

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 21<sup>ST</sup> NOVEMBER 2023**

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The SEAC met on 21<sup>st</sup> November 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.

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|------------------------------|---|-----------------------|
| 1. Sri Shashi Paul           | - | Chairman (through VC) |
| 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                |
| 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 FOR ENHANCEMENT IN PRODUCTION OF GRAPHITE FROM 4750 TPA TO 27091 TPA FROM GANDABHALI GRAPHITE MINES OVER AN AREA OF 28.615 HA. AT VILLAGE - GANDABHALI, TAHASIL - SINAPALLI IN THE DISTRICT OF NUAPADA OF SRI PRABHAS CHANDRA AGRAWAL – 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 the EIA Notification, 2006 and amendment thereafter.
2. This proposal is for Terms of Reference (ToR) for Enhancement in Production of graphite from 4750 TPA to 27091 TPA from Gandabahali Graphite mines over an area of 28.615 Ha. at Village - Gandabahali, Tahasil - Sinapalli in the District of Nuapada of Sri Prabhas Chandra Agrawal.
3. **Category:** As per the EIA notification 2006 and its subsequent amendments, proposed project falls in category B under schedule of Item 1(a)-Mining of minerals.
4. The mining lease deed made between Govt. of Odisha, Bhubaneswar and Sri Prabhash Chandra Agrawal was on dated 15.02.2005 for 20 years. As per section 8A of MM (D & R) Act, 2015 as amended, Lessee has requested the Principal Secretary, Department of Steel & Mines, Government of Odisha, Bhubaneswar vide letter dated 06.10.2016 to revise the lease period of

this mine for 50 years from the date of execution of the lease deed from 15.02.2005 to 14.02.2055.

5. Modified mining plan approved for the period of 2016-17 to 2020-21 under rule17(C) of MCR,2016, Approval letter no. MPN/OTFM/02-ORI/BHU/2017-18 dated 08.06.2017. The Review of Mining Plan along with PMCP was approved vide letter no. RMP/A/27-ORI/BHU/2020-21/2172 on dated 18.11.2020.
6. This is an existing mine. The proposed project is applied for enhancement in production of graphite from 4750 TPA to 27091 TPA from Gandabahali Graphite Mine over area of 28.615 Ha.
7. **Location and Connectivity:** The lease over an area of 28.615 hectares is located in Plot No1195/P-1821 bearing Khata no:139-218 of Gandabahali village, PO/PS-Sinapali, Tahasil-Sinapali, District-Nuapada, Odisha. Gandabahali Graphite ore mine is in part of Survey of India toposheet No. 64 L/12 and geo co-ordinates are latitudes 20° 07'59.3"N to 20°08'26.0"N and longitude 82°42'03.1"E to 82° 42'27.0"E. The M.L area is accessible from Khariar through metalled road over a distance of 20km via Duajhar. The nearest rail head is at Kantabanji at a distance of 40 km from Khariar (in Raipur-Vizianagaram section of SE Railway). Udanti - Sitanadi Tiger Reserve is situated 16 km distance from the lease area. Sunabeda Wildlife Sanctuary is situated at a distance of 40km from Gandabahali Graphite Mine.
8. **Reserves and total production:**

**Table: Geological Reserves**

Category	Cross sectional area	Length of influence	Volume of excavation	Volume of Waste /Inter-burden (55%)	Saleable Ore		Sub-grade ore / Mineral Rejects		Total Quantity
					Volume (40%)	Quantity (@2.1t/m <sup>3</sup> )	Volume (5%)	Quantity (@2.1t/m <sup>3</sup> )	
	(m <sup>2</sup> )	(m)	(m <sup>3</sup> )	(m <sup>3</sup> )	(m <sup>3</sup> )	(t)	(m <sup>3</sup> )	(t)	(t)
Indicated (332)	627	68	42636	23450	17054	35814	2132	4477	40291
	668	75	50100	27555	15030	31563	7515	15781	47344
	666	80	53280	29304	21312	44755	2664	5594	50349
	532	52	27664	15215	11066	23238	1383	2905	26143
	524	66	34584	19021	13834	29050	1729	3631	32681
	509	70	35630	19596	14252	29929	1782	3741	33670
<b>Total</b>	---	---	<b>243894</b>	<b>134141</b>	<b>92548</b>	<b>194349</b>	<b>17205</b>	<b>36129</b>	<b>230478</b>

**Table: Mineable Reserves**

Category	Length of influence	Volume of excavation	Volume of Waste / Inter-burden (55%)	Saleable Ore		Sub-grade ore / Mineral Rejects		Total Quantity
				Volume (40%)	Quantity (@2.1t/m <sup>3</sup> )	Volume (5%)	Quantity (@2.1t/m <sup>3</sup> )	
	(m)	(m <sup>3</sup> )	(m <sup>3</sup> )	(m <sup>3</sup> )	(t)	(m <sup>3</sup> )	(t)	(t)
Probable (122)	60	37620	20691	15048	31601	1881	3950	35551
	75	37200	20460	14880	31248	1860	3906	35154
	72	23760	13068	9504	19958	1188	2495	22453
	44	23408	12874	9363	19663	1171	2458	22121
	66	34584	19021	13834	29051	1729	3631	32682
	70	35630	19597	14252	29929	1781	3741	33670

Total	---	192202	105711	76881	161450	9610	20181	181631
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**Table: Total production**

Year	Volume of excavation (m <sup>3</sup> )	Volume of Inter-burden Waste (55%) (m <sup>3</sup> )	Production of Graphite		Sub-grade ore / Mineral Rejects		Total Production of graphite (TPA)
			Volume (40%) (m <sup>3</sup> )	Quantity (@2.1t/m <sup>3</sup> ) (m <sup>3</sup> )	Volume (5%) (m <sup>3</sup> )	Quantity (@2.1t/m <sup>3</sup> ) (m <sup>3</sup> )	
1 <sup>st</sup> Year	25,782	14,180	10,313	21,657	1,289	2,707	24,364
2 <sup>nd</sup> Year	27,528	15,140	11,011	23,124	1,377	2,890	26,014
3 <sup>rd</sup> Year	28,626	15,744	11,451	24,046	1,431	3,006	27,052
4 <sup>th</sup> Year	28,680	15,774	11,472	24,091	1,434	3,000	27,091
<b>Total</b>	<b>110,616</b>	<b>60,838</b>	<b>44,247</b>	<b>92,918</b>	<b>5,531</b>	<b>11,614</b>	<b>1,04,532</b>

9. **Mining method:** Semi mechanised, opencast mining method through the formation of safe benches which will be on single shift basis, using machineries such as DTH drill, compressor, small capacity excavator, tippers etc. as category-A (other than fully mechanized) mine as per MCDR, 2017. Enhancement in production will be 4750 TPA to 27091 TPA in Gandabahali Graphite Mine. The Mining lease area is accessible from Khariar through metalled road over 20 km via Duajhar.
10. **Beneficiation detail:** Graphite ore (8.41% F.C.) will be beneficiated for semi-enrichment of graphite (35% to 45% F.C.) in beneficiation plant located outside the leased mine area.
11. **Waste generation and management:** Out of 362,755 m<sup>3</sup> waste, 120,918 m<sup>3</sup> waste will be disposed in a forwarding manner over an area of 1 hectare or 10,000 m<sup>2</sup> in a single terrace of 12m each for 15m maximum height. Slope of the terrace will be maintained equivalent with the angle of repose of the waste materials i.e. around 37° 30' and overall slope angle of the dump will be 28° with the horizontal. Floor of the terrace will be sloped inward to prevent the flow of water outside at weak zone.

Name	Length(m)	Width (m)	Area occupied (m <sup>2</sup> )	Design Capacity (m <sup>3</sup> )	Present Capacity (m <sup>3</sup> )	Remaining Capacity (m <sup>3</sup> )	Top RL (m)	Bottom RL (m)
				(A)	(B)	(A-B)		
Dump-1	225	78	17550	131625	131625	---	258	243
Dump-2	75	40	3000	7500	7500	---	249	244
Dump-3	152	45	6840	23940	23940	---	250	243
Dump-4	65	26	1690	4225	4225	---	252	247
Dump-5	66	25	1650	5775	5775	65100 (proposed)	253	246
Dump-6	58	25	1450	3625	3625	55818 (proposed)	253	248
Dump-7	110	29	3190	9570	9570	---	253	247
<b>Total</b>	<b>---</b>	<b>---</b>	<b>35,370</b>	<b>---</b>	<b>---</b>	<b>120,918</b>	<b>---</b>	<b>---</b>

12. **Water Requirement:** In a day, about 810 litres of potable water will be provided to the Quarry staff of 54 persons for drinking purpose assuming 15 litres of clean and wholesome drinking water per day per man and 5,000 litres will be required at the mine site for bathing, washing & cooking. In addition to these, 22,000 litres of water will be utilized for non-domestic purpose which includes 20,000 litres for water spraying for dust suppression and 2,000 litres for watering the plantation site for live and growth of the saplings.

13. **Greenbelt Development:** The mine started the plantation programme in and around the mining lease. There are plantation of 9680 nos. of sapling near the office building, around the lease and the untouched area with the species like Mango, Amla, Teak, Chakunda, Neem. Further, there is the proposal for plantation over an area of 0.5 Ha of virgin area with 1250 saplings and rehabilitated dump area of 2.0 Ha with 5000 saplings.

PLANTATION ALREADY CARRIED OUT DURING LAST 5 YEARS		
Year	Proposed Plantation (No. of saplings)	Achieved Plantation (No. of saplings)
2016-17	250	NIL
2017-18	1213	988
2018-19	3812	3815
2019-20	3266	3267
2020-21	1602	1610
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VIRGIN AREA PLANTATION PROPOSAL						
Year of plan	Financial Year	Location	No. of Saplings proposed	Spacing (m)	Area Earmarked (m <sup>2</sup> )	Name of the saplings suggested
1 <sup>st</sup>	2021-22	Safety zone	500	2	2000	Teak, Mango, Jack-fruit, Neem, Chakunda, Gambhari etc.
2 <sup>nd</sup>	2022-23	-do-	250	2	1000	--do--
3 <sup>rd</sup>	2023-24	-do-	250	2	1000	-do-
4 <sup>th</sup>	2024-25	-do-	250	2	1000	-do-
<b>Total</b>	---	---	<b>1,250</b>	---	<b>5,000</b>	---

PLANTATION ON THE REHABILITATED DUMP					
Year of plan	Financial Year	Location	Area Earmarked (m <sup>2</sup> )	No. of Saplings proposed	Name of the saplings suggested
1 <sup>st</sup>	2021-22	Dump-1	5000	1250	Teak, Mango, Jack-fruit, Neem, Chakunda, Gambhari etc.
2 <sup>nd</sup>	2022-23	-do-	5000	1250	--do--
3 <sup>rd</sup>	2023-24	-do-	5000	1250	-do-
4 <sup>th</sup>	2024-25	Dump-	5000	1250	-do-

		3			
<b>Total</b>	<b>Total</b>	---	<b>20,000</b>	<b>5,000</b>	---

14. **Manpower:** A total of 54 nos. of persons are employed in the mine from which 6 nos. as Management & Supervisory, 10 nos. as skilled, 10 nos. as semi-skilled and 28 nos. as unskilled.
15. **Project Cost:** Total project cost of the project 2.20 Crore from which 1.5 Cr is cost of existing project cost at current price level and 0.7 Cr will be the proposed enhancement project cost.
16. **Environment Consultant:** The Environment consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar** along with the project proponent, the SEAC prescribed the ToR as per **Annexure – A** for conducting detailed EIA study with following specific ToRs:

- i) The project proponent shall furnish all the documents and details regarding statutory clearances like Consent to Establish, Consent to Operate, Previous Environmental Clearance etc.
- ii) The project proponent shall provide the clarification regarding the disputed area and submit the revised mining plan.
- iii) The project proponent shall apply for NOC from CGWA and permission from Water Resources Department, Govt. of Odisha regarding intersection of ground water during plan period of mining.
- iv) Furnish a comparative table indicating the conditions stipulated as per the previous EC and its compliance status.
- v) Submit layout map of different dumps and its present status, its total capacity of storage and future use of all dumps.
- vi) Slope of the dumps should be done by DGMS Survey and slope study should be approved by the concerned authority. If approved, submit a copy of the same.
- vii) Submit Traffic study report vetted by institute of repute.
- viii) Submit parking facility details.
- ix) Copy of the letter from Department of Steel and Mines, Govt. of Odisha regarding validity of lease.
- x) Analysis report of mine water (including Boron content analysis) and management plan for discharge water.
- xi) Existing no. of employees is 48nos. and proposed only 6 more people in addition to existing. Justify how 54 nos. of employees will be adequate for the proposed expansion which is 6 times more than the present production.
- xii) Note on Silt management.

- xiii) The Project proponent needs to use non-explosive blasting to loosen the rock body as agricultural land is nearby.
- xiv) After beneficiating operation, tailings containing slimes should be channelized into a tailing pond. The surplus/overflow water of the tailing pond may be stored in a pond to avoid contamination of nearby agricultural field.
- xv) Assessment and management of surface runoff. Precautionary measures to prevent the runoff affecting the nearby agricultural fields.
- xvi) Measures for augmentation and conservation of water resources.
- xvii) SOP for control of dust and noise.

**ITEM NO. 02**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S STHAAPATY PVT. LTD FOR PROPOSED (2B+G+12) MULTI STORIED RESIDENTIAL APARTMENT OVER AN BUILT-UP AREA LOCATED AT PLOT NO.- 361, KHATA NO-212, MOUZA- BANDHACHHADA & KACHARAMALA, TAHASIL- CUTTACK, DIST-CUTTACK OF SRI ABINASH DASH - EC**

1. This proposal is for Environmental Clearance of M/s Sthaapaty Pvt. Ltd for Proposed (2B+G+12) Multi Storied Residential Apartment over an built up area located at Plot No.- 361, Khata No-212, Mouza- Bandhachhada & Kacharamala, Tahasil- Cuttack, Dist-Cuttack of Sri Abinash Dash.
2. **Category:**The project falls under category "B" or activity 8 (a)-Building & Construction Project under EIA Notification dated 14th September 2006 as amended from time to time.
3. **Location and Connectivity** – The proposed site is located at Mouza- Bandhachhada and Kacharamala, Tehsil- Cuttack, Dist- Cuttack, Odisha. The Geographical co-ordinate of the project site is Latitude 20°22'05.00"N & Longitude 85°53'18.9"E. The project site is well connected with the National Highway-16 & Puri-canal Road located at the distance of 0.2 Km & 0.03 km respectively. The nearest Railway station is Bhubaneswar Railway Station at a distance of approximately 12.2 Km from the project site. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is at a distance of 14.5 Km from the project site. Kuakhai River is at a distance of 0.5 km from project site.
4. The site is coming under Cuttack Municipal Corporation (CMC).
5. The total plot area is 6152.854 sq.mt. with total built-up area 24535.357 sq.mt.
6. Details of the Project in tabulated form

Particular	Permissible	Proposed
Project Name	Proposed 2B+G+12 <sup>th</sup> Multi Storied Residential Apartment	
Plot Area	6152.854 sqm	
Ground Coverage		2082.125 sqm (33.84%)
FAR	7.5	3.987
<b>Total Built up Area</b>	--	<b>24535.357 sqm</b>
Maximum Height	--	40.9
Road Area	--	1700 sqm
Open Visitor Parking	--	88 sqm.

Basement Parking	--	4547.939 sqm
Open Parking	--	88.00 sqm
Total Parking Area	7360.60 sqm (30% of FAR Area)	9183.878 sqm.
Green Area	1,230.57 sqm (20% of Plot Area)	1,384.57 sqm (22.5% of Plot Area)
Maximum No. of Floor	--	2B+G+12 <sup>th</sup>
Power/Electricity Requirement & Sources	--	1839.6 KW Source: TPCODL
No. of DG sets	--	2x500 KVA
Solar Energy	--	101.5 KW (5.5 %)
Water requirement & Sources	--	103.0 KLD
Waste Water Generation	--	132.7 KLD
Sewage Treatment & Disposal	--	STP Capacity – 150 KLD
Solid Waste Generation	--	583.3 kg/day
No. of Dwelling Unit	--	184 nos.
Estimated Population-Residential, Floating/visitors	--	Residential- 1112 Nos. Floating- 111 Nos.

7. **Statutory clearances:** CDA has provisionally approved the building plan vide Letter No. 1586/CMC, dated: 26.10.2022. Ground Water Clearance obtained from CGWA vide NoC No. CGWA/NOC/INF/ORIG/2023/18573, dated 22.05.2023. Height clearance obtained from Airport Authority of India (AAI) vide NOC ID BHUB/EAST/B/111422/726399, dated 26.12.2022. Water & Sewerage connection from WATCO Cuttack vide letter no. 2214, dated 14.02.2023. Fire recommendation obtained from Odisha Fire Services vide recommendation No. RECOMM1101020042022000946, dated 08.12.2022. Electricity permission obtained from TPCODL vide Letter No. TPCODL/CED/TECH/No. 667, dated 24.02.2023.

8. **Water requirement:** Fresh make up water of quantity 103.0 m<sup>3</sup>/day will be required for the project which will be sourced from Ground Water.

Sl. No.	Description	Total Population	Per Capita Consumption (ltr/day)	Water Requirement (KLD)		
				Domestic	Flushing	Total
1.	Residential Building	1112 nos.	135	100.08	50.04	150.12
2.	Visitor @ 10 %	111 nos.	45	2.77	2.22	4.99
<b>TOTAL</b>				<b>102.85</b>	<b>~ 52.26 ~ 53</b>	<b>155.11 ~ 156</b>

9. **Waste water generation and management:** Total waste water generated from the proposed building will be 132.7 KLD which is treated in STP of capacity 150.0 KLD.

Details of waste water calculation	Water (KLD)
Water requirement for domestic purpose	103.0
Wastewater generated from domestic use (@ 80% of domestic water requirement)	82.4

Water requirement for Flushing Purpose	53.0
Wastewater generated from Flushing (@ 95% of flushing requirement)	50.3
Total Wastewater generated	82.4+50.3 = 132.7 KLD
Sewage Treatment Plant Capacity	150 KLD
STP Loss (5 % of wastewater generation)	6.6
Recycled water form STP @ 95% of wastewater generated	126.0

10. **Power requirement:** Total Power requirement of the proposed residential building is 1839.6 KW, Source is TPCODL, 2x500 KVA DG Set will be provided. Total 101.5 KW Solar Power Generation which is 5.5% of total power required in project.

Total Power Requirement	1839.6 KW
Power from Solar System	101.5 KW
Source	TPCODL
Back up Power	2 x 500 KVA DG sets will be provided.

11. **Rain Water Harvesting:** Total 137 cum Rain Water will be harvested through 14nos. of recharge pits.

12. **Parking Requirement:** Total parking area of 9183.878 Sq.mt. will be provided and total 288 nos. of ECS and location of parking area is Basement.

Parking Area Provided			
Basement Parking			9095.878 sqm
Open Parking			88.0.00 sqm
<b>Total Parking</b>	--	--	<b>9183.878 sqm</b>
Equivalent Car Space Provided			
	Area (sqm)	Area/ECS	
Basement Parking	9095.878	32	284 ECS
Open Parking	88 sqm	25	4 ECS
<b>Total Parking Provided</b>			<b>288 ECS</b>
Total Four Wheeler Parking			184 Nos.
Total Two Wheeler Parking			150 Nos.
Parking for Visitor (10%)			918.4 sqm

13. **Green Belt Development:** Greenbelt will be developed over an area of 1,384.57 sqm which is 22.5% of the total plot area. Total 80 nos. of plants to be planted.

14. **Solid Waste Management:** Solid waste generated and its management.

#### Detail of Solid Waste Management

S. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residents	1112 @ 0.45 kg/day	500.4



2.	Floating	111 @ 0.15 kg/day	16.6
3.	STP sludge		66.3
<b>Total Solid Waste Generated</b>			<b>583.3 kg/day</b>

15. **Project cost:** The estimated project cost is 45.0 Crores and cost for EMP is 1.7 Crores.

16. **Environment Consultant:** The Environment consultant **M/s Centre for Envotech & Management Consultancy 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, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar** 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 document with layout plan for approach road and permission from concerned authority for usage.
- ii) NOC/permission from concerned authority for discharge of treated waste water into the nearby drains.
- iii) Brief write up on present road connectivity status to the proposed project.
- iv) Revisit the water balance to reduce the water discharge.
- v) Traffic study report vetted by institute of repute.
- vi) RL of ground water level during monsoon and rainy season, Plinth reduced level; Bottom reduced level of discharge pit, ground water level.
- vii) Structural stability certificate vetted by institute of repute.
- viii) Details of Fire Recommendations.

**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 AMENDMENT ENVIRONMENTAL CLEARANCE OF M/S. SHIVA CEMENT LTD FOR LIMESTONE MINE (KHATKURBAHAL NORTH BLOCK, AREA: 156.43 HA) WITH LIMESTONE PRODUCTION CAPACITY OF 1.6 MILLION TPA AT VILLAGE KHATKURBHAL & PHALSAKANI, TAHSIL: KUTRA, DIST: SUNDARGARH OF SRI MANOJ KUMAR RUSTAGI – MOD- EC**

1. This proposal is for amendment Environmental Clearance of M/s. Shiva Cement Ltd for Limestone Mine (Khatkurbahal North Block, Area: 156.43 ha) with Limestone production capacity of 1.6 Million TPA at Village Khatkurbhal & Phalsakani, Tahsil: Kutra, Dist: Sundargarh of Sri Manoj Kumar Rustagi.
2. **Category:** The project falls under Category” B” Project or Activity 1(a) – “Mining of Minerals” as per MoEF&CC, Govt. of India Notification as the Mining Lease Area is less than 250 ha.
3. **Location :** The mine is situated near Villages- Khatkurbahal & P halsakhani, Tehsil- Kutra, District Sundargarh, Odisha. The latitude is 22° 16'45.31025" N to 22° 17'10.12835" N and 84° 27'36.13496" E to 84° 29'18.22107" E. The mines fall in part of Survey of India topo sheet No. F45G7, F45G8, F45G11 & F45G12.
4. 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. Tehsil- Kutra, District Sundargarh, Odisha.
5. Environment clearance has been obtained from MoEFCC vide File No J-11011/84/2008-IA.II (I) dated 23.03.2022. To meet the limestone requirement of cement plant, company has two mines:
  - Khatkurbahal Limestone & Dolomite Mine (ML Area- 72.439 ha) with Production Capacity 1.5 million TPA Near village – Khatkurbahal & Kulenbahal, Tehsil – Kutra, District – Sundargarh (Odisha). Environment Clearance for the same has been obtained from SEIAA, Odisha vide letter No 37895/62-MINB1/11-2021 dated 11.03.2022.
  - Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil Kutra, District Sundargarh, Odisha. Environment clearance has been obtained from MoEFCC vide File No J-11015/47/2020-IA.II (I) dated 17.03.2022.
6. **Amendment justification :** Project Proposal is for amendment in Specific Condition No. ii of the existing Environment Clearance Letter No J-11015/47/2020-IA-II(M) dated 17.03.2022 in favor of Shiva Cement Limited for Khatkurbahal (North) Block Limestone Mine (M.L. Area- 156.43 ha) with limestone production capacity of 1.6 million TPA at Villages Khatkurbahal & Phalsakhani, Tehsil - Kutra, District Sundargarh, Odisha w.r.t permission for road transportation from mines to captive cement plant for 5 years. Amendment required is as below:

Sl. No.	Reference of Approved EC	Description as per Approved EC	Amendment requested	Reason for amendment
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1.	Specific Condition No ii	The transportation of mineral should be carried out through the over land conveyor belt.	The transportation of mineral from mine to captive cement plant may be carried out through existing road for a period of 5 years from the start of mining operations and later through Overland belt Conveyor (OLBC).	Majority of the land required for installation of OLBC is tribal land and thus has to be acquired by the state govt as per LARR Act, 2013. The land acquisition has already been undertaken by the state Govt. and the same is a time-consuming process. Complete land acquisition and its handover to SCL along with installation and commissioning of conveyor is likely to take approx. 5 years
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**7. Status of Land Acquisition and installation of conveyor belt and timeline for completion is given below:**

S. No.	Activity	Status/ tentative date of completion
1	Project approval by IPICOL	Completed
2	Recommendation to IDCO by IPICOL for land	Completed
3	Scrutiny by IDCO for land records	Completed
4	Recommendation by IDCO to 5 irrigation depts & geology dept. For noc& to obtain NOC	Completed
5	Administrative approval from industries dept to start the land acquisition process	Completed
6	Recommendation by IDCO to district administration to start the la process	Completed
7	District administration to start the land acquisition process as per the land acquisition act	Started
8	Posting of data in LARRMS	Completed
9	Scrutiny of the land records by District land acquisition dept and process for 4(i)notification	31-12-2023
10	Preparation of Draft SIA study report	31-03-2024
11	Public hearing based on draft SIA study report	30-06-2024
12	Finalization of SIA study report	30-07-2024
13	Constitution of expert GP and evaluation of SIA report by expert GP(u/s-7(2))	30-08-2024

14	Submission of expert GP Report to collector	30-09-2024
15	Publication of Declaration U/s- 8(2) by R&DM dept.	20-10-2024
16	Preparation of documents and administrative cost for 11(1) notifications	30-10-2024
17	Publication of preliminary notification by collector U/s-11(1)	30-11-2024
18	Survey of structures, trees etc over the land to be acquired (U/s-12)	15-02-2025
19	Objection hearing u/s - 15 regarding SIA study/public purpose/suitability of the land	20-04-2025
20	Preparation of R&R plan (if any) by the administrator U/S-31. This will in parallel with U/s-12	20-07-2025
21	Estimation and deposit of LA cost, preparation of relevant documents for publication of declaration u/s-19	20-08-2025
22	Declaration by collector U/s-19(1)	20-10-2025
23	Conduction of yadast report for preparation of award for the land losers	20-12-2025
24	Objection hearing regarding legal heir or person interested (U/s-23)	31-01-2026
25	Passing of award U/s-30	05-03-2026
26	Disbursement of award (min 80% of compensation)	05-05-2026
27	Handing order possession after disbursement of 80% of compensation	05-07-2026
28	Consent to Establish	05-10-2026
29	Erection & commissioning of OLBC	30-04-2028
30	Consent to Operate	31-07-2028

8. **Environment Consultant:** The environment consultant M/s J.M. Enviro Net Pvt. Ltd., Gurugram 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 J.M. Enviro Net Pvt. Ltd., Gurugram., the SEAC decided to take decision on the proposal after receipt of the following information from the proponent:

- i) Compliance report to the Previous EC conditions regarding the road.
- ii) Traffic study report vetted by reputed institute and details of traffic load due to the proposed transport activity of the project.
- iii) Height of the conveyor belt may be considered after consultation with forest department.

- iv) NOC/Permission from local authority regarding usage of approach road.
- v) Present status of land acquisition and reason for delaying land acquisition.

**ITEM NO. 04**

**PROPOSAL OF AMENDMENT ENVIRONMENTAL CLEARANCE OF M/S. SHUVAM CONSTRUCTION PVT LTD FOR 2B+G+14 HIGH RISE RESIDENTIAL APARTMENT BUILDING OVER AN BUILT-UP AREA 59578.43 SQM IN MOUZA- GHATIKIA, BHUBANESWAR, DIST.- KHURDA OF SRI KANTILAL PATEL – MOD- EC**

1. This proposal is for Amendment Environmental Clearance of M/s. Shuvam Construction Pvt Ltd for 2B+G+14 High Rise Residential apartment building over an built up area 59578.43 sqm in Mouza- Ghatikia, Bhubaneswar, Dist.-Khurda of Sri Kantilal Patel.
2. **Category:** The project falls under category "B" or activity 8 (a)-Building & Construction Project under EIA Notification dated 14<sup>th</sup> September 2006 as amended from time to time.
3. **Location and Connectivity:** The project is located at Mouza- Ghatikia, Bhubaneswar, District- Khurda, Odisha bounded by Latitude: 20°16'15.78"N and Longitude: 85°46'44.81"E. The Nearest Highway is NH-16 which is 1.44 km from the project site in East direction; NH-316 is 6.70 km towards SE direction, SH-13 is 14.45 km towards SSW direction. Ghatikia Main Road is at a distance of 0.80 km in North direction. The nearest Railway Station is Retang Railway Station at 8.36 km in South direction. Biju Patnaik International Airport Bhubaneswar is at 3 km in ESE direction from project site.
4. Earlier, Environment Clearance was granted by SEIAA, Orissa vide EC Identification No. EC22B038OR134872 dated 22nd July,2022 for Plot area = 10,732.17 sqm (2.652 acre) and Built-up area =56,722.86 sqm.
5. Due to proposed amendment, the plot area will change from 10,732.17 to12,443.97 sqm & BUA will change from 56,722.86 to 59,578.43 sqm.
6. **Comparative statement of amendment:**

S. NO.	PARTICULARS	EXISTING AS PER EARLIER EC	PROPOSED AMENDMENT	TOTAL AFTER PROPOSED AMENDMENT
1	Total Plot Area (m <sup>2</sup> )	10,732.17	1711.8	12,443.97
	• Future Development Area	--	1343.54	1,343.54
	• Total Road Area	--	594.88	594.88
	• Acquisition of Sewerage board	--	364.21	364.21
2.	Net Plot Area	10,732.17	-590.83	10,141.34
3.	Permissible Ground Coverage	6,439.3 (@60% of the plot area)	-354.496	6,084.804 (@60% of the net

				plot area)
4.	Proposed Ground Coverage	3,053.12 (@ 28.55% of the plot area)	-92.68	2960.44 (@29.19% of the net plot area)
5.	Permissible FAR	75,125.19 (@7 of the plot area)	-4135.81	70,989.38 (@7 of the net plot area)
6.	Proposed FAR	44,996.50 (@ 4.192 of the plot area)	-1674.17	43,322.33 (@ 4.271 of the net plot area)
7	Non FAR (Fire Tower, Balcony & Basement Area)	11,726.36	4529.74	16,256.1
8	<b>Total Built Up Area (6 +7+ 8)</b>	<b>56,722.86</b>	<b>2,855.57</b>	<b>59,578.43</b>
9	Green Area Proposed	2641.18 (@24.16% plot area)	-612.92	2028.26 (@20% of net plot area)
10	Maximum Height of the Building up to terrace level (meter)	50.93 (G+14)	--	50.26 (G+14)
11	Population (Nos.)	1672	194	1866
12	Total Water Requirement (KLD)	212	22	234
13	Domestic Water Requirement (KLD)	141	85	226
14	Fresh Water Requirement (KLD)	141	8	149
15	Wastewater Generation (KLD)	180.16	15.84	196
16	STP Capacity (KLD)	200	40	240
17	Rainwater Harvesting Pits (Nos.)	14	20	34
18	Parking provided	22,308.36 sqm	-9,234.48 sqm	13,073.88 sqm

19	Power requirement (kW)	1482	118	1600
20	D.G sets	1000 kVA (2x 500)	-500kVA (-250 kVA )	500 kVA (2x 250)
21	Solid waste generation (kg/day)	796.8	90.2	887
22	Project cost (INR)	95 Crores	57 Crores	152 Crores

7. **Building details:** There will be a residential tower (288 Dwelling units) with common amenity area. The maximum height of the Tower will be 50.26 m. The total plot area is 12,443.97 sqm and Net plot area is 10,141.34 sqm. The permissible ground coverage will be 6,084.804 sqm (60% of the net plot area) and proposed Ground Coverage will be 2,960.44 sqm (29.19% of the net plot area). The permissible FAR will be 70,989.38 sqm (@7.0 of net plot area) and proposed FAR will be 43,322.33 sqm(@4.271 of net plot area). The Non-FAR for the project will be 16,256.1sqm. Total Built up area for the project will be 59,578.43 sqm. The total population of project after proposed will be 1,866 persons.
8. **Water Requirement:** The total water requirement will be met through Ground water and Bore well which is approx. 234 KLD, total domestic water requirement is 226 KLD. Out of which fresh water requirement is approx. 149 KLD, & flushing water will 77 KLD.

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
A.	Domestic Water						
	• Residents	1623	90	45	146.07	73.03	219.1
	• Staff	81	25	20	2.02	1.62	3.64
	• Visitors	162	5	10	0.81	1.62	2.43
					148.9 KLD say 149 KLD	76.27 KLD say 77KLD	225.17 KLD say 226 KLD
<b>Total Domestic Water = 226 KLD</b>							
B.	Horticulture	2028.26 m <sup>2</sup>	4 l/sqm		8 KLD		
<b>Grand Total (A+B+C) = 234 KLD</b>							

9. **Waste water details:** The project will generate approx. 196 KLD of waste water. The waste water will be treated in an onsite STP of 240 KLD capacity. The treated effluent will be reused for flushing & horticulture. Surplus treated effluent will be discharged to external sewer.

<b>Domestic Water Requirement</b>	<b>234 KLD</b>
• Fresh	149 KLD
• Flushing	77 KLD
<b>Waste water [@80% fresh + 100% flushing]</b>	<b>119.2 + 77= 196 KLD</b>
<b>STP Capacity (20 % higher than waste water)</b>	<b>240 KLD</b>

**10. Comparative water calculation:**

S. No.	Description	Value as per earlier EC	Proposed Amendment	Total Quantity (EC accorded + Amendment)
1.	Total Water Requirement	212	+22	234
2.	Domestic Water Requirement	141	+85	226
3.	Fresh Water Requirement	141	+8	149
4.	Wastewater Generation	180.16	+15.84	196
5.	STP Capacity	200	+40	240

11. **Rainwater harvesting details:** Total 34 RWH pits at different locations will be constructed for the proposed project.

12. **Parking details:** Total parking proposed is 146(LB)+142(UB)+43(Stack UB) = 331 ECS.

13. **Power Requirement:** The power supply will be supplied by State Electricity Board. The requirement load for the project will be 1,600 kW. There is provision of 2 nos. of DG sets total 500 kVA capacity (i.e. 2 x 250 KVA) for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion. Total solar power as per the following table.

S. No.	DESCRIPTION	SAVINGS (kVA)
1.	Solar based Lighting will be done in the common areas, stair cases, landscape areas, signage, entry gates and boundary walls etc. (5% from total power load) Norms for Rooftop PV systems Installation: Solar power back of a minimum generation capacity of 5% of the connected load (OR) 20 Watts/sq.ft on available roof space, whichever is less.	50 kVA
2.	LEDs will be used in all dwelling units.	22.5 kVA
3.	Outdoor and common are lighting shall be LED	7.5 kVA
<b>Total Energy Saved</b>		<b>80 kVA</b>



Total Power load = 1,600 kVA  
 Energy saved through various provisions =80 kVA TOTAL ENERGY SAVING = 10 %

14. Solid waste management: The total solid waste generation will be 887 kg/day.

S. No.	Description	Occupancy	Waste Generated (kg/capita/day)	Waste Generated (kg/day)
1.	<b>Domestic Solid Waste</b>			
	• Residents	1623	0.5	811.5
	• Staff (Maintenance, Club house, Departmental Store)	81	0.3	24.3
	• Visitors (Maintenance, Club house, Departmental Store)	162	0.15	24.3
2.	Horticultural Waste (0.5 acre)	@ 0.2 kg/acre/day		0.1
3.	STP Sludge	Waste water x 0.35 x B.O.D difference/1000		26.754
<b>Total Solid Waste Generation = 887 kg/day</b>				

15. Greenbelt: Total green area measures 2,028.26 m<sup>2</sup> i.e. 20% of the net plot area. No. of trees required = 1 tree/80 sq.m. of net plot area =10141.34/80 = 126.766 say 127 Nos. So, total no. of trees proposed is 127 Nos.

S. No.	Botanical Name	Numbers
1	<i>Alstoniascholaris</i>	29
2	<i>Lagerstroemia flosreginae</i>	23
3	<i>Azadirachtaindica</i>	20
4	<i>Mimusopselengi</i>	28
5	<i>Tamarindusindica</i>	5
6	<i>Syzygiumcumini</i>	10
7	<i>Mangiferaindica</i>	12
	<b>Total</b>	<b>127</b>

16. Project cost: Total Project cost is estimated to be INR 152 Cr. Including land and development cost.

Table: ENVIRONMENT MANAGEMENT PLAN COST (OPERATION)

COMPONENT	CAPITAL COST (INR LAKH)	RECURRING COST (INR LAKH/YR)
Sewage Treatment Plant	50	6
Rain Water Harvesting Pits	35	6
Solid Waste Management	2.5	5
Environmental Monitoring	0	10

Green Area/ Landscape Area	3	0.75
Others (Energy saving devices, miscellaneous)	10	0.25
<b>Total</b>	<b>100.5</b>	<b>28.0</b>

17. **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.**, along with 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) Clarify exactly what the proponent is increasing both in auxiliary and mainstream.
- ii) Detailed area breakup for balcony, fire tower and basement.
- iii) Comparative table for previous EC condition and present revised proposal w.r.t. all the changeable parameters. Additionally, incorporate remarks column to specify the reason for change.
- iv) NOC/ Permission from concerned authority for discharge of excess treated waste water. Further, submit the copy of application submitted for proposed drain plan from Bhubaneswar Development Authority for drainage discharge.
- v) Justification for reduction in DG set capacity.
- vi) Increase the greenbelt area upto 20% of the total plot area as per the norms.

**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. 05

### **PROPOSAL FOR AMENDMENT ENVIRONMENTAL CLEARANCE OF M/S. UNITED CONSTRUCTION CORPORATION FOR PROPOSES AMENDMENT IN RESIDENTIAL PROJECT OVER A BUILT-UP AREA 24,689.58 M2 AT MOUZA- BADARAGHUNATHPUR, TEHSIL- JATANI, DISTRICT KHURDA, BHUBANESWAR OF SRI TAPAN KUMAR MOHANTY – MOD- EC**

1. This proposal is for Amendment Environmental Clearance of M/s. United Construction Corporation for proposes Amendment in residential project over an built up area 24,689.58 m<sup>2</sup> at Mouza- Badaraghunathpur, Tehsil- Jatani, District Khurda, Bhubaneswar of Sri Tapan Kumar Mohanty.
2. **Category:** This project falls under Category "B", Project or Activity 8(a) Building and Construction projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. The project was **earlier granted Environmental Clearance** by SEIAA Odisha vide EC Identification No.: EC22B038OR134759, SEIAA File No.: 230678/50-MIS/09-2021 dated **06/05/2022**.
4. The earlier sanctioned **Built-up area** as per the above-said EC letter was **24,601.44 m<sup>2</sup>** which has now changed to **24,689.58 m<sup>2</sup>**. The total plot area remains the same i.e. 9,124.19 sqm.
5. **Location and connectivity:** The Project site is located at Khata Nos. 270/3122, 270/3123, 400/3933, 400/3934 of Mouza- Badaraghunathpur, Tehsil- Jatani, District Khurda, Bhubaneswar, Odisha. The geo coordinates of the project is Latitude: 20°13'46.47"N and Longitude: 85°43'43.95"E. The Nearest Highway is NH-16 which is 2.4 km (SE) away from project site, SH-13 is at 7.5 km (SSW) away from project site, NH-57 which is 10 km (SSW) away from project site, NH-316 which is 13.0 (E) away from project site. The nearest Railway Station is Retang Railway Station, 4.7 km (SE) away from the project site. The nearest Airport BijuPatnaik International Airport, Bhubaneswar is at 8.7km (ENE) from the project site.
6. Total Plot area measures 9,124.19m<sup>2</sup> and the proposed built-up area is 24,689.58 m<sup>2</sup>.
7. There will be a residential tower of 132 dwelling units with common amenity area. The maximum height of the Tower 17.60 m.

#### **Area Statement:**

<b>S. No.</b>	<b>PARTICULARS</b>	<b>AREA (sq.m.)</b>
i)	Total plot area	9,124.19
ii)	Permissible Ground coverage (@50% of plot area)	4,562.095
iii)	Proposed Ground coverage (@47.57% of the plot area)	4,340.377
iv)	Permissible FAR (@3.0 of the Net plot area)	27,372.57
v)	Proposed FAR (@ 2.08 of Net plot area)	19,019.39
vi)	Non-FAR area	5,670.19
vii)	<b>Total Built-up Area</b>	<b>24,689.58</b>

8. The total population of project after proposed will be 888 persons.

#### **9. Comparative statement of amendment:**

Proceedings of the SEAC meeting held on 21.11.2023

*T. Nayak*  
Environmental Scientist, SEAC

S.NO.	PARTICULARS	EXISTING AS PER	PROPOSED	TOTAL AFTER PROPOSED
		EARLIER EC	AMENDMENT	AMENDMENT
1	Total Plot Area (m <sup>2</sup> )	9,124.19 (2.25Acres)	--	9,124.19 (2.25Acres)
2	Proposed Ground Coverage (m <sup>2</sup> )	3,260.073 (35.73% of plot area)	1,080.304	4,340.377 (47.57% of plot area)
3	Proposed FAR (m <sup>2</sup> )	19,502.70 (@2.14 of plot area)	-483.31	19,019.39 (@2.08 of plot area)
	a) Residential FAR (m <sup>2</sup> )	15,105.38	-265.03	14,840.35
	b) Common area FAR (m <sup>2</sup> )	4,397.32	-218.28	4,179.04
4	Non FAR area (m <sup>2</sup> )	5,098.74	571.45	5,670.19
	a) Mumty+ Service area (m <sup>2</sup> )	714.21	615.51	1,329.72
	b) Stilt area (m <sup>2</sup> )	4,384.53	-44.06	4,340.47
5	Built-up Area (m <sup>2</sup> )	24,601.44	88.14	24,689.58
6	Landscape Area (m <sup>2</sup> )	3,021.93 (33.12% of plot area)	-228.64	2,793.29 (30.61% of plot area)
7	Maximum Height of the Building (m)	14.95	2.65	17.60
8	No. of Dwelling unit	186	-54	132
9	Project Cost	INR57.942Crore	INR3.775Crore	INR61.717Crore

S.No.	Particulars	Existing As Per Earlier EC	Proposed Amendment	Total After Proposed Amendment
10	Population (Nos.)	1070	-182	888
11	Total water demand (KLD)	141	-21	120
12	Domestic Water Demand (KLD)	129	-21	108
13	Fresh water (KLD)	85	-14	71
14	Flushing water (KLD)	44	-7	37
15	Waste water (KLD)	112	-18	94

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*J. Jayak*  
Environmental Scientist, SEAC

16	STP Capacity (KLD)	135	-5	130
17	Rainwater Harvesting Pits (Nos.)	11	13	24
18	Parking	228ECS	-72ECS	154ECS
19	Parking Area	6275m <sup>2</sup>	-1,338.86m <sup>2</sup>	4,936.14m <sup>2</sup>
20	Power Requirement	760kVA	356kVA	1116kVA
21	DG Sets	1x225kVA	-45kVA	1x180kVA
22	Solid waste generation (kg/day)	503	-83	420

10. **Water requirement:** The total water requirement will be met through Ground water and Bore well which is approx. 120 KLD, total domestic water requirement is 108 KLD. Out of which fresh water requirement is approx. 71 KLD, & flushing water will 37 KLD.

S.No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
<b>A. Domestic Water</b>							
	Residents	772	90	45	69.48	34.74	104.22
	Staff	39	25	20	0.97	0.78	1.75
	Visitors	77	5	10	0.38	0.77	1.15
					71KLD	37KLD	108KLD
<b>Total Domestic Water =108KLD</b>							
<b>B. Horticulture</b>		2,793.29m <sup>2</sup>	4l/sqm		11.17KLDsay12KLD		
<b>Grand Total(A+B) =120KLD</b>							

11. **Wastewater details:** The project will generate approx. 94 KLD of wastewater. The wastewater will be treated in an onsite STP of 130 KLD capacity. The treated effluent will be reused for flushing & horticulture. Surplus treated water of 36KLD in Summer season and 46KLD in Monsoon season will be discharged to external sewer.

<b>Domestic Water Requirement</b>	<b>108KLD</b>
• Fresh	71KLD
• Flushing	37KLD
<b>Wastewater[@80%fresh+100%flushing]</b>	<b>57+37 =94KLD</b>
<b>STP Capacity</b>	<b>130KL</b>

S.No.	Description	Value as per earlier EC (KLD)	Proposed Amendment (KLD)	Total Quantity (EC accorded + Amendment) (KLD)
1.	Total water demand	141	-21	120
2.	Domestic Water Demand	129	-21	108
3.	Freshwater	85	-14	71
4.	Flushing water	44	-7	37
5.	Wastewater	112	-18	94
6.	STP Capacity	135	-5	130

12. **Rainwater harvesting details:** Total 24 nos. of Rainwater harvesting pits will be provided for storage of rain water.

13. **Parking details:** Total parking proposed is 145(Stilt) + 9(Surface) = 154 ECS.

18. **Power Requirement:** The requirement load for the project will be 1,116 kVA. The power supply will be supplied by State Electricity Board. There is provision of 1 nos. of DG sets total 180 kVA capacity for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height (30m) for proper dispersion. Total solar power as per the following table.

S.No.	DESCRIPTION	SAVINGS (kVA)
1.	Solar based Lighting will be done in the common areas, stair cases, land scape areas, signage, entry gates and boundary walls etc. (5% from total power load) Norms for Rooftop PV systems Installation: Solar power back of a minimum generation capacity of 5% of the connected load (OR)20 Watts/sq.ft on available roof space, whichever is less.	35kVA
2.	LEDs will be used in all dwelling units.	15.8kVA
3.	Outdoor and common area lighting shall be LED	5kVA
<b>Total Energy Saved</b>		<b>55.8 kVA</b>
<b>Total Power load=1,116kVA</b> <b>Energy saved through various provisions =55.8</b> <b>KVATOTALENERGYSAVING = 10%</b>		

**Comparative Power Requirement (EC accorded + Amendment)**

	EC accorded	Expansion	Total (EC accorded + Amendment)
<b>Power Requirement</b>	760kVA	+356kVA	1,116kVA
<b>D.G sets</b>	1x225kVA	-45kVA	1x180kVA

14. **Solid waste generation:** The total solid waste generation will be 420 kg/day for the proposed project. Approx. of solid waste would be generated 420 kg per day (@ 0.25 kg per capita per day for staff, @0.15 kg per capita per day for the visitor, 0.5 kg capita per day resident and landscape waste @0.2 kg/acre/day and STP Sludge). The solid waste will be collected and then segregated at source. Adequate number of colored bins (green, blue & dark grey) separate for bio-degradable and non-biodegradable are proposed to be provided at the strategic locations within the site. STP sludge is proposed to be used for horticultural purpose as manure. Horticultural Waste/ Biodegradable waste will be composted by Organic Waste Converter. 50 sqm area has been proposed for OWC. Spent oil from DG sets will be sold to CPCB authorised recyclers.

S.No.	Category	Norms (Kg/capita/day)	Waste generated (kg/day)
1.	Residents (772)	@0.5	386
2.	Staff (39)	@0.25	9.75
3.	Visitors (77)	@0.15	11.55
4.	Landscape waste (0.69acre)	@0.2kg/acre/day	0.138
5.	STP sludge	Waste water x 0.35x B.O.D difference/1000	12.83
<b>TOTALSOLIDWASTE</b>			<b>420kg/day</b>

**Comparative Solid Waste Details**

Solid Waste Generation	EC accorded (kg/day)	Proposed Amendment (kg/day)	Total (EC accorded+ Amendment) (kg/day)
	503	-83	420

15. **Greenbelt:** Total green area measures 2,793.29 m<sup>2</sup> i.e. 30.61% of the net plot area. No. of trees required = 1 tree/80 sqm of plot area = 9,124.19/80 = 114 nos. Total no. of trees proposed = 150 trees.

16. **Project cost:** Total estimated cost of the proposed project is Rs.61.717 Cr. including land and development cost.

**ENVIRONMENT MANAGEMENT PLAN COST (OPERATION)**

COMPONENT	CAPITALCOST (INRLAKH)	RECURRINGCOST (INRLAKH/YR)
Sewage Treatment Plant	15	8
Rain Water Harvesting Pits	10	0.50
Solid Waste Management	2.5	1
Environmental Monitoring	0	10

Green Area/Landscape Area	2.5	0.50
Others (Energy saving devices, miscellaneous)	10	0.15
<b>Total</b>	<b>40</b>	<b>20.15</b>

17. **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.**, along with 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) Detailed justification w.r.t. to all environment parameters for increase in built-up area and non-FAR area.
- ii) Comparative table for previous EC conditions and present revised proposal w.r.t. all the changeable parameters. Additionally, incorporate remarks column to specify the reason for change.
- iii) Submit write-up regarding increase in power requirement.
- iv) Submit the permission/application copy for discharge of excess treated water to the drainage.
- v) Submit the EMP plan along with capital and recurring cost.
- vi) The proponent shall clarify whether the recurring cost shall be borne by the developer or the management of society.

**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. 06**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE OF CHADHIAPADA SAND QUARRY WITH PROPOSED EXCAVATION OF 5200 CUM/YEAR OF SAND OF TAHASILDAR CHIKITI HAVING AN AREA OF 5.090 HA. LOCATED AT KHATA NO: 631, PLOT NO: 1079 & 1 AT-CHADHIAPADA, TAHASIL- CHIKITI, DISTRICT- GANJAM OF TAHASILDAR, CHIKITI - EC**

The Project Proponent didn't attend the meeting. The project proponent via E-mail on dated 17/11/2023 has requested to adjourn the presentation for the next SEAC meeting. The SEAC decided to defer the proposal to next meeting.

**ITEM NO. 07**

**PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR PURNAPANI SAND QUARRY OVER AN AREA OF 12.50 ACRES/5.059 HA AT VILLAGE PURNAPANI OF TAHASIL-KUCHINDA IN DISTRICT SAMBALPUR OF SRI RAJ KUMAR AGASTY – EC.**

1. This proposal is for Environmental Clearance for Purnapani Sand Quarry over an area of 12.50 Acres/5.059 ha at village Purnapani of Tahasil-Kuchinda in District Sambalpur of Sri Raj Kumar Agasty.
2. **Category:** As per EIA Notification 2006 and its subsequent amendments, the proposed project falls under Category B in Schedule in item 1(a)- Mining of Minerals.
3. The lease has granted in the name of Successful Bidder - Raj Kumar Agasty, At/ PO /PS- Dhuruadihi, District- Sambalpur, Odisha for a lease period of 5 (five) years by Tahasildar, Kuchinda, Sambalpur vide letter no – 2770 on dated 27.11.2020.
4. The Mining plan has been approved for a period of five years by the AO & Joint Director Geology, Sambalpur, with Letter No. – XIX-(S) 216/21 165/ ZS, Date- 28.01.2021.
5. This is a new mine and mining lease is an identified sairat source in the District Survey Report for River Sand of Sambalpur district and the said area has been marked in page no – 3, Serial no – 18 of DSR Report.
6. **TOR details:** Terms of Reference (ToR) was issued by SEIAA, Odisha vide File no. SIA/OR/MIN/62078/2021 on dated 27.08.2021.
7. **Public hearing details:** Public hearing was conducted on 01.11.2022 at 11.0 AM at Upper Primary School (PUPS) Playground, Mouza-Purnapani, GP-Kuleigarh, R.I Circle-Kuturachuan in Sambalpur District. Issues raised was mainly for repair and maintenance of road by PP. Budget allocated for Public hearing issues Rs. 3,50,000.00.
8. **Location and connectivity:** The mine lease area is located at Khata No.- 163, Plot No.-1416P, Village- Purnapani, Tehsil- Kuchinda, District- Sambalpur, State- Odisha. The proposed site is bounded by Latitude -21° 44' 25.3" N to 21° 44' 41.2" N & Longitude – 85° 15' 34.4" E to 84° 15' 23.5" E bearing Topo Sheet No. - 73CO6. The Nearest Railway Station- Lapanga Railway Station, approx. 23 km towards West direction, Nearest Airport- BijuPatnaik International Airport, approx. 230 km towards SE direction, Nearest Highway-NH-200, approx. 7.0 km in NE direction, SH-24, approx. 9.2 km in East direction. Nearest Forest-Lariapali RF, approx. 2.0 km towards NE direction, Open mixed Jungle, approx. 9.0 km towards WSW direction. Nearest School/ Collage- Deheripali PUP School, approx. 1.2 km NW, Nearest Hospital- Sub divisional

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Hospital, Kuchinda, approx. 10 km East, Temple-approx. 1.0 km SW.

9. **Reserves and production:** The total Geological reserves is 53,823 Cum and Mineable Reserves is 23,223cum. The average production is proposed to be 2,500 cum/year and 12,500 cum is the total production during the plan period.
10. **Replenishment study details:** The total area available in Purunapani sand quarry after post monsoon study is around 12,600 m<sup>2</sup> after leaving the safety zone. The available sand for mining is 8,820m<sup>3</sup> which can be treated as safe extractable within the framework of the study after arrival of river level. In the Mining Plan the approved quantity of production is 2500 cum. The Study was carried out in in the month of May/June, in the Month of Nov/Dec after the monsoon and at the end of March by using UAV/ Drone method
11. **Baseline study details:** Baseline Study was conducted inDecember 2020 to February 2021.
  - a) **Air quality:** Ambient Air Quality monitoring reveals that the minimum & maximum concentrations of PM<sub>10</sub> for all the 7 AAQ monitoring stations were found to be 57.43 µg/m<sup>3</sup> at AQ2 and 87.26 µg/m<sup>3</sup> at AQ1, respectively. As far as the gaseous pollutants SO<sub>2</sub> and NO<sub>x</sub> are concerned, the prescribed CPCB limit of 80 µg/m<sup>3</sup> for residential and rural areas has never surpassed at any station. The maximum & minimum concentrations of SO<sub>2</sub> were found to be 14.36µg/m<sup>3</sup> at AQ1 & 6.39 µg/m<sup>3</sup> at AQ5 respectively. The maximum & minimum concentrations of NO<sub>x</sub> were found to be 21.73µg/m<sup>3</sup> at AQ1 & 10.3µg/m<sup>3</sup> at AQ2, respectively. .
  - b) **Surface water quality:** pH values varied between 7.2 to 8.0, Dissolved oxygen - 6.5 to 7.0 mg/L, BOD – 3.8 to 4.0 mg/L. Based on the results it is evident that most of the parameters of the samples comply with 'Category 'C' standards of CPCB indicating their suitability for Drinking water source after conventional treatment and disinfection
  - c) **Ground water quality:** pH values varied between 7.15 to 7.5, Dissolved Solids - 324 to 360 mg/l, total hardness - 230 to 276 mg/l. Fluorides and nitrates are within the permissible limits.
  - d) **Noise study:** Noise monitoring reveals that the maximum & minimum noise levels at day time were recorded as 62.77 Leq. dB (A) at NQ1 & 45.85 Leq. dB (A) at NQ2, respectively. The maximum & minimum noise levels at night time were found to be 35.73 dB (A) at NQ3 & 48.42 dB (A) at NQ1.
  - e) **Soil quality:** Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.21 to 7.55, which shows that the soil is alkaline in nature. Potassium is found to be from 51.82 mg/kg to 60.20 mg/kg. The water holding capacity is found in between 28.45% to 32.18%.
12. **Mining method:** The mining of sand will be done by open cast manual method for excavation. The maximum depth of mining will be of 3 m below bed / water table whichever less.
13. **Water requirement:** Total water approx, 2.5 KLD will be required for different purposes like Domestic (0.1KLD), Dust suppression (2.0KLD) & plantation purposes (0.3KLD).
14. **Greenbelt development:** 250 nos. of plantation will be carried out for the proposed project.
15. **Manpower requirement:** Total 10 nos of manpower will be required for the proposed project.

16. **Project cost:** Total cost of the proposed project is 60.0 Lakhs. A capital cost of 4.7 lakhs is proposed & 2.35 lakhs as recurring cost.
17. **Environment Consultant:** The Environment consultant **M/s Parivesh Environmental Engineering Services, Lucknow, Uttar Pradesh** 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 Parivesh Environmental Engineering Services, Lucknow, Uttar Pradesh** with the project proponent, the SEAC decided to take decision after receipt of the following from the proponent.

- a) The project proponent shall submit the distance of the water project from the proposed site, effect of mining on it and the safety measures taken.
- b) The project proponent shall demarcate the safety zone w.r.t. to the Bridge.
- c) The project proponent shall find out the common workable area and production w.r.t. that area after leaving the safety zone.

**ITEM NO. 08**

**PROPOSAL OF AMENDMENT TOR FOR KUSUMI & MOHUDA STONE QUARRIES CLUSTER OVER AN AREA OF 38.228 ACRES OR 15.469 HECTARES IN VILLAGE KUSUMI & MOHUDA, TAHASIL KUKUDAKHANDI IN DISTRICT GANJAM OF TAHASILDAR KUKUDAKHANDI (SUBMITTED UNDER CLUSTER APPROACH WITH CONSISTING OF 7 STONE QUARRIES) – MOD TOR**

1. This proposal is for amendment Terms of Reference for Kusumi & Mohuda Stone Quarries Cluster over an area of 38.228 acres or 15.469 hectares in village Kusumi & Mohuda, Tahasil Kukudakhandi in District Ganjam of Tahasildar Kukudakhandi (submitted under cluster approach with consisting of 7 stone quarries).
2. **Category:** As per EIA Notification,2006 and its subsequent amendments, the project proposed comes under Category -B of Schedule- 1(a) - Mining of Minerals.
3. **TOR details:** Earlier Terms of Reference (ToR) was issued earlier for 5 quarries over an area of 11.139 Ha. or 27.258 Acres. vide Letter no.- 5157/SEIAA dated. 19/8/2022.
4. As per the Minutes of 138<sup>th</sup> Meeting of SEIAA, Odisha held on 10.10.2023 & 12.10.2023, it has been directed to include two more quarries i.e., Mohuda stone quarry of Sri Balaji Reddy and Mohuda stone quarry of Sri Tushar Kanta Dash which have already granted EC in EIA study as all leases are within 500 meters radius.
5. The total no. of quarries in cluster will increase from 5 to 7 and area of cluster will increase from 11.139 Ha. or 27.258 Acres to 15.469 Ha. or 38.228 Acres. Details of the quarries are as per the following table.

### Cluster Details

Name of the Quarry	Khata no.	Plot no.	Area (Hectares)	Maximum production capacity of individual source per year in Cum	Status of Quarry
Kusumi Stone Quarry (2.294 Ha)	325	147/P	2.294	8015	Pending for EC
Kusumi Stone Quarry (2.472 Ha)	325	147	2.472	10098	Pending for EC
Kusumi Stone Quarry (1.199 Ha)	325	166	1.199	6148	Pending for EC
Mohuda Stone Quarry (0.890 Ha)	669	1978(P)	0.890	3015	Pending for EC
Mohuda Stone Quarry (4.284 Ha)	669	1978/P	4.284	10088	Pending for EC
Mohuda Stone Quarry (2.165 Ha)	669	1406	2.165	12020	EC Granted Operational, till 27.05.2025
Mohuda Stone Quarry (2.165 Ha)	669	1406	2.165	992	EC Granted Operational, till 21.08.2026
<b>Total</b>			<b>15.469</b>	<b>50376</b>	

6. The project proponent has requested for public consultation instead of public hearing for these two existing sources.

7. **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 furnished and the presentation made by the consultant, **M/s M/S P & M Solution, Noida**, with the project proponent, the SEAC recommended the following:

- i) Amendment of ToRs may be considered including the old quarries which was not included in the earlier ToRs.
- ii) Since, the public hearing has already conducted for the proposal, a fresh public hearing may not be insisted for inclusion of these old quarries. However, there shall be a public consultation giving one month notice in the news papers for inclusion of these old quarries along with revised EIA/EEMP report.

  
**MEMBER SECRETARY, SEAC**

**TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR ENHANCEMENT IN PRODUCTION OF GRAPHITE FROM 4750 TPA TO 27091TPA FROM GANDABAHALI GRAPHITE MINES OVER AN AREA OF 28.615 HA. AT VILLAGE - GANDABAHALI, TAHASIL - SINAPALLI IN THE DISTRICT OF NUAPADA OF SRI PRABHAS CHANDRA AGRAWAL – TOR.**

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**A. STANDARD TOR FOR MINING PROJECT**

1. The Environmental Clearance 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 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.
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 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. 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).
7. 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.
8. 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.
9. 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 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.
  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.
  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,

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the necessary plan alongwith 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.

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 failing 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 (ease 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  $PM_{10}$ , 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. 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.
26. Necessary clearance from the Competent Authority for drawl of requisite quantity of water

for the Project should be provided.

27. 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,
28. 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.
29. 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.
30. Details of any stream, seasonal or otherwise, passing through the tease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be.
31. 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.
32. 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.
33. 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.
34. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
35. 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.
36. 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.

37. 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.
  38. 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.
  39. 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.
  40. 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.
  41. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
  42. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
  43. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
  44. 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.
  45. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per MoEF&CC, Govt. of India 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.
  46. The Action Plan on the compliance of the recommendations of the CAG as per MoEF&CC, Govt. of India 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.
  47. Compliance of the MoEF&CC, Govt. of India Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgement 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.
- B.** 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. 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.
- C. The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report.**