present in the proposed site. If the PP is planning to cut it, necessary permission shall be taken from the concerned authority.

ii) Permission copy from Chief Engineer, Drainage Department for discharge of treated water and storm water to the nearest municipal drain.

iii) Layout of proposed internal drainage connecting to main municipal drain to be submitted along with necessary approval of the competent authority.

iv) Kisam of the land is "Patita" which needs to be converted into kisam "Gharabari" and submit the document.

v) Revisit the calculation of Rainwater harvesting pits by considering the highest rainfall of that area.

vi) Detailed calculation of Solar generation through PV Cell to be submitted.

vii) Structural Stability Certificate certified by authorized structural Engineer.

viii) Revisit the water balance as the treated water discharge is very high. Justify why the discharge is high although the greenbelt percentage is 24%.

ix) The PP shall provide filter press for STP sludge drying.

x) In water Balance, fresh water requirement mentioned is 94KLD (91Domestic+3KLD (Swimming Pool) while it is mentioned 91 KLD as per PPT is the fresh water requirement. CGWA NOC obtained for 92KLD. Which one is correct? This shall be clarified.

xi) Total solid waste generation will be 548 Kg/Day as per online document and 432.18kg/Day as per PPT. Submit the correct one. This shall be clarified.

xii) Source of water and its quantity during construction / project execution phase to be provided.

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

i) Environmental settings of the project site.

ii) Verify if the site is a flood prone area.

iii) Construction activity if any started at the site and extent of construction activity.

iv) Road connectivity to the project site.

v) Drainage network at the site.

vi) Discharge point for discharge of treated water and distance of the discharge point from the project site.

vii) Any other issues including local issues.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S RNG INFRASTRUCTURE PVT. LTD FOR PROPOSED RESIDENTIAL BUILDING PROJECT OF 'B+S1+S2+18' STORIED OVER AN AREA 23472.00 SQMT AT MOUZA - SUNDARPUR, TAHASIL - BHUBANESWAR, DIST-KHORDHA OF SRI MANORANJAN BISWAL - EC

1. This proposal is for Environmental Clearance of M/s RNG Infrastructure Pvt. Ltd. for Proposed Residential Building Project of 'B+S1+S2+18' storied over an area 23472.00 Sqmt at Mouza-Sundarpur, Tahasil- Bhubaneswar, Dist- Khordha of Sri Manoranjan Biswal.
2. **Category**: The project falls under category "B" or activity 8 (a) - Building and construction projects, as per the EIA Notification 2006 and amendments thereafter.
3. **Location and Connectivity**: The proposed project is located at Plot no- 2387(P), 2388(P), 2432(P) (sub plot No-38), Khata No- 153,553 at Mouza- Sundarpur, Tahasil- Bhubaneswar , District Khordha. The Project Site is a part of the Survey of India Toposheet No. F45T15. The geo-coordinates of the project site is - Latitude: 20° 21' 06.99"N to 20° 21' 09.42" N, Longitude: 85° 46' 48.05" E to 85° 46' 51.10" E. The kissam of land is Gharabari. Nearest Habitation is Sundarpur at 1.5 km,N. Nearest Highway is NH-16 -.8.0 km, , Khandagiri Chandaka Road is at a distance of 1.5 km. Nearest Railway Station is Bhubaneswar junction railway station at 11.5 km.

Nearest Airport is Biju Patnaik International Airport at 11.7 km. Nearest water body is Jhumuka Nala is at 0.8 km,N.

4. The site is coming under Bhubaneswar Development Authority. The approval has been taken vide Letter No.- 13072/BDA, Bhubaneswar dated 25-04-2023.

5. Total plot area is 3836.20 sqm/ 0.948 Acres/0.383 Ha. with built-up area 23472.0 Sq.mt.

6. The building area details of the project is:

S.No	Particulars	Area in Sq.mts
1	Total Plot Area	3836.20 sqm
2	Total Proposed FAR Area	16057.0 sqm
3	Total Proposed Non-FAR Area	7415
4	Total Built-up Area	23472.0 sqm
5	Total Green Area Provided (24.41%)	1335.26
8	Parking Area Provided	5282.00
9	Height of the Building	60.98
10	No. of Blocks/ Floors	1/ B+S1+S2+18
11	No. of Dwelling Units	102
12.	Each Floor built-up Area: 1-17th floors	1003.80
13	18th Floor built-up Area	573.40

7. **Water Requirement:** Water during operation phase will be sourced from ground water. The fresh water requirement is 63.0 KLD. NOC from Central Ground Water Authority (CGWA) obtained vide NOC No. CGWA/NOC/INF/ORIG/2023/19438 Dt.17.10.2023. Domestic water requirement will be 105 KLD. In this, freshwater requirement and flushing water is 60 KLD and 31 KLD respectively. Wastewater generation will be 79 KLD. The STP, MBBR, capacity provided is 100 KLD. Discharge of treated wastewater quantity to nearest drain will be 29.0 KLD in Non Rainy season and 31 KLD in Rainy Season.

S.NO	REQUIREMENT	QUANTITY (KLD)
1	Domestic Water	63
2	Flushing Water	31
3	Gardening	3.0
4	Fire, Swimming Pool & Others	8.0
	Total	105

8. **Power requirement:** The total power requirement for the proposed residential building is 689.0 KW. The power will be sourced from State Electricity Board, Odisha. The premise is connected by 800 KVA 11/0.433 KV, Copper Wound, DY-11 ONAN Outdoor with Off load Tap Changer 1 no. of Transformer. In case of power cut, 100% power backup generators will be provided for common uses only. 180 KVA 2 DG Sets has been proposed for the residential project with stack height of 64 mts. to provide backup supply. Solar power generation is 34.5 kw with 23 PV cells. Consumption and its contribution are 5 % towards total power requirement in the project.

9. **Rainwater Harvesting:** - Total Runoff is 93.89 m^3 and 13 no. of pits is proposed for the project.

10. **Parking requirement:** - Total parking area required is 4817.10 Sq.mt (30% of 16057 sq.mt). The provided parking area is 5282 Sq.mt (32.90%) i.e. covered area - 4970.4 Sq.mt, ECS-155 @

- $32m^2$, Open Area -311.6 Sq.mt, ECS-13 @ 23 m^2. Total parking proposed in terms of ECS is 168. EV parking provided is 73 ECS.

11. **Fire fighting installation**: - Fire NOC recommendations obtained vide No. RECOMM120413005202300159 3 Dt. 04.11.2023. The fire protection system for the building will be designed as per the provisions of National Building Code - 2016 and the directions of local fire service authority.
12. **Green Belt Development**: - Green area will be provided in 767.24 sq.mt. (20 % of net plot area). The no. of trees proposed in the project is 55 trees.
13. **Solid Waste Management**: - Total solid waste generation will be 356 Kg/Day. Garbage will be 356Kg/Day in which Biodegradable Waste 213.6Kg/Day @ 60% will be treated in In-house Organic Waste Convertor and Non-Biodegradable waste 142.4 Kg/Day @ 40% will be sent to Authorized Vendors as per SWM Rules 2016. Landscape waste will be 0.038 Kg/Day. STP Sludge generation will be 11.06 Kg/day.
14. **Traffic Study**: Traffic Composition after development of the project will be very good. Traffic study report was prepared by School of Civil Engineering, KIIT Deemed to be University, Bhubaneswar. LOS for the project is "A" with or without project.
15. **Project cost:** The estimated project cost is INR 47.42 Crores. Budget allocated for Environmental protection measures during construction phase - Rs.13 Lakhs as capital cost and Rs.7.5 Lakhs as recurring and during occupation phase - Rs.47 Lakhs as capital cost and Rs. 12 Lakhs as recurring cost.

S.No	Activity	Capacity /Area/Nos.	Capital Cost (Lakhs)	Recurring Cost (Lakhs)
1	STP	100 KLD	30.0	6.0
2	Landscaping & Planting trees	55 nos	3.0	1.0
3	Solid waste Management	356 Kg/Day	4.0	2.0
4	RWH Pit Installation	13 nos	5.0	1.0
5	Environmental Monitoring*	Air, Water, Soil & Noise	5.0	2.0
Total			47.0	12.0

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

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

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

i. Supporting documents i.e. Land documents or agreement papers with private owners with PP indicating the ownership of the Project Proponent for the land use for connecting drain from project site to nearest municipal drain.

ii. Revisit the Rainwater harvesting pits by considering the highest rainfall of that region.

iii. Detailed calculation of Solar generation through PV Cell.

iv. Structural Stability Certificate certified by authorized structural Engineer.

v. Permission copy from Chief Engineer, Drainage Department for discharge of treated water and storm water to the nearest municipal drain.

vi. Layout of proposed internal drainage connecting to main municipal drain to be submitted.

vii. Analysis report of wastewater including total coliform.

viii. The PP shall build the structural protection for the drain and submit the layout of the same.

ix. Layout of proposed internal drainage connecting to main municipal drain to be submitted along with necessary approval of the competent authority.

x. Source of water and its quantity during construction / project execution phase to be provided.

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

i. Environmental settings of the project site.

ii. Verify if the site is a flood prone area.

iii. Construction activity if any started at the site and extent of construction activity.

iv. Road connectivity to the project site.

v. Drainage network at the site.

vi. Discharge point for discharge of treated water and distance of the discharge point from the project site.

vii. Any other issues including local issues.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S GD CONSTRUCTIONS FOR RESIDENTIAL APARTMENT BUILDING 'ARKA HEIGHTS' WITH TOTAL BUILT- UP AREA 35,393.31M^2 AT MOUZA - HALADIAPADAR, TAHASIL - KANISI, DISTRICT - GANJAM OF SRI BIKRAM KUMAR PANIGRAHI – EC

1. This proposal is for Environmental Clearance of M/s GD Constructions for Residential Apartment Building 'Arka Heights' with total built-up area 35,393.31m^2 at Mouza - Haladiapadar, Tahasil - Kanisi, District - Ganjam of Sri Bikram Kumar Panigrahi.

2. **Category**: As per the EIA Notification, 2006 and its subsequent amendments, the proposed project falls under 8 (a): Building & Construction projects.

3. **Location and Connectivity:** The project site is located at Plot No.- 2209, Khata No. 227, Mouza- Haladiapadar, Tehsil - Kanisi, District - Ganjam, Odisha. The geographical co-ordinates of project site are 19°17'05.97"N and 84°46'52.37"E and the project is a part of the Survey of India Toposheet no. E45A15. The Gosaninuagan Road is at 0.25 km towards NE direction. The nearest Highway is NH-16 which is 0.7 km towards SSE direction, NH-59 is 3.6 km towards NE direction, NH-516 is 7.2 km towards ENE direction, NH-516A is 12.1 km towards East direction, SH-22 is 3 km towards NW direction, SH-17 is 4.5 km towards N direction, SH-32 is 9.8 km towards ENE direction and SH-36 is 14.2 km towards NE direction. The nearest Railway Station is Berhampur Railway Station is about 2 km (NE) away from the project site. Nearest airport is Biju Patnaik International Airport is at 151.5 km (NE) from project site.

4. The site is coming under Brahmapur Development Authority.

5. The plot area is 7,768.56 m^2 (1.92 acres) with total built-up area 35,393.31 m^2.

6. **The Building Area Details of the Project is:**

S. No.	Particulars	Area (m^2)
i)	Total Plot Area	7,768.56
	Road Widening	275.92
	Net plot area	7,492.64
ii)	Permissible Ground Coverage (@ 40 % of the net plot area)	2,997.056
iii)	Proposed Ground Coverage (@30.63 % of the net plot area)	2,294.995
iv)	Permissible FAR (@4.00)	29,970.56
v)	Proposed FAR (@3.49)	26,149.313
vi)	Non FAR Area	9,243.997
vii)	Built-up Area (5+6)	35,393.31
viii)	Proposed Parking	8,367.38
ix)	Landscape Area (@ 20% of net plot area)	1,486.528
x)	Maximum Height of the Building (m)	41.6 m

7. **Water Requirement:** During operation phase, the source of water supply will be Ground water. The total water requirement for the project will be approx. 166 KLD out of which domestic water demand is 158 KLD. The freshwater requirement will be 104KLD. NOC from CGWA has been obtained vide no. CGWA/NOC/INF/ORIG/2022/17059 valid from 17th Nov. 2022 to 16th Nov. 2027.

S. No	Description	Occupancy	Rate of water demand (LPCD)		Total Water Requirement (KLD)		
A	Domestic Water		Fresh	Flushing	Fresh	Flushing	Total
	Residents	1116	90	45	100.44	50.22	150.66
	Staff (Maintenance, Commercial, Community)	80	25	20	2	1.6	3.6
	Visitors(Maintenance, Commercial, Community)	251	5	10	1.25	2.51	3.76

S. No	Description	Occupancy	Rate of water demand (LPCD)		Total Water Requirement (KLD)		
					104 KLD	54 KLD	158 KLD
Total Domestic Water =158KLD							
B	Horticulture	1,486.528m^2	4 l/sqm		6 KLD		
C	Make Up water for Swimming Pool (43.3 sqm)	43.3 sqm x 0.9 @5% of water			2 KLD		
Grand Total (A+B+ C) = 166 KLD							

8. **Wastewater generation:** It is expected that, the project will generate approx. 137 KLD of wastewater. The wastewater will be treated in onsite STP of 165 KLD capacity. The treated effluent will be reused for flushing & horticulture. 68 KLD Surplus treated effluent will be discharged to external sewer in monsoon and 63 KLD in summer season.

Domestic Water Requirement	**158 KLD**
• Fresh	104 KLD
• Flushing	54 KLD
Wastewater [@80% fresh + 100% flushing]	83.2 + 54 = **137 KLD**
STP Capacity (~20 % higher than waste water)	**165 KLD**

9. **Power Requirement:** The power supply will be through State Electricity Board. The total maximum demand is estimated as 988 KW. 10% i.e., 98.8 KW energy will be saving from total energy load (5% i.e., 49.4 KW through solar and 5% i.e., 49.4 KW through LED). Solar energy will be utilized for street lighting, solar blinkers and signage to reduce electricity consumption. There is provision of 2 nos. of DG sets of total 1,500 kVA (1 x 750 kVA + 1 x 750 kVA) capacity for power back up. The DG set will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion as per CPCB norms.

10. **Rainwater Harvesting:** 3 RWH tanks of 162.5 m^3 capacity each are proposed to collect rainwater for 578.338 m^3 runoff load.

11. **Parking Requirement:** Proposed Parking Area = = 8,367.38 m^2 [i.e., 7,128.23 m^2 (Covered parking) + 1,239.15 m^2 (Open parking)]. Total 277 ECS is proposed.

12. **Fire Fighting Installation:** Fire fighting measures will be adopted as per the guidelines of NBC. External yard hydrants shall be installed around all buildings in the complex in galvanized steel fire house cabinet (weatherproof). All external yard hydrants shall be at one meter height from finished ground level as per NBC at a distance of 60 m along the road. External fire hydrants shall be located such that no portion of any building is more than 45 m from a hydrant and the external hydrants are not vulnerable to mechanical or vehicular damage.

13. **Green Belt Development:** Green Belt will be developed over an area of 7,492.64 m^2 which is 20% of total plot area. Total 100 Nos. of plants to be planted and 3m spacing between plants and it will be 2 tier plantations.

14. **Solid Waste Management:** During the operation phase, waste will comprise domestic as well as horticultural waste. The solid waste generated from the project shall be approx. 634 kg per day (@ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for the visitor, 0.25 kg per capita per day for the staff members and landscape waste @ 0.2 kg/acre/day.

S. No.	Description	Occupancy	Waste Generated (kg/capita/day)
1.	Domestic Solid Waste		
	Residents	1116	0.5
	Staff	80	0.25
	Visitors	251	0.15
2.	Horticultural Waste (0.148 acre)	@ 0.2 kg/acre/day	
3.	STP Sludge	Waste water x 0 .35 x B.O.D difference/1000	
	Total	634 kg/d	

15. **Project cost:** The estimated Project cost is 90.12 Crores (Land and Development Cost) and cost form EMP is 31.659 lakhs (capital cost) and 16.914 lakhs(recurring cost).

COMPONENT	CAPITAL COST (INR LAKH)	RECURRING COST (INR LAKH/YR)
Sewage Treatment Plant	16.5	4.125
Rain Water Harvesting System	3	0.75
Solid Waste Management	1.268	0.317
Environmental Monitoring	0	9
Green Area/ Landscape Area	0.891	0.222
Others (Energy saving devices, miscellaneous)	10	2.5
Total	31.659	16.914

16. **Environment Consultant**: The Environment consultant **M/s Grass Roots Research & Creation India (P) Ltd. Noida** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **M/s Grass Roots Research & Creation India (P) Ltd. Noida,** alongwith the project proponent, the SEAC recommended the following:

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

i. The project proponent shall increase the greenbelt area up to 20% excluding Landscape.

ii. The proposed water discharge is high. The PP shall revisit the water balance and reduce the water discharge by keeping a provision to increase the greenbelt.

iii. There is a school nearby to the project site. Thus, the PP shall take additional safety measures for protecting school children from pollution particularly during construction phase.

iv. Permission copy from Chief Engineer, Drainage Department for discharge of treated water and storm water to the nearest municipal drain.

v. Layout of proposed internal drainage connecting to main municipal drain to be submitted along with necessary approval of the competent authority.

vi. Copy of Structural Stability Certificate.

vii. The PP shall ensure that the project site shouldn't be an obstacle in the operations of airport. Permission for the same shall be obtained from Airport Authority of India.

viii. Source of water and its quantity during construction / project execution phase to be provided.

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

i. Environmental settings of the project site.

ii. Verify if the site is a flood prone area.

iii. Construction activity if any started at the site and extent of construction activity.

iv. Road connectivity to the project site.

v. Drainage network at the site.

vi. Discharge point for discharge of treated water and distance of the discharge point from the project site.

vii. Any other issues including local issues.

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S RENEWABLE ENVIROGIC PRIVATE LIMITED OF COMMON BIOMEDICAL WASTE TREATMENT FACILITY (CBWTF) AT: KHATA NO.18, PLOT NO. 134, MOUZA- PADMAPUR, TAHASIL- KORAPUT, DISTRICT – KORAPUT OF SRI DEBASIS TRIPATHY – TOR

1. 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 EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference for environmental clearance for M/s Renewable Envirogic Private Limited of Common Biomedical Waste Treatment Facility (CBWTF) At: Khata No.18, Plot No. 134, Mouza- Padmapur, Tahasil - Koraput, District – Koraput of Sri Debasis Tripathy.
3. **Category**: The proposed project of setting up of Common Biomedical Waste Treatment Facility (CBWTF) falls under Category B, schedule 7(da) as per the EIA notification, 2006 and after the subsequent amendments made in 2009 and 2015.
4. **Location and connectivity**: The proposed site is located in plot area of 1.44Acres, KhataNo.18, Plot No. 134, Mouza- Padmapur, Tahasil - Koraput, District – Koraput , State Odisha. The project is a part of the Survey of India Toposheet No. F44T14 & F44T15. The geo-coordinates of the project is - Latitude 18° 47' 29.2164" N and Longitude 82° 47' 59.658" E. Nearest railway station is Koraput Junction- 8.3 km (sw); Nearest National highway is NH- 43 is about 1.4 km in S

direction; Nearest airport is Jeypore airstrip - 28 km. Nearest habitation are Village-Padampur-0.63 KM-S and Koraput Town-9.4 km (NW). Nearest Rivers / streams/ Water Bodies are Kolab Reserver-4.25 km(S) and Mukhnajorhi Nalla-4.7 km(NE). Nearest forests are Anigurha Reserve forest-2.3 km(NNW) and Naranga RF-4.7(NNE)

5. **Baseline study period**: Baseline monitoring period is from Oct-2023 to Dec 2023.

6. **Proposed Plant Capacity** –

Incinerator: 250 Kg/ hr - 1 number+ 1 (For Future)
Autoclave: 300 kg/batch
Shredder: 300 kg/hr
Effluent Treatment Plant (ETP): 10 KLD
Total estimated waste 5 TPD generated from about 10,000 beds @ 300~500 gm/bed.
Proposed CBMW TFCapacity-5 TPD
Incinerable waste = 40~50% of total waste = 2.0~2.5 TPD
Operating hours =8 to 10 hrs/day

7. **Treatment Technology**:

EQUIPMENT	PURPOSE	Capacity	Number(s)
Incinerator With APCD & continuous Emission Monitoring instrument	The primary purpose of incineration is to burn the waste to ashes through a combustion process. The purpose of primary chamber of the incinerator would be combustion of the waste materials into safe end products (ash). The purpose of the secondary chamber would be to burn off gases and ensure safe end products (gaseous).	250 kg/hr	2
Autoclave	The proposed autoclave is a high pressure high vacuum steam sterilizer. This technique uses mechanical air removal with the help of vacuum pump and offers several advantages over standard sterilization cycle such as: Nearly 100% air removal from sterilization chamber. Vacuum drying at the end of sterilization hold period ensures drying of the material which has been sterilized.	300 kg/hr	1
Shredder	Shredder will be installed by the side of Autoclave for immediate shredding of sterilized materials to complete the cycle of operation of disinfection and segregation for reuse/recycle.	300 kg/hr	1

EQUIPMENT	PURPOSE	Capacity	Number(s)
Effluent Treatment Plant	The Effluent Treatment Plant will be an integral part of the plant as it will treat the waste water generated from the treatment of biomedical waste during incineration, autoclaving, washing of floors, vehicle wash platform, etc.	10 KLD	1
Transportation Vehicle	GPS enabled closed container Vehicles will be employed for transporting waste from common collection point to the facility.	Model : TATA Ace Gold	3

8. **Water requirement**: Total water requirement for the CBWTF project is 18.5 KLD which will be sourced from bore wells & water tankers. The daily fresh water requirement would be12.5 KLD and recycled water would be 6 KLD. A rainwater harvesting system will be also be set up at the plant to ensure better water management.

Sr. No.	Details	Consumption (KLD)
1	Process requirement (Incineration, Cleaning of storage area, Autoclave, Shredder)	7.5
2	Domestic Requirement	1.5
3	Reuse(in Venturi Scrubber, Incineration process)	6.0
4	Greenbelt	1.5
5	Vehicle Wash	2
	Total	18.5

9. **Wastewater management**: Wastewater generated from the treatment of biomedical waste during incineration, autoclaving, washing of floors, vehicle wash platform, etc. will be treated in the Effluent Treatment Plant (capacity 10 KLD). The treated water would be recycled in the plant to reduce the amount of water used.

10. **Solid Waste generation:** Ash - 100 - 150 kg/day and Other Residues - 10 - 20 kg/day

11. **Power requirement**: DG set of 125.0 KVA is proposed for the project and 100 KW at 11 KV lines will be taken from State Electricity Board.

12. **Manpower**: Total about 30 persons are proposed to be hired for plant operations including officers, skilled and unskilled workers.

SL. NO.	JOB PROFILE	NO. OF PERSONS
1.	Project/ Plant Manager	1
2.	Chief Operator of Equipment	2
3.	Assistant Operators	5
4.	Office Staff including marketing people	6
5.	Drivers	3
6.	Helpers with the Vehicles	3

SL. NO.	JOB PROFILE	NO. OF PERSONS
7.	Workers on the Floor at the Facility	6
8.	Security Personnel	4
	Total	30

13. **Project cost:** The Estimated cost of the project is approx. 178.2 Lakhs.

14. **Environment Consultant**: The Environment consultant **M/S Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant consultant, **M/S Visiontek Consultancy Services Pvt. Ltd, Bhubaneswar** along with the project proponent, the SEAC recommended the following.

A. The proponent may be asked to submit the following before consideration of ToRs:

i) The proposed site is located within 75 K.M. from another proposed CBWTF. As per CPCB guidelines, this proposed CBWTF does not meet the siting criteria. The PP has to clarify as to why this proposal shall not be rejected due to non-confirming to the siting criteria. A detailed write up in this regard shall be submitted.

ii) Land documents and kisam of land.

B. Following specific ToRs to be issued if decided to issue ToRs:

i) Permission from the panchayat and ROW documents for connecting 240meters of land from project site to nearest approach road through the nearby village area.

ii) Submit details of amount of waste to be generated from the hospitals on the per day basis rather than calculating on number of beds.

iii) Submit aerial distance certificate from the nearby biomedical waste treatment facilities.

iv) Precautionary measures to be undertaken to avoid contamination of wastes or due to surface runoff from project site to the nearby water reservoir.

v) Submit a Standard Operating Protocol starting from collection point of waste generation/raw material, segregation, transportation, treatment and disposal of waste generated from plant.

vi) The baseline monitoring should also include biological parameters and baseline study should also cover the monsoon period.

vii) The storage sheds provided for the biomedical waste should be covered.

viii) Provide a buffer zone of 5km around the proposed site.

ix) Submit a write up on the amount of segregated waste to be handled at the project site monthly and annually.

x) Avoid using transport route passing through the village.

xi) SOP/measures to be followed for safety and health issues (due to handling of hazardous waste materials) of employees and local people of nearby villages.

xii) Area details to be cover for collection of waste materials/raw materials.

xiii) Agreement papers or MoU with dealers for disposal of waste generated and its management.

xiv) Category wise list of wastes to be handled.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SHIVA CEMENT LIMITED FOR EXPANSION OF KHATKURBAHAL (NORTH) BLOCK, ML AREA: 156.43 HA) WITH PRODUCTION CAPACITY OF LIMESTONE 1.6 MILLION TPA, DOLOMITE 2.42 MILLION TPA, MINERAL REJECT 0.035 MILLION TPA, TOP SOIL 0.033 MILLION TPA & OVER BURDEN: 1.455 MILLION TPA (TOTAL EXCAVATION: 5.543 MILLION TPA) WITH PROPOSED CRUSHER & SCREEN WITH CAPACITY OF 800 TPH FOR INCLUSION OF DOLOMITE AS MINERAL AT VILLAGES: KHATKURBAHAL & PHALSAKANI, TEHSIL: KUTRA, DISTRICT: SUNDAR ARH OF SRI MANOJ KUMAR RUSTAGI– TOR

1. This proposal is for Environmental Clearance of M/s. Shiva Cement Limited for Expansion of Khatkurbahal (North) Block, ML Area: 156.43 ha) with production capacity of Limestone 1.6 million TPA, Dolomite 2.42 million TPA, Mineral Reject 0.035 million TPA, Top Soil 0.033 million TPA & Over Burden: 1.455 million TPA (Total excavation: 5.543 million TPA) with Proposed crusher & screen with capacity of 800 TPH for inclusion of Dolomite as mineral at Villages: Khatkurbahal & Phalsakani, Tehsil: Kutra, District: Sundargarh of Sri Manoj Kumar Rustagi.
2. **Category**: This project falls under Category "B", Project or 1(a) for "Mining of Minerals" projects as per EIA Notification dated 14th Sept, 2006 and its amendments as the Mining Lease Area is less than 250 ha.
3. **Location and connectivity**: The proposed project is situated near Villages - Khatkurbahal & Phalsakhani, Tahasil - Kutra, District - Sundergarh, Odisha. The geo coordinates of the project are - latitude - 22^0 16'45.31025" N to 22^0 17'10.12835" N and 84^0 27'36.13496" E to 84^0 29'18.22107" E. The project is a part of the Survey of India Toposheet No. is 73 B/7, 73 B/8, 73 B/11, 73 B/12 of the core and buffer zone of project. The mine is well connected with SH-10 (~5.5 Km in SSW Direction). The nearest railway is available at Sonakhan (~12.9 km in SE direction), the nearest airport is Ranchi (Birsa Munda) Airport (~ 143 km in NE direction) & the nearest city is Rajgangpur (~12.5 km in SE direction). Mine site comes under seismic zone II as per IS: 1893 (Part-I): 2002.
4. **Statutory Clearances obtained:**
   - M/s. Shiva Cement Limited has an existing Cement Plant with clinker production capacity 3.0 million TPA & Cement 2.0 million TPA at Village - Telighana. Tahasil - Kutra, District Sundargarh, Odisha for which Environment Clearance has been obtained from MoEF&CC vide File No. J-11011/84/2008-IA.II (I) on dated 23.03.2022.
   - Khatkurbahal Limestone & Dolomite Mine (ML Area- 72.439 ha.) with Production Capacity 1.5MTPA located near villages – Khatkurbahal & Kulenbahal, Tahasil – Kutra, District – Sundergarh for which Environment Clearance has been obtained from SEIAA, Odisha vide letter No 37895/62-MINB1/11-2021 on dated 11.03.2022.

- Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha.) with limestone production capacity of 1.6 million TPA located at Villages - Khatkurbahal & Phalsakhani, Tahasil - Kutra, District - Sundergarh, Odisha for which Environment clearance has been obtained from MoEF&CC vide File No J-11015/47/2020-IA.II (I) on dated 17.03.2022.
- Lease was executed on 15.11.2023 and registered on 16.11.2022 in respect of Limestone Mineral infavor of M/s. Shiva Cement Ltd. for a period of 50 years from the date of registration. Lease was also executed on 15.11.2023 and registered on 16.11.2022 in respect of Dolomite Mineral in avor of M/s. Shiva Cement Ltd for a period of 50 years from the date of registration. Mining lease will be valid up to 15.11.2072.
- CTE has been obtained SPCB, Odisha vide letter no. 546/IND-II-NOC-6603.
- Modification of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been approved vide letter no. MCDR-MiFL0LST/1/2022-BBS-IBM_RO_BBS dated 20.12.2023.
- NOC from CGWA has been obtained vide letter no. CGWA/NOC/MIN/ORIG/2021/14185 on dated 29.12.2021 which will be valid upto 28.12.2023.

5. Dolomite has been added as a mineral in mining lease for which proposal for amendment in EC was appraised in SEAC, Odisha in its meeting held on 03.08.2022 and on 02.11.2022 in which SEAC recommended the proposal for amendment in EC. The proposal was placed in the meeting of SEIAA held on 19.01.2023 for consideration of amendment in EC which was referred back to SEAC for reconsideration of the proposal. SEAC issued a clarification letter on 01.08.2023. In compliance of clarification letter issued by SEAC, they have submitted Fresh proposal for Environment clearance to use dolomite as a mineral.
6. There is no change in total excavation (5.543 million TPA) proposed in the existing Environment Clearance within the Mining lease area, except change in use of dolomite as a mineral for which Mining lease has been granted.
7. Public hearing for the project has already been conducted on 24.08.2021 for total excavation 5.543 million TPA, where it was mentioned that 2.42 MTPA of Dolomite as waste.
8. **Total reserves:** The total geological reserve of Limestone is 53.37 million tons, out of which 21.41 Million tonnes are minable reserve as on 01/08/2023. Total life of mine for limestone will be 15 years. The total geological reserve of Dolomite is 73.04 million tons, out of which 43.40 Million tonnes are minable reserve for Dolomite as on 01/08/2023. Total life of mine for Dolomite will be 21 years.
9. **Land use:** The total ML Area is 156.43ha., out of which 42.461 ha. is Government land and 113.96 ha. is private land. At the conceptual stage, total mined out area will be 98.96 ha., out of which 14.84 ha. area will be converted into water reservoir and 14.84 ha. area will backfill area. As well as 15.03 ha. area covered under dump and 28.45 ha. area will be undisturbed.
10. **Method of Mining:** The method of mining adopted in Khatkurbahal (North) Block is opencast fully mechanized method. 0.3m thick topsoil on an average will be scraped which will be initially stacked in the lease area and subsequently will be used for spreading over the waste dump, back-filled area and plantation pits for rehabilitation of waste dump and reclamation of mined out area. Opencast method of mining will be adopted with the deployment of machines like 115 mm

dia DTH drill, 1.8m3 & 2.5 m3 capacity excavator, 50 t capacity dumper etc. Only one pit/quarry is proposed to be developed in plan period for limestone. Opencast mechanized mining by forming systematic benches of 6.0 m height with proper width of 9. Conventional drilling blasting will to be adopted for excavation of limestone as well as waste as per requirement and site conditions/ constraints due to proximity of habitations. Hard rock mass will be loosened by the primary blasting of DTH drilled holes. Controlled blasting technique will be adopted to minimize the ground vibration and flying fragments using NONEL with delay elements depending upon the location of human settlements. Generally, slurry explosives, ANFO etc. will be used for blasting. Top part of the hole over 2m (approx) will be stemmed by the drill cuttings and remaining 4 m hole length will be charged by the slurry explosives. Oversized boulders will be broken by the deployment of rock breakers instead of secondary blasting. The excavation & loading of blasted rocks will be done by excavators of 1.8 cum & 2.5 cum capacity as well as loader/frontend loaders of 1.5 cum capacity. One crusher will be commissioned in the M.L area. Crusher mainly consists of hopper, feeder, crusher, vibratory screens and a number of belt conveyors. ROM limestone and dolomite will be transported to crusher sites mineral will be crushed & screened into the different sizes such as lumps (+10-30mm, 30- 60mm & 60 - 80mm) and fines (-10mm). The transport of Limestone will be done by 50 Ton capacity dumpers from mine faces to crusher (average distance b/w quarry & crushing unit is 1.5 km) and after crushing the limestone will be dispatched to the Cement plant initially by road (19.2 km) and later by OLBC (8.7 km).

11. **Top Soil management:** Top soil is fertile in nature. It contains organic matter and macro & micro nutrients. Total 0.0225 million tons of Topsoil will be generated and stacked in 1.15 ha area and at the conceptual stage 0.54 million tons of Topsoil will be generated at conceptual stage. Top soil will be stacked initially, shifted subsequently to 7.5 m wide safety zone along the M.L boundary within M.L area, and spread over the backfilled area for plantation.
12. **Solid waste generation**: Solid waste generated will be stacked in dump and backfilled in mined out area. Screen reject will be used for blending and clay (part of waste) will be used in raw mix for clinkerization in the existing cement plant.
13. **Water requirement**: Total water requirement is 82 KLD out of which 15 KLD will be sourced from ground water for drinking & domestic purpose and remaining 67 KLD will be sourced from the sump of existing mine and later from this mine sump as and when developed.
14. **Power Requirement:** Power requirement will be around 2.0 MW (which will be sourced from WESCO of Grid Corporation of Odisha Limited). DG of 600 KVA capacities is also proposed for emergency power.
15. **Man Power requirement:** Total man power for the project is 306 persons. The Unskilled /semi-skilled manpower are being sourced from the local area whereas the skilled manpower is being sourced from local as well as outside. Preference is given to the locals as per their skills set, qualification and eligibility.
16. **Rehabilitation & Resettlement:** The total ML Area is 156.43 ha, out of which 42.461 ha is Government land and 113.96 ha is private land. Rehabilitation & Resettlement is under process. Total 201 families in two villages, are affected due to this project.

17. **Greenbelt:** Total 3.41 ha developed under Greenbelt as well as Plantation will be done on 33.723 ha area (14.845 ha area on backfilled area and 18.878 ha area on safety zone along nallah, village road and around the habitation).

18. **Project cost**: Total project cost is Rs. 160 Crores. Cost for Environment Protection is 11.57 Crores. Recurring Cost for EMP is Rs. 1.0 Crore per annum.

19. **Environment Consultant**: The Environment consultant **M/s J.M. EnviroNet Pvt. Ltd., Noida** along with the proponent made a presentation on the proposal before the Committee.

20. During presentation, the consultant along with the representative of the project proponent requested to issue ToRs with exemption of public hearing for the following reasons:

    i) There will be no change in total excavation (5.543 million TPA) proposed in the existing Environment Clearance within the Mining lease area except change in use of dolomite for which Mining lease has been granted for Dolomite as a mineral.

    ii) Public hearing for the project has already been conducted on 24.08.2021 for total excavation 5.543 million TPA which includes 2.42 MTPA Dolomite as waste.

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

A. The SEIAA, Odisha may consider for exemption of conducting public hearing for the proposal for the reasons as requested by the project proponent at para 20 above.

B. The following specific ToRs may be prescribed in addition to standard ToRs as per **Annexure – A** for conducting detailed EIA study.

    i) Approved mining plan including dolomite as a mineral product.

    ii) Status of all the work progress on the project site.

    iii) Mitigation measures to be followed to prevent silt accumulation w.r.t. the Sankh nala flowing nearby should be included in EMP.

    iv) Status of all the activities/programmes covered against the issues raised in Public Hearing conducted on 24.08.2021.

    v) Mineral balance and the amount of waste generated in a flow chart manner.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S ARUNODAYA MINERALS AND METAL TRADING CORPORATION FOR BARAJHULA QUARTZ MINE OVER AN AREA OF 11.900 ACRES OR 4.816 HECTARES BEARING KHATA NO.124, PLOT NO.1/P LOCATED IN VILLAGE - BARAJHULA, TAHASIL - BIRMAHARAJPUR, DISTRICT - SUBARNAPUR OF ARUNODAYA MINERALS & METAL TRADING CORPORATION - EC

1. This proposal is for Environmental Clearance of M/s. Arunodaya Minerals and Metal Trading Corporation for Barajhula Quartz Mine, over an area of 11.900 acres or 4.816 hectares bearing Khata no.124, Plot no.1IP in village Barajhula, Tahasil- Birmaharajpur, District- Subarnapur, Odisha of M/s. Arunodaya Minerals and Metal Trading Corporation.

2. **Category**: This project falls under Category "B" of Project activity 1 (a) for "Mining of Minerals" projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **Location and connectivity:** The mine lease area is located at Village - Barajhula, Tahasil – Birmaharajpur, District - Subarnapur, Odisha over an area of 4.816 ha. The ML has been allotted to M/s Arunodaya Minerals & Metal Trading Corporation bearing Khata no. 124 plot no. 1/P. The geo-coordinates of the project are: Latitude - 20°56'47.00"N to 20°57'06.00"N & Longitude- 84°02'42.00"E to 84°02'51.00"E. The project is a part of the Survey of India Toposheet No. : E44E8(65I/8).The nearest distance of approach road is 0.05 Km, nearest National Highway is NH-55 is at a distance of 25.0 Km in NE, nearest State Highway is SH-15 at a distance of 14.50 Km in SW, nearest airport is Bhubaneswar Airport, approx. 380 km in SE direction, nearest River is Harihara Jora River at a distance of 0.8 Km. in SW, nearest reserve forest is Ghikundi Reserve Forest at a distance of 5.00 Km in SW, nearest road bridge is near Jatesingha Bridge over Harihara Jora River at a distance of 10.70 Km. in SE, nearest River embankment is Jatesingha Bridge, Harihara Jora River at a distance of 10.70 Km. in SE, nearest habitation is 0.6 Km in the SW direction.
4. The Mining Lease has been granted by Joint Secretary, Odisha on behalf of Governor of Odisha in accordance with the provision of the Minor Mineral Concession Rules (amendment),2014 vide letter no 332/SM dated 14.01.2004.
5. **Total reserves and production:** The total geological reserves 126820cum and mineable reserves are 88975cum and the proposed production for the proposed project is 16949cum /year. Excess of waste generated during mining will be used for landfill in the low lying areas.
6. **Method of Mining:** The Proposed depth of mining is 9.5m as per approved mining plan. Mining will be carried out by opencast semi-mechanized method with adoption of drilling & blasting. Handling of rock mass will be done both manually & by excavators.

Year wise Production Details

Year	Volume of excavation in cu.m	Volume of waste in cu.m
1st (2021-22)	6,510	838
2nd (2022-23)	6,512	2,235
3rd (2023-24)	6,513	1,073
4th (2024-25)	6,519	1,159
Total	**26054**	**5,305**
Average/annum	**6,513**	**1,326**

7. **Water requirement:** The total water requirement for the proposed project will be 2 KLD.
8. **Power requirement:** There is no power requirement for the project.
9. **Greenbelt development:** Green belt is proposed with 400 no. of plants to be planted in the proposed area of 0.200ha.
10. **Total Employment**: Total 51 persons are proposed to be engaged at the site.
11. **Project cost**: The estimated project cost is 60 lakh and EMP cost is 0.9 lakhs.

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

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

i) The project proponent has intimated that the operation of the project was started from 2006 and continued till 2009. Hence, the project proponent shall submit a document from Steel & Mines Department clarifying whether the proposal comes under violation category.

ii) The lease area is on grazing land, the project proponent shall follow the provision for compensation of grazing land.

iii) The sairat source is not included in the DSR. Copy of DSR including this sairat source.

iv) Submit details of the waste generated according to the proposed production and its management.

v) Consult with the Forest deptt. as the proposed site does not appear conducive for plantation.

vi) Brief write-up on dust management during the blasting and mining operation.

vii) Safety measures to be followed during blasting operation.

viii) The PP has mentioned the mineral content in the ore is 99.84 % SiO_2. Revisit the waste estimated, specify which type of waste will be generated and quality of waste w.r.t. % SiO_2 content in it.

ITEM NO. 07

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR BALANDA STONE QUARRIES CLUSTER (7,9,14,15,16) OVER AN AREA OF 44.05 ACRES OR 17.823 HECTARES BEARING KHATA NO. 504, 506 AND PLOT NO. 2473/P, 1899/P, 2008/P & 2009/P, 2473/P, 2473/P & 2010/P AND 1893/P & 2010/P IN VILLAGE BALANDA, TAHASIL-LATHIKATA, DISTRICT-SUNDARGARH OF SRI BIJAY AGARWAL (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 5 STONE QUARRIES) – TOR

1. The SEAC in its meeting held on 31-07-2023 decided to defer the proposal to the next meeting and will consider it after receipt of the following from the proponent:

   (i) Details of total number of quarries present in the Balanda Stone Quarries Cluster (including existing and proposed mines) in tabulated form.

   (ii) Details of status of existing mines & proposed mines with name of lessee.

   (iii) Copies of Environment Clearance, CTE & CTO of existing mines in cluster.

   (iv) A detailed notes giving reason why the EIA study undertaken and ToRs issued earlier does not contain all quarries i.e. Balanda Stone Quarries 1 to 16 and presently another proposal has been submitted for issue of ToRs in cluster approach.

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

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Details of total number of quarries present in the Balanda Stone Quarries Cluster (including existing and proposed mines) in tabulated form.	Details of all quarries are in tabular form. Annexed herewith. (Annexure-1)	Details of all quarries submitted.
2.	Details of status of existing mines & proposed mines with name of lessee.	Details of status of existing mines & proposed mines with name of lessee (Annexure -2)	Details of all quarries submitted.
3.	Copies of Environment Clearance, CTE & CTO of existing mines in cluster.	Copies of Environmental Clearance, CTE & CTO of existing mines in cluster (Annexure -3)	EC, CTE and CTO copies of Balanda Stone Quarry No – 2, 3 and 10.
4.	A detailed notes giving reason why the EIA study undertaken and ToRs issued earlier does not contain all quarries i.e. Balanda Stone Quarries 1 to 16 and presently another proposal has been submitted for issue of ToRs in cluster approach.	A detailed notes on Balanda Stone Quarries Cluster (1 to 16) is annexed herewith (Annexure-4)	Justification has been submitted where it is mention proposed quarries 14,15 & 16 were identified as new source and approved after 14.07.2021.

3. The SEAC in its meeting held on dated 18-11-2023 decided that the proponent shall be called for a detailed presentation for consideration of ToRs.

4. The proposal was called for a detailed presentation for consideration of ToRs in this SEAC Meeting dated 27-12-2023.

5. This proposal is for Terms of Reference (TOR) for Balanda Stone Quarries Cluster (7,9,14,15,16) over an area of 44.05 acres or 17.823 hectares bearing Khata no. 504, 506 and Plot no. 2473/P, 1899/P, 2008/P & 2009/P, 2473/P, 2473/P & 2010/P and 1893/P & 2010/P in village Balanda, Tahasil-Lathikata, District- Sundargarh of Sri Bijay Agarwal.

6. **Category**: As per the EIA Notification dated 14th September 2006 and its subsequent amendments the proposed project falls under category B2 (<5ha) of Schedule in item 1 (a) – Mining of minerals.

7. There were originally 13 stone quarries known as Balanda Stone Quarry-1 to 13 in the village of Balanda, Tahasil-Lathikata, District-Sundargarh. Prior to July 9, 2021, four of these quarries, namely Stone Quarry-4, 11, 12, and 13 had already been extinct. On July 9, 2021, a TOR (Terms of Reference) application was submitted for the remaining 9 stone quarries - Balanda Stone Quarry-1, 2, 3, 5, 6, 7, 8, 9, and 10. Subsequently, on November 18, 2021, SEIAA Odisha granted TOR in favor of Balanda Stone Quarry-1, 2, 3, 5, 6, 7, 8, 9, and 10. Following the TOR approval, the lease period for quarry no. 7 and 9 expired. Simultaneously, the Tahasildar Lathikata declared stone quarry no. 5 and 6 as extinct and introduced three new quarries, namely no. 14, 15, and 16. Consequently, a new TOR application was submitted on February 14, 2023, specifically for Balanda Stone Quarry-7, 9, 14, 15, and 16.

8. **List of Statutory Clearances obtained earlier -**

a) Balanda Stone Quarry-7: Mining Plan Approved on Letter no- 1493, Dt- 27.10.2021

b) Balanda Stone Quarry-9: Mining Plan Approved on Letter no- 793, Dt- 16.04.2022

c) Balanda Stone Quarry-14: Mining Plan Approved on Letter no- 1489, Dt- 27.10.2021

d) Balanda Stone Quarry-15: Mining Plan Approved on Letter no- 1491, Dt- 27.10.2021

e) Balanda Stone Quarry-16: Mining Plan Approved on Letter no- 1655, Dt- 23.11.2021

9. **Location and connectivity**: The project is located at plot no.- Balanda SQ- 7: 2473/P, Balanda SQ- 9: 1899/P, 2008/P, 2009/P, Balanda SQ- 14: 2473/P, Balanda SQ- 15: 2473/P, 2010/P and Balanda SQ- 16: 1893/P, 2010/P of Village- Balanda, Tehsil- Lathikata, Dist- Sundargarh, State- Odisha. The ML area is located in Topo sheet no. F45G16, F45G12. The kissam of the land is as follows: Balanda SQ- 7: Patita, Balanda SQ-9: Parbat, Balanda SQ-14: Pahad, Balanda SQ-15: Pahad, Balanda SQ- 16: Parbat. The nearest NH- 6Km, nearest SH- 5.5Km, nearest Airport- Rourkela- 15Km. the nearest water body- 800m, Reserve forest- 1.7Km, Road Bridge- 6.2Km, Rail Bridge- 5.8Km, river embankment-6.2 Km, electric transmission pole- 550m, village road- 300m. Nearest Habitation- 500m. the nearest sanctuary is Palkot Wild Life Sanctuary- 63Km.

10. **Total Reserves Production:** The total Geological Reserves for the ML area is 5765755.7Cum, Mineable Reserves for the ML area is 2400609.1Cum.

11. **Water requirement**:

Activity	Calculation	Round off Figure in KLD
Drinking	@ 10lpcd per labor (10*448/1000)= 4.48 KLD	4.48
Dust suppression	Total haulage road to be water sprinkled = 6000 m*6 m*0.5 lt/sqm*2times/1000 = 36 KLD	36
Plantation	7154 plants in financial year@ 2 L/per plant= 7154*2 lt= 14308/1000= 14.308KLD	14.308
	Total	**54.788 ~ 55 KLD**

12. **Power Requirement** - No electricity required at quarry site. Only diesel is used for operating mining equipment only. For which 4 KL of HSD will be used and sourced from local market.

13. **Mining Plan Details:**

a) **Method of Mining:** Semi Mechanized Open cast Method.

Production capacity per annum:

Sl no.	Quarry name	Maximum Production (in a financial year) in Cum
01	Balanda Stone Quarry - 7	50049
02	Balanda Stone Quarry - 9	50057.8
03	Balanda Stone Quarry - 14	15016
04	Balanda Stone Quarry - 15	15015
05	Balanda Stone Quarry - 16	80017
Total		**210154.8**

Total production in 5 years:

Sl no.	Quarry name	Total Production in 5 Years
01	Balanda Stone Quarry - 7	250140
02	Balanda Stone Quarry - 9	250271.6
03	Balanda Stone Quarry - 14	75080
04	Balanda Stone Quarry - 15	75075
05	Balanda Stone Quarry - 16	400176.4
Total		**1050743**

Proposed mining depth as per approved mining plan:

Sl no.	Quarry name	Proposed Mining Depth from Quarry Floor Level
01	Balanda Stone Quarry - 7	10m
02	Balanda Stone Quarry - 9	07m
03	Balanda Stone Quarry - 14	04m
04	Balanda Stone Quarry - 15	10m
05	Balanda Stone Quarry - 16	10m

Equipments used and list of machinery:

Name	Capacity	Quantity
Driller	4" diameter	9
Compressor	450cfm	5
Rock Breaker	220T	5
Excavator	210T	10
Tipper	10MT	15
Water carrier	1000 liters	15
Safety equipments such as Helmets, safety shoes, Goggles,& Hand gloves	---	As required (according to DGMS Guidelines)

14. **Solid waste generation & mitigation:** • Only weathered rock will be considered as waste and will be dumped in a temporary dump, and it will be used for the maintenance of the approach road.

15. **Wastewater generation**: The said quarry area does not have any stone crusher within the lease area. Thus, no trade effluent is generated from the quarry site. However, during the rainy season, surface runoff containing suspended solids and silts flows out

16. **Greenbelt Development:**

Year	Greenbelt development	Plantation along both sides of approach road	No. of plants in Anganwadi, Schools, Panchayat Bhawan inconsultation with the government body/local authorities	Species of Plant
1st Year	1.237 ha/60 plants	120	1253	Plants suggestedby
2nd year	1.237 ha/60plants	120	1253	
3rd year	1.237 ha/60 plants	120	1250	

Year	Greenbelt development	Plantation along both sides of approach road	No. of plants in Anganwadi, Schools, Panchayat Bhawan inconsultation with the government body/local authorities	Species of Plant
4th year	1.237 ha/60 plants	120	1249	villagers
5th Year	1.237 ha/60 plants	120	1249	
Total	**300**	**600**	**6254**	
Total	**7154**			

17. **Total Employment**: Balanda SQ- 7: 63, Balanda SQ- 9: 76, Balanda SQ- 14: 34, Balanda SQ-15: 26, and Balanda SQ- 16: 69 people will be engaged.

18. **Project Cost**: The total project cost is approx.. 2Cr. The Capital cost allocated for implementation of EMP is ₹29,30,800 and recurring cost allocated for EMP is ₹24,08,000.

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

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s P&M Solution, Noida**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – B** for conducting detailed EIA study

i) Submit NOC/Permission copy for 55KLD of ground water/surface water utilization. They should also take permission from Water Resource Department.

ii) Submit plan for roads to be used for transportation and its management.

iii) Submit the SOP for blasting to be conducted at the cluster ML area.

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ANNEXURE - A

STANDARD TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR M/S. SHIVA CEMENT LIMITED FOR EXPANSION OF KHATKURBAHAL (NORTH) BLOCK, ML AREA: 156.43 HA) WITH PRODUCTION CAPACITY OF LIMESTONE 1.6 MILLION TPA, DOLOMITE 2.42 MILLION TPA, MINERAL REJECT 0.035 MILLION TPA, TOP SOIL 0.033 MILLION TPA & OVER BURDEN: 1.455 MILLION TPA (TOTAL EXCAVATION: 5.543 MILLION TPA) WITH PROPOSED CRUSHER & SCREEN WITH CAPACITY OF 800 TPH FOR INCLUSION OF DOLOMITE AS MINERAL AT VILLAGES: KHATKURBAHAL & PHALSAKANI, TEHSIL: KUTRA, DISTRICT: SUNDAR ARH OF SRI MANOJ KUMAR RUSTAGI– TOR.

1. The ToR will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors .
2. Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
3. Year-wise production details since 1993-94 should be given, clearly stating the highest production achieved in any one year prior to 1993-94. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994. The production details need to submit since inception of mine duly authenticated by Department of Mines & Geology, State Government.
4. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
5. All documents including approved mine plan, EIA and Public Hearing (conducted on 19.12.2014) should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
6. Certificate from Mining Officer that mining pits which are existing within lease area have been done illegally prior to sanction of lease in favour of lessee.
7. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
8. Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
9. Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
10. It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in

Jnayak
Environmental Scientist, SEAC

the EIA Report with description of the prescribed operating process / procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the proposed safeguard measures in each case should also be provided.

11. Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.

12. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine/ lease period.

13. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.

14. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.

15. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

16. Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.

17. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

18. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

19. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.

20. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be

Environmental Scientist, SEAC

applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.

21. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

22. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.

23. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

24. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

25. One season (non-monsoon) [i.e. March - May (Summer Season); October - December (post monsoon season); December - February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PMIO, particularly for free silica, should be given.

26. Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

Jnayak
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27. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.

28. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.

29. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.

30. Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.

31. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

32. Details of any stream, seasonal or otherwise, passing through the lease area and modification/ diversion proposed, if any, and the impact of the same on the hydrology should be.

33. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.

34. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.

35. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

36. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.

37. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.

38. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The

Jayak
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project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

39. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
40. Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
41. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
42. Public Hearing (conducted on 19.12.2014) points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EM P Report of the Project.
43. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
44. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
45. A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
46. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
47. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
48. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
49. Compliance of the Ministry's Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgment of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.
50. Mitigation measures as per the Ministry's OM no Z-11013/57/2014-IA.II(M) dated 29.10.2014-Impact of mining activities on Habitations-Issues related to the mining projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area.
51. Besides the above, the below mentioned general points are also to be followed:-
    a) All documents to be properly referenced with index and continuous page numbering.
    b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.

JNayak
Environmental Scientist, SEAC

c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.

d) Where the documents provided are in a language other than English, an English translation should be provided.

e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.

f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O. M. No. J-11013/41/2006- IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.

g) The consultants involved in the preparation of EIA/EMP report should be an accredited with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) and a certificate in this regard should be annexed in the EIA/EMP reports. Data provided by other organization/Laboratories including their status of approvals etc. should be specified. The consultant, while presenting the project should be equipped with relevant data and information relating to the project and make a qualitative presentation.

h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. Process) will entail conducting the PH again with the revised documentation.

i) As per the circular no. J-11011/618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area

52. **This Terms of References (TORs) is valid for a period of four years from the date of issue of TORs for submission of the final EIA/EMP report after conducting public hearing.**

Environmental Scientist, SEAC

ANNEXURE – B

TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY IN CLUSTER APPROACH AND INFORMATION TO BE INCLUDED IN THE EIA/EMP REPORT

1. Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
2. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
3. Name and area of other mines within 500 meter of the lease area.
4. All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
5. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/Topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
6. Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
7. Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
8. It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
9. Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
10. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.

Jnayak
Environmental Scientist, SEAC

11. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.

12. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given. Proposal for Common Non-Mineralized Zone for dumping of rejects / OB.

13. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

14. Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.

15. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

16. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

17. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.

18. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.

19. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should

Jnayak
Environmental Scientist, SEAC

be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

20. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.

21. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

22. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

23. One season (non-monsoon) [i.e. March - May (Summer Season); October - December (post monsoon season) ; December - February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.

24. Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

25. Environment Impact Assessment / Environment Management Plan document shall be in accordance with the provisions & generic structure stipulated in the EIA Notification 2006 dated 14.09.2006 & subsequent amendments.

JNayak
Environmental Scientist, SEAC

26. EIA-EMP document shall be based on the maximum achievable mineral extraction of the mine and according to the impact of mines in cluster (within 500m) of the said mine.
27. EIA-EMP document shall include complete profile of the all the Project Proponent, implementing organization of mines in cluster (within 500m) of the said mine.
28. EIA-EMP document shall corer land description of project site (plot/survey / khasara number, village, tehsil, district, state & extent of land involved), of mines in cluster (within 500m) of the said mine.
29. EIA-EMP document shall include deposit conditions working depth mining scheme, details of machinery, backfilling of mine pit with type of blasting, drilling and explosives.
30. The general features such as surface drainage, mineral transportation and process flow of beneficiation plant, power and water supply shall be indicated.
31. The baseline environmental status within 10km radius from the boundary limit of mining lease area (buffer zone) and core zone with respect to air, water, noise and soil shall be covered of mines in cluster(within 500m) of the said mine.
32. Baseline data generation for one season (post monsoon) with respect to air, water, noise and soil shall be generated on the same sampling locations for obtaining EC
33. EIA-EMP document shall include land use pattern including agriculture, forest land, water bodies and settlements.
34. Existence of National Park, Wild Life sanctuary, migratory routes of wild animals within 10 km of mine lease area shall be brought out.
35. Topographical map of study area (core & buffer zone -10 km from the boundary of core zone) showing major topographical features shall be included.
36. EIA-EMP document shall include biological environment (flora and fauna) and socio-economic environment within the study area.
37. EIA-EMP document shall include anticipated impacts on land, air, noise and water environment and the mitigation measures of mines in cluster (within 500m) of the said mine.
38. Environmental Monitoring Programme and the environment management plan shall also be covered measures of mines in cluster (within 500m) of the said mine.
39. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
40. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
41. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
42. Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.

Jnayak
Environmental Scientist, SEAC

43. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

44. Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.

45. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.

46. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.

47. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

48. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.

49. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.

50. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

51. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.

Jnayak
Environmental Scientist, SEAC

52. Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.

53. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.

54. Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

55. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

56. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

57. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.

58. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.

59. Besides the above, the below mentioned general points are also to be followed

    a) All documents to be properly referenced with index and continuous page numbering.

    b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.

    c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.

    d) Where the documents provided are in a language other than English, an English translation should be provided.

    e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.

    f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J- 11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.

    g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H.

Jnayak
Environmental Scientist, SEAC

process) will entail conducting the PH again with the revised documentation.

h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

60. **This Terms of References (TORs) is valid for a period of four years from the date of issue of TORs for submission of the EIA/EMP report after conducting public hearing.**

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